Form No. S12A
表格第 S12A 號

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131)

根據《城市規劃條例》(第131章)第12A條遞交的修訂圖則申請

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

此文件在2023年 10月 27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 27 OCT 2023
The Town Planning Board will formally acknowledge the date of receipt of the application only upon receipt of all the required information and documents.

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

2302189 24.10.2023 By Hand Form No. S12A 表格第 S12A 號

For Official Use Only 請勿填寫此欄	Application No. 申請編號	Y/NE-TKL/5
	Date Received 收到日期	27 OCT 2023

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。

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~~)

Bergeron (Hong Kong) Company Limited 保嘉(香港)有限公司

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~~)

Arup Hong Kong Limited 奧雅納香港有限公司

3. Application Site 申請地點

(a)	Whether the application directly relates to any specific site? 申請是否直接與某地點有關？	Yes 是 ☑ No 否 ☐ （Please proceed to Part 4 請跳到第 4 部分填寫）
(b)	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）	Lots 796 and 1008 RP in D.D. 77, and adjoining Government Land, Ping Che, Ta Kwu Ling, New Territories
(c)	Site Area 申請地點面積	17,821.2 sq.m 平方米 ☑ About 約

(d) Area of Government land included (if any) 所包括的政府土地面積 (倘有)	9,938.5 .....sq.m 平方米 ☑ About 約
(e) Current use(s) 現時用途	Open storage for construction materials, temporary structure and a portion of existing un-named local road (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. Eligibility of Applicant 申請人資格

The applicant 申請人 –

☑ (a) is a person whose name is registered in the Land Registry as that of the sole owner or one of the owners of any non-Government land within the application site, when this application is made[&] (if the applicant is the sole owner, there is no need to fill in Part 5).
(a) 是一名人士，其姓名或名稱於提出申請時已在土地註冊處註冊，該註冊顯示申請人為申請地點內任何非政府土地的唯一或其中一名擁有人[&](如申請人為唯一擁有人，不用填寫第 5 部分)。

☐ (b) is a person who has obtained consent to this application from at least one owner as defined in (a) above[&].
(b) 是一名人士，已獲得最少一名上述 (a) 所界定的擁有人同意這宗申請[&]。

☐ (c) is a person who has obtained consent to this application from the Director of Lands in relation to any government land within the application site[&].
(c) 是一名人士，就這宗申請地點內的任何政府土地，已獲得地政總署署長同意這宗申請[&]。

☐ (d) is a public officer.
(d) 是公職人員。

☐ (e) is a public body as defined by section 2 of the Prevention of Bribery Ordinance (Cap. 201).
(e) 是《防止賄賂條例》(第 201 章)第 2 條所界定的公共機構。

5. Statement on Consent from/Notification to "Current Land Owner"[#] 就「現行土地擁有人」[#]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 ..... (DD/MM/YYYY), this application involves a total of ..... "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 ..... "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)

(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 "current land owner(s):
已採取合理步驟以取得「現行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 "Current Land Owner(s)"# 取得「現行土地擁有人」# 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 "Current Land Owner(s)"# 向「現行土地擁有人」# 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. Plan Proposed to be Amended 擬議修訂的圖則

(a) Name and number of the related statutory plan(s) 有關法定圖則的名稱及編號	Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14
(b) Land use zone(s) involved (if applicable) 涉及的土地用途地帶(如適用)	"Open Storage", "Agriculture" Zones and an Area shown as 'Road'

7. Proposed Amendments 擬議修訂

(a) Propose to rezone the application site to the following zone(s)/use(s)
(May insert more than one 「✔」) (Please illustrate the details on plan)
建議將申請地點的用途地帶改劃作下列地帶 / 用途
(可在多於一個方格內加上「✔」號) (請在圖則顯示詳情)

☐ Comprehensive Development Area [ ]
綜合發展區 [ ]

☐ Residential (Group ☐A/☐B/☐C/☐D/☐E) [ ]
住宅 (☐甲類 / ☐乙類 / ☐丙類 / ☐丁類 / ☐戊類) [ ]

☐ Agriculture [ ] 農業 [ ]

☐ Industrial (Group D) [ ] 工業 (丁類) [ ]

☐ Government, Institution or Community [ ]
政府、機構或社區 [ ]

☐ Recreation [ ] 康樂 [ ]

☐ Country Park [ ] 郊野公園 [ ]

☐ Conservation Area [ ] 自然保育區 [ ]

☐ Commercial [ ] 商業 [ ]

☐ Village Type Development [ ]
鄉村式發展 [ ]

☐ Industrial [ ] 工業 [ ]

☐ Open Storage [ ] 露天貯物 [ ]

☐ Open Space [ ] 休憩用地 [ ]

☐ Green Belt [ ] 綠化地帶 [ ]

☐ Coastal Protection Area [ ]
海岸保護區 [ ]

☐ Site of Special Scientific Interest [ ]
具特殊科學價值地點 [ ]

☑ Other Specified Uses (☐Business/☐Industrial Estate/☑Mixed Use/☐Rural Use/☐Petrol Filling Station/
☐Others (please specify_____)) [ ]
其他指定用途 (☐商貿 / ☐工業邨 / ☑混合用途 / ☐鄉郊用途 / ☐加油站 /
☐ 其他 (請註明：_____)) [ ]

☐ Road 道路

☐ Others (please specify_____)
其他 (請註明：_____)

Please insert subzone in [ ] as appropriate.
請於[ ]內註明支區，如適用。

(b) Propose to amend the Notes of the Plan(s) 建議修訂圖則的《註釋》

☐ Covering Notes 《註釋》說明頁

☑ Notes of the zone applicable to the Site 適用於申請地點土地用途地帶的《註釋》

Details of the proposed amendment(s) to the Notes of the Plan, where appropriate, are as follows:
(Please use separate sheets if the space below is insufficient)
建議修訂圖則的《註釋》的詳情，如適用：
(如下列空間不足，請另頁說明)

Please refer to the attached Supporting Planning Statement for details of the proposed amendment(s).

☑ Proposed Notes of Schedule of Uses of the zone attached
夾附對《 註釋 》的擬議修訂

8. Details of Proposed Amendment (if any) 擬議修訂詳情 (倘有)

☑ Particulars of development are included in the **Appendix**.
附錄包括一個擬議發展的細節。

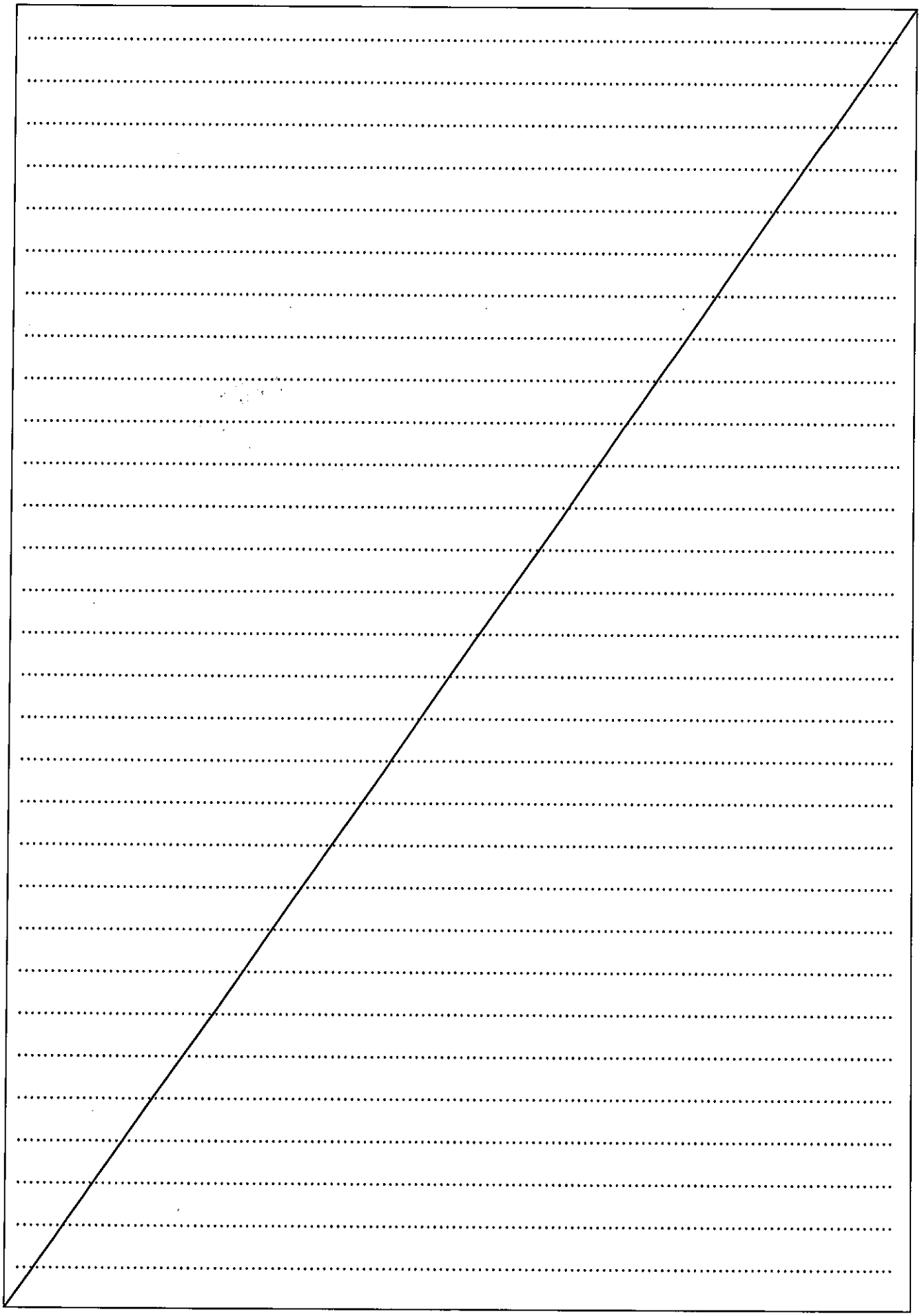
☐ No specific development proposal is included in this application.
這宗申請並不包括任何指定的擬議發展計劃。

9. 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 Supporting Planning Statement for justifications in support of the Application.

Parts 7 (Cont'd), 8 and 9 第 7 (續)、第 8 及第 9 部分



10. 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

YEUNG WING SHAN, THERESA — Name in Block Letters 姓名（請以正楷填寫）

Director — 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 MRTPI

ARUP HONG KONG LIMITED *AH16* 奧雅納香港有限公司

on behalf of 代表 Arup Hong Kong Limited

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

Date 日期 20/10/2023 (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。

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131)
根據城市規劃條例(第 131 章)第 12A 條遞交的修訂圖則申請

Development Proposal (only for indicative purpose)
擬議發展的發展計劃（只作指示用途）

1. Development Proposal 擬議發展計劃

☑ Proposed Gross floor area (GFA) 擬議總樓面面積	124,748 sq.m. 平方米	☑ About 約
☑ Proposed plot ratio 擬議地積比率	7 (of which the domestic PR should not exceed 5.9)	☑ About 約
☑ Proposed site coverage 擬議上蓋面積	Not more than 75% (below 15m) (domestic) Not more than 100% (below 15m) (non-domestic) Not more than 37.5% (above 15m) (domestic) Not more than 90% (over 24m but not exceeding 27m) (non-domestic) Not more than 62.5% (above 27m) (non-domestic) %	☑ About 約
☑ Proposed number of blocks 擬議座數	6	
☑ Proposed number of storeys of each block 每座建築物的擬議層數	T1: 35; T2: 48; T3 to T6: 47 storeys 層 ☐ include 包括 ____ storeys of basements 層地庫 ☑ exclude 不包括 T1: 1 T2 to T6: 3 storeys of basements 層地庫	
☑ Proposed building height of each block 每座建築物的擬議高度	m 米 T1: +169.70; T2:+175.00; T3 to T4: +171.85; T5 to T6: +171.83 mPD 米(主水平基準上)	☐ About 約 ☑ About 約
☑ Domestic part 住用部分		
GFA 總樓面面積	105,145 (excluding about 3,500m² domestic GFA for Clubhouse to be exempted from GFA calculation) sq.m. 平方米	☑ About 約
number of units 單位數目	2,205	
average unit size 單位平均面積	47.7 sq.m. 平方米	☑ About 約
estimated number of residents 估計住客數目	6,174	
☑ Non-domestic part 非住用部分	19,603 (excluding non-domestic GFA for social welfare facilities and public transport terminus) GFA 總樓面面積 sq.m.平方米	☑ About 約
☑ hotel 酒店	5,703 sq.m.平方米 (please specify the number of rooms 請註明房間數目: 70)	☑ About 約
☑ office 辦公室	11,500 sq.m.平方米	☑ About 約
☑ shop and services/eating place 商店及服務行業/食肆	2,400 sq.m.平方米	☑ About 約
☑ Government, institution or community facilities 政府、機構或社區設施	(please specify the use(s) and concerned land area(s)/GFA(s)) (請註明用途及有關的地面面積/總樓面面積) Social welfare facilities (including a 100-place Child Care Centre about 1,166m² GFA and a 60-place Day Care Centre for the Elderly about 787.6m² GFA) in addition to domestic and non-domestic plot ratio. The GFA is indicative only and the exact GFA would be confirmed in detail design stage. The GFAs of these social welfare facilities are assumed to be exempted from GFA calculation.	
☑ other(s)其他	(please specify the use(s) and concerned land area(s)/GFA(s)) (請註明用途及有關的地面面積/總樓面面積) A public transport terminus with about 1,246m² GFA in addition to domestic and non-domestic plot ratio. The GFA is indicative only and the exact GFA would be confirmed in detail design stage. The GFA of the PTT is assumed to be exempted from GFA Calculation.	
☑ Open space 休憩用地	(please specify land area(s)) (請註明面積)	
☑ private open space 私人休憩用地	6,174 sq.m.平方米	☑ Not less than 不少於
☐ public open space 公共休憩用地	sq.m.平方米	☐ Not less than 不少於

☑ Transport-related facilities 與運輸有關的設施

☑ parking spaces 停車位 (please specify type(s) and number(s)) (請註明種類及數目)

Private Car Parking Spaces 私家車車位	725
Motorcycle Parking Spaces 電單車車位	33
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)	

☑ loading/unloading spaces 上落客貨車位 (please specify type(s) and number(s)) (請註明種類及數目)

Taxi Spaces 的士車位	2
Coach Spaces 旅遊巴車位	1
Light Goods Vehicle Spaces 輕型貨車車位	8
Medium Goods Vehicle Spaces 中型貨車車位	
Heavy Goods Vehicle Spaces 重型貨車車位	10
Others (Please Specify) 其他 (請列明)	

☑ other transport-related facilities 其他與運輸有關的設施 (please specify type(s) and number(s)) (請註明種類及數目)

A Public Transport Terminus on the G/F of T1

Use(s) of different floors (if applicable) 各樓層的用途(如適用)

[Block number] [座數]	[Floor(s)] [層數]	[Proposed use(s)] [擬議用途]
T1	G/F	Public Transport Terminus
	1/F	Retail
	2/F to 4/F	Social Welfare Facilities (2/F and 3/F: Child Care Centre; 4/F: Day Care Centre for the Elderly)
	5/F to 34/F	Commercial Uses (5/F to 24/F: Office; 25/F to 34/F: Hotel)
T2	G/F	Retail
	1/F	Retail and Club House
	2/F to 47/F	Residential Units except 21/F for Sky Garden
T3 to T6	G/F	Lobby and Club House
	1/F to 46/F	Residential Units excepts 20/F for Sky Garden
T1 to T6	B1	Basement carpark, E&M provision and Sewage Treatment Plant
T2 to T6	B2 to B3	Basement carpark and E&M provision

Proposed use(s) of uncovered area (if any) 露天地方(倘有)的擬議用途

Landscape area, open-air clubhouse facilities (e.g. swimming pool), vehicular access, EVA, and footpaths, and a proposed upgraded access road to the east of the Application Site etc.

Any vehicular access to the site? 是否有車路通往地盤?

Yes 是 ☑ There is an existing access. (please indicate the street name, where appropriate)
有一條現有車路。(請註明道路名稱(如適用))
Ping Che Road and an un-named access road connecting Ping Che 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 ☐

For Development involving columbarium use, please complete the table in the Annex to this Appendix.
如發展涉及靈灰安置所用途，請填妥於此附件後附錄的表格。

2. 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。

Does the development proposal involve alteration of existing building? 擬議發展計劃是否包括現有建築物的改動?	Yes 是	☐ Please provide details 請提供詳情 ....
	No 否	☑
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 ..... sq.m 平方米 ☐About 約 Depth of filling 填土厚度 ..... m 米 ☐About 約 ☑ Excavation of land 挖土 Area of excavation 挖土面積.....14,300..... sq.m 平方米 ☑About 約 Depth of excavation 挖土深度 .....13.5.....m 米 ☑About 約
	No 否	☐

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) Sewerage, Air Ventilation	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)

Please refer to Appendix B - Landscape Master Plan and Tree Preservation Proposals of the Supporting Planning Statement.

For Developments involving Columbarium Use, please also complete the following:
如發展涉及靈灰安置所用途，請另外填妥以下資料

Ash interment capacity 骨灰安放容量@

Maximum number of sets of ashes that may be interred in the niches
在龕位內最多可安放骨灰的數量 _____

Maximum number of sets of ashes that may be interred other than in niches
在非龕位的範圍內最多可安放骨灰的數量 _____

Total number of niches 龕位總數 _____

Total number of single niches
單人龕位總數 _____

Number of single niches (sold and occupied)
單人龕位數目 (已售並佔用) _____

Number of single niches (sold but unoccupied)
單人龕位數目 (已售但未佔用) _____

Number of single niches (residual for sale)
單人龕位數目 (待售) _____

Total number of double niches
雙人龕位總數 _____

Number of double niches (sold and fully occupied)
雙人龕位數目 (已售並全部佔用) _____

Number of double niches (sold and partially occupied)
雙人龕位數目 (已售並部分佔用) _____

Number of double niches (sold but unoccupied)
雙人龕位數目 (已售但未佔用) _____

Number of double niches (residual for sale)
雙人龕位數目 (待售) _____

Total no. of niches other than single or double niches (please specify type)
除單人及雙人龕位外的其他龕位總數 (請列明類別) _____

Number. of niches (sold and fully occupied)
龕位數目 (已售並全部佔用) _____

Number of niches (sold and partially occupied)
龕位數目 (已售並部分佔用) _____

Number of niches (sold but unoccupied)
龕位數目 (已售但未佔用) _____

Number of niches (residual for sale)
龕位數目 (待售) _____

Proposed operating hours 擬議營運時間 _____

_____

@ Ash interment capacity in relation to a columbarium means –
就靈灰安置所而言，骨灰安放容量指：
- the maximum number of containers of ashes that may be interred in each niche in the columbarium;
每個龕位內可安放的骨灰容器的最高數目；
- the maximum number of sets of ashes that may be interred other than in niches in any area in the columbarium; and
在該靈灰安置所並非龕位的範圍內，總共最多可安放多少份骨灰；以及
- the total number of sets of ashes that may be interred in the columbarium.
在該骨灰安置所內，總共最多可安放多少份骨灰。

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	Lots 796 and 1008 RP in D.D. 77, and adjoining Government Land, Ping Che, Ta Kwu Ling, New Territories 新界打鼓嶺坪輋丈量約份第77約地段第796號及第1008號餘段和毗連政府土地
Site area 地盤面積	17,821.2 sq. m 平方米 ☑ About 約 (includes Government land of 包括政府土地 9,938.5 sq. m 平方米 ☑ About 約)
Plan 圖則	Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14 坪輋及打鼓嶺分區計劃大綱圖編號S/NE-TKL/14
Zoning 地帶	"Open Storage" ("OS"), "Agriculture" ("AGR") Zones and an Area shown as 'Road' 「露天貯物」、「農業」地帶及顯示為「道路」的地方
Proposed Amendment(s) 擬議修訂	☐ Amend the Covering Notes of the Plan 修訂圖則《註釋》的說明頁 ☑ Amend the Notes of the zone applicable to the site 修訂適用於申請地點土地用途地帶的《註釋》 ☑ Rezone the application site from "Open Storage" ("OS"), "Agriculture" ("AGR") Zones and Area shown as 'Road' to "Other Specified Uses" annotated "Mixed Use" Zone 把申請地點由「露天貯物」、「農業」及顯示為「道路」的地方地帶改劃為「其他指定用途」註明「混合用途」地帶

Development Parameters (for indicative purpose only) 發展參數(只作指示用途)

			sq.m 平方米	Plot Ratio 地積比率
(i)	Gross floor area and/or plot ratio 總樓面面積及／或地積比率	Domestic 住用	105,145 ☑ About 約 ☐ Not more than 不多於	5.9 ☐About 約 ☑Not more than 不多於
		Non-domestic 非住用	19,603 (excluding social welfare facilities of 1,933 m² GFA (a 100-place Child Care Centre with 1,146m² GFA and a 60-place Day Care Centre for the Elderly with 787 m² GFA) and a public transport terminus with 1,516m² GFA. The GFAs are indicative only and would be confirmed in detail design stage. These GFAs are assumed to be exempted from GFA calculation.) ☑ About 約 ☐ Not more than 不多於	1.1 ☑About 約 ☐Not more than 不多於
(ii)	No. of block 幢數	Domestic 住用	4 (T3 to T6)	
		Non-domestic 非住用	1 (T1)	
		Composite 綜合用途	1 (T2)	

(iii)	Building height/No. of storeys 建築物高度／層數	Domestic 住用		m 米 ☐ (Not more than 不多於)
			T3 and T4: +171.85 T5 and T6: +171.83	mPD 米(主水平基準上) ☐ (Not more than 不多於)
			47 3 (3 storeys of basement carpark are shared among T3 to T6)	Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☑ Exclude 不包括* ☐ *Carport 停車間* ☑ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
		Non-domestic 非住用		m 米 ☐ (Not more than 不多於)
			T1: +169.70	mPD 米(主水平基準上) ☐ (Not more than 不多於)
			35 1 (1 storey of basement carpark is shared among T1 to T2)	Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☑ Exclude 不包括* ☐ *Carport 停車間* ☑ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
		Composite 綜合用途		m 米 ☐ (Not more than 不多於)
			T2: +175.00	mPD 米(主水平基準上) ☑ (Not more than 不多於)
			48 3 (3 storeys of basement carpark are shared among T2 to T6))	Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☑ Exclude 不包括* ☐ *Carport 停車間* ☑ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
(iv)	Site coverage 上蓋面積	Not more than 不多於 75% (below 15m) (domestic 住用) Not more than 不多於 37.5% (above 15m) (domestic 住用) Not more than 不多於 100% (below 15m) (non-domestic 非住用) Not more than 不多於 90% (over 24m but not exceeding 27m) (non-domestic非住用) Not more than 不多於 62.5% (above 27m) (non-domestic 非住用)		% ☐ About 約
(v)	No. of units 單位數目	2,205		
(vi)	Open space 休憩用地	Private 私人	6,174	sq.m 平方米 ☑ Not less than 不少於
		Public 公眾		sq.m 平方米 ☐ Not less than 不少於

(vii) 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	758
	Private Car Parking Spaces 私家車車位	725
	Motorcycle Parking Spaces 電單車車位	33
	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)	
	Total no. of vehicle loading/unloading bays/lay-bys 上落客貨車位／停車處總數	21
	Taxi Spaces 的士車位	2
	Coach Spaces 旅遊巴車位	1
	Light Goods Vehicle Spaces 輕型貨車車位	8
	Medium Goods Vehicle Spaces 中型貨車位	
	Heavy Goods Vehicle Spaces 重型貨車車位	10
	Others (Please Specify) 其他 (請列明)	

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）	☐	☐
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）	☐	☑

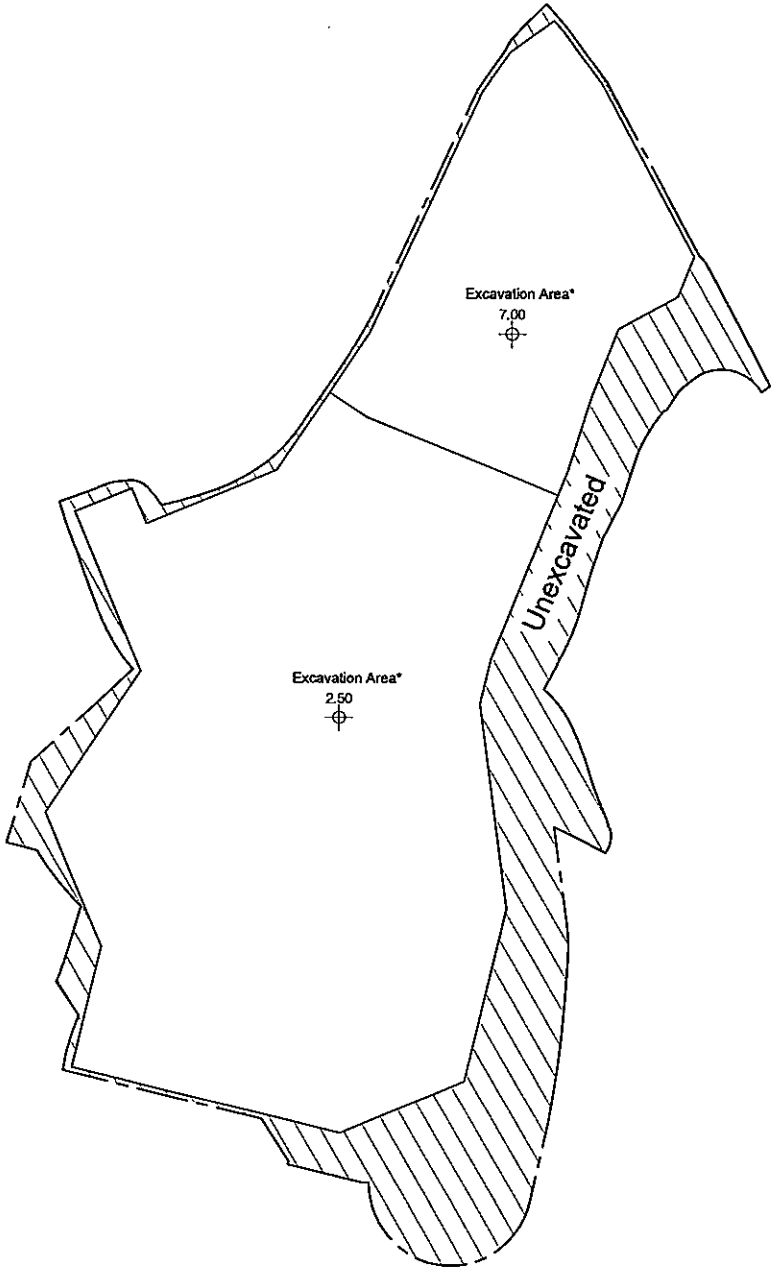
Water Supply Impact Assessment, Air Ventilation Assessment - Expert Evaluation

Landscape Master Plan and Tree Preservation Proposals

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。



*The excavation area is about 14,300m^2 and the excavation depth is about 13.5m. The excavation area and depth are subject to future detailed design on foundation based on further geotechnical information.

EXCAVATION PLAN SK-13
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
12 OCTOBER 2023

ARUP

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131), to Rezone the Application Site from "Open Storage", "Agriculture" Zones and an area shown as 'Road' to "Other Specified Uses" annotated "Mixed Use" Zone, for Proposed Mixed Use Development at Lots 796 and 1008 RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Consolidated Set

Support Planning Statement with Final Technical Assessments & Further Information with Responses to Comments Tables

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 295450-00

Arup Hong Kong Limited
Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon
Hong Kong
arup.com

Attachment A

Final Supporting Planning Statement with Final Technical Assessment Reports

ARUP

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131), to Rezone the Application Site from "Open Storage", "Agriculture" Zones and an area shown as 'Road' to "Other Specified Uses" annotated "Mixed Use" Zone, for Proposed Mixed Use Development at Lots 796 and 1008 RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Supporting Planning Statement

August 2024

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 295450-00

Arup Hong Kong Limited
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Hong Kong
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Executive Summary

This Supporting Planning Statement is submitted for the Proposed Amendment to the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14 (the "OZP") under Section 12A of the Town Planning Ordinance (Cap. 131), in support of the rezoning from "Open Storage" ("OS"), "Agriculture" ("AGR") zones and an area shown as 'Road' to a tailor-made "Other Specified Use" annotated "Mixed Use" ("OU(MU)") zone at Lots 796 and 1008 RP in D.D. 77 and adjoining Government land in Ping Che, Ta Kwu Ling, New Territories (the "Application Site") to facilitate a Proposed Mixed Use Development (the "Proposed Amendment").

The Application Site is currently falling mainly on "OS" zone to the southwest of Ping Che Road and a minor portion on "AGR" and area shown as 'Road' on the OZP. Majority part of the Application Site is paved and occupied by temporary structures for open storage use. According to the Northern Metropolis Development Strategy ("NMDS") promulgated by the Government in 2021, the New Territories North New Town ("NTN New Town") has been put forward to foster integration of Hong Kong with the Greater Bay Area. The Application Site, being located at the centre of the NTN New Town and near to the planned Ping Che Station under the Northern Link Eastward Extension ("NOLE") and Northeast New Territories Line ("NENTL"), is considered with opportunities to unleash the valuable land resources and undergo improvement of the overall quality of the built environment by phasing out existing brownfield uses.

The Applicant, being the sole landowner of private lots on the Application Site, seizes the opportunity to respond to the changing planning circumstances for early delivery of 2,205 private residential units at the Application Site by 2032 that is in line with the Government's planning intention. The early delivery by private initiative will not mobilise the Government's resources, where there would be social welfare facilities and a Public Transport Terminus ("PTT") provided within the Application Site as planning merits to serve the existing and future population.

In view of the strategic location of the Application Site at the future centre of the NTN New Town and near to the potential Ping Che Station with connections with the Boundary Control Points ("BCP") and the nearby Heung Yuen Wai Industrial Estate/Science Park, the Applicant sees the opportunity to provide additional commercial elements along Ping Che Road, including office space and complementary hotel element as a support to the economic activities along the boundary while providing retail facilities. Taken into account the above considerations, the Applicant thus put forward a mixed use development at the Application Site that could be delivered in efficient and timely manner as an early phase of the NTN New Town.

An Indicative Scheme has been formulated in support of the Proposed Amendment at the Application Site. It is proposed for a maximum plot ratio ("PR") of 7 on the Application Site, of which not more than PR5.9 will be used for domestic use, while about PR1.1 will be used for non-domestic use including retail, office and hotel. In addition, the Applicant also intends to provide a 100-place Child Care Centre, a 60-place Day Care Centre for the Elderly, as well as a Public Transport Terminus ("PTT") as additional planning gains serving the local community. The Applicant is also intended to upgrade the unnamed sub-standard local road running along the eastern boundary of the Application Site to a standard 7.3m carriageway with footpaths on both sides, and will be open for public use connecting Ping Che Road with the inner area to the south.

The following planning merits could be achieved with the Proposed Amendment:

- Respecting the Planning Intention for High-Density Development in the NTN New Town;
- Providing the Right Degree of Flexibility on Mix of Uses and Layout at the Centre Location of the NTN New Town;
- Meeting the Main Planning Criteria for "OU(MU)" Zone;
- Meeting Acute Housing Demand by Private Sector Initiatives;
- Improving the Environmental Quality through Phasing Out of Brownfield Uses;
- Connectivity Improvement through Provision of Public Transport Facilities and Road Improvement Works
- Supporting Community Needs and Improving Quality of Life;
- Ensuring Compatibility with Surrounding Environment;
- Inducing No Adverse Impacts to Surrounding Environment; and
- Setting a Desirable Precedent for Public-Private Partnership in Delivering the NTN New Town.

This Application has demonstrated Applicant's genuine intention and commitment in taking forward the Indicative Scheme at the Application Site. In light of the planning merits and justifications put forward in this Supporting Planning Statement, we sincerely seek the favorable consideration from the Town Planning Board to give its support to this Section 12A Application.

行政摘要

（內文如與英文版本有任何差異，應以英文版本爲準）

本規劃綱領根據《城市規劃條例》（第 131 章）第 12A 條，就位於新界打鼓嶺坪輋丈量約份第 77 約地段第 796 號、第 1008 號餘段毗連政府土地（「申請地點」），擬議修訂坪輋及打鼓嶺分區計劃大綱核准圖編號 S/NE-TKL/14（「分區計劃大綱圖」）將申請地點由「露天貯物」、「農業」地帶及顯示為「道路」的地帶方改劃為「其他指定用途」註明「混合用途」地帶，以作混合用途發展（「擬議修訂」）。

根據分區計劃大綱圖，位於坪輋路西南方的申請地點現時主要被劃為「露天貯物」地帶，另有部分被劃為「農業」地帶及顯示為「道路」的地方。現時申請地點主要為已鋪路面的地區，亦存在不少臨時構築物作露天倉庫用途。隨著政府近年公佈「北部都會發展策略」並銳意發展新界北新市鎮，以促進香港融入粵港澳大灣區。申請地點位於未來新界北新市鎮核心位置並鄰近規劃中的「北環綫」東延及新界東北綫的的坪輋鐵路站，可藉此釋放珍貴的土地資源，並通過逐步淘汰現有的棕地用途來改善整體的環境質素。

申請人作爲申請地點中私人地段的唯一擁有人，積極回應規劃環境的轉變，將透過私人市場參與的發展，爭取於 2032 年之前於申請地點提供共 2,205 個私人住宅單位。透過私人市場適切提供住宅供應將不需動用公共資源，同時於申請地點內提供社會福利設施及公共車輛總站作爲規劃增益，服務現有及未來的社群。

鑑於申請地點位於新界北新市鎮未來中心的策略性位置，並鄰近規劃中的坪輋鐵路站，將連繫口岸及附近的香園圍工業邨/科學園，申請人認為可沿坪輋路提供額外的商業活動，包括辦公室和附加酒店，以支援沿口岸一帶的經濟活動。基於以上考慮，申請人建議在申請地點作混合式發展，務求有效及盡早地促進新界北新市鎮的早期發展。

本規劃綱領附上指示性方案以支持在申請地點的擬議修訂。擬議修訂建議最高地積比為 7 倍（其中住用部份的地積比率不得超過 5.9 倍），另外地積比率約 1.1 倍將用作非住宅用途，包括零售、辦公室及酒店。申請人亦將提供一間 100 個服務名額的幼兒中心、一間提供 60 個服務名額的長者日間護理中心及一個公共車輛總站作爲規劃增益以服務本地社區。申請人亦建議將沿申請地點東面的一條低於標準的未命名道路改善爲 7.3 米寬的標準車路，及為車路兩旁提供行人道予公眾使用，以連接坪輋路及申請地點以南的地方。

ARUP

擬議修訂可以達到以下規劃增益：

- 尊重新界北新市鎮作高密度發展的規劃意向；
- 在新界北新市鎮的中心地段為發展用途的組合及佈局提供適當的靈活性；
- 符合「其他指定用途」註明「混合用途」地帶主要規劃準則；
- 以私人市場參與以協助滿足本港急切的房屋需求；
- 透過淘汰棕地作業以改善整體環境質素；
- 透過提供公共交通設施及道路改善工程以改善連接性；
- 滿足社區需要及提升生活質素；
- 確保與周邊環境兼容；
- 不會對周邊環境造成負面影響；及
- 為透過公私營協作建設新界北新市鎮創立良好先例。

申請人對推進於申請地點的指示性方案持有誠懇和積極的態度。基於本規劃綱領所闡述的規劃增益和理據，我們懇請城市規劃委員會支持是次第 12A 條規劃申請。

1. Introduction

1.1.1 This Supporting Planning Statement is submitted to the Town Planning Board ("TPB") in support of the Planning Application under Section 12A of the Town Planning Ordinance (Cap. 131) for Proposed Mixed Use Development (the "Proposed Amendment") at Lot 796 and 1008 RP at D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories (the "Application Site").

1.1.2 The Applicant proposes amendment to the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14 (the "OZP") by rezoning the Application Site from "Open Storage" ("OS"), "Agriculture" ("AGR") zone, and an area shown as 'Road' to "Other Specified Uses" annotated "Mixed Use" ("OU(MU)") zone with a maximum plot ratio ("PR") of 7 (of which the domestic plot ratio should not exceed 5.9) and a maximum building height ("BH") of 175 metres above principal datum ("mPD"). In view of the Application Site's central location in the New Territories North New Town ("NTN New Town") and its close proximity to existing and future population, the Applicant is intended to provide additional social welfare facilities including a 100-place Child Care Centre ("CCC") and a 60-place Day Care Centre for the Elderly ("DE"), as well as a Public Transport Terminus ("PTT") to serve the surrounding neighbourhoods in Ping Che.

1.1.3 The Application Site is majorly paved and mainly use for open storage for construction materials. Currently, the Application Site is located immediately southwest of Ping Che Road, while to its immediate east is an un-named and sub-standard local road. The un-named local road is proposed to upgrade to a 7.3m single carriageway with footpaths on both sides within the Application Site boundary for public use. This upgraded road will be used for run-in for the PTT as well as run in/out to serve the development at the Application Site. In addition, it will be open for public access connecting to Ping Che Road and to the further south of the Application Site.

1.1.4 Overall, the Proposed Amendment demonstrates the Applicant's genuine intention to align with the planning intention of the Government in promoting high-density development under the NTN Study, and later the NTN New Town under the Northern Metropolis Development Strategy ("NMDS"). Being the sole owner of private lots within the Application Site, the Applicant is committed to spearhead development of the NTN New Town by a properly designed mixed use development appealing to market needs (including residential, retail, office and hotel elements) and enhancing well-being of local communities by 2032 at a location to be conveniently served by the potential Ping Che Station. .Technical assessments conducted have confirmed that the Proposed Amendment is technically feasible and will not generate adverse impacts to the surrounding area.

1.1.5 This Supporting Planning Statement contains the sections below to support this Planning Application and demonstrates its feasibility and suitability:

- **Section 2** describes the context of the Application Site and its surrounding areas;
- **Section 3** explains the planning context of the Application Site;
- **Section 4** presents the Indicative Scheme at the Application Site;
- **Section 5** describes the amendment proposal to be incorporated into the Plan the Notes of the OZP;
- **Section 6** highlights the planning justifications and planning merits in of the Proposed Amendment; and

- **Section 7** concludes the highlights and justifications of this Supporting Planning Statement.

2. Site Context

2.1 Location

2.1.1 The Application Site is located along Ping Che Road, Ping Che, Ta Kwu Ling, New Territories.

2.1.2 Please refer to **Figure 2.1** for the Location Plan.

2.2 Land Status

2.2.1 The Application Site is about 17,821.2m^2, of which about 7,882.7m^2 (about 44.2% of the Application Site) is under private ownership (i.e. Lots 796 and 1008 RP in D.D. 77) under sole ownership by the Applicant. The remaining area is occupied by Government land.

2.2.2 Please refer to **Figure 2.2** for the Lot Index Plan.

2.3 Existing Land Use

2.3.1 Majority part of the Application Site is paved. It is currently used as open storage for construction materials. A strip of trees and vegetation can be observed along the northern and southern boundary of the Application Site intermixing with temporary structures. The eastern part of the Application Site includes a portion of the existing un-named local road which connects Ping Che Road to the further south of Ping Che, where the Applicant is prepared to commit upgrading a portion of this local road to enhance connectivity (to be discussed in later section).

2.3.2 Please refer to **Figure 2.3** for the existing use and condition of the Application Site.

2.4 Surrounding Land Uses

2.4.1 The Application Site is currently surrounded by a number of brownfield uses such as open storage and rural workshops. Existing village type developments can also be found near the Application Site.

2.4.2 To the **immediate north** of the Application Site is an island street block bounded by Ng Chow South Road, Ng Chow Road and Ping Che Road, mainly comprises of "Industrial (Group D)" ("I(D)"), "Government, Institution or Community" ("G/IC") and "Green Belt" ("GB") zone. Open storages and temporary structures are mainly identified within the "I(D)" zone. The "G/IC" zone is currently occupied by the Ta Kwu Ling Rural Centre Government Offices, Ping Che Nursing Home Limited, a number of local shops and restaurants and open air car parks. Ping Che New Village and it's sitting out area can be found on the "GB" zone. To the **further north**, Sun Uk Tsai Village and Ping Che Tsuen can be found on "Village Type Development" ("V") zone to the north of Ng Chow South Road. An "Open Space" ("O"), currently occupied by Ping Che Mini-Soccer Pitch can also be found serve the existing surrounding population in the village. Considerable amount of open storage and rural workshop uses in temporary structures can be found in areas zoned as "AGR" and "I(D)" intermixing with rural villages.

2.4.3 The **immediate east** of the Application Site across the unnamed local road is largely zoned as "OS" along both side of Ping Che Road, currently occupied by container storage and rural

workshops. A "G/IC" zone can be found in Pak Hok Shan, currently occupied by the Baptist Convention of Hong Kong Baptist Assembly.

2.4.4 The **immediate south** of the Application Site of a mix of land uses comprising mainly of "OS" and "AGR" zones. Only limited agricultural activities but majority open storage and rural workshop uses can be found within the "AGR" zone. To the **further south** is the larger "GB" zone which surrounds the ridgeline of Tsung Shan. .

2.4.5 To the **west** of the Application Site is largely zoned as "AGR" on the OZP. It is observed that majority of "AGR" zone to the **immediate west** of the Application Site are largely occupied by open storage and rural workshops, while more agricultural activities can only be found on the "AGR" zone to the **further west** near Ping Che Yuen Ha.

2.4.6 Please refer to **Figure 2.4** for the surrounding context of the Application Site.

2.5 Accessibility

2.5.1 The Application Site is directly accessible by vehicles and pedestrians via Ping Che Road to the immediate northeast of the Application Site. Ping Che Road is a single two-lane rural road, connecting to the Application Site. Its northern end and southern end connect to Lin Ma Hang Road and Sha Tau Kok Road – Ma Mei Ha respectively. Franchised bus and green minibus services are immediately available along Ping Che Road, within 5 minutes walking distance to the Application Site, connecting to the MTR Fanling Station and Fanling Town Centre. The eastern and southern part of the Application Site can be directly accessed by an unnamed road with a width of about 16m.

3. Planning Context

3.1 Land Use Zoning

3.1.1 The Application Site falls within the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14 (the "OZP"). Majority part of the Application Site (about 56.2%) falls within the "OS" zone, followed by "AGR" zone (about 30.4%) and a minor portion within area shown as 'Road' (about 13.4%).

3.1.2 According to the Notes of the OZP, the planning intention of the "OS" zone is "*primarily for the provision of land for appropriate open storage uses and to regularize the already haphazard proliferation of open storage uses. It provides for the orderly development of land for open storage uses that cannot be accommodated in conventional godown premises*". Whilst "AGR" zone is "*primarily to retain and safeguard good quality agricultural land/farm/fish ponds for agricultural purposes. It is also intended to retain fallow arable land with good potential for rehabilitation for cultivation and other agricultural purposes*". As stated in the Covering Notes of the OZP, *"area shown as 'Road', all uses or developments except specified in paragraphs (9)(a) to (9)(d) and 9(g) above and those specified below require permission from the Town Planning Board: road and on-street vehicle park."*

3.1.3 For details, please refer to the extracted Schedule of Use and Explanatory Statement of the "OS" and "AGR" zones in **Figure 3.1a to 3.1f**, and the extracted notes of area shown as 'Road' on the OZP in **Figures 3.1g.**

3.2 Redefined Spatial Development Pattern Under Hong Kong 2030+

3.2.1 In respond to the changing planning circumstances and national policy directives[1] in strengthening the role of Hong Kong in national development, the Government has put forward the "Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030" ("HK2030+") [2] to encapsulate territorial spatial development strategy. In particular, HK2030+ sets out new impetus for economic growth and foster integration between Hong Kong and the Greater Bay Area by introducing the Northern Metropolis ("NM").

3.2.2 As illustrated in the Conceptual Spatial Framework[3] of HK2030+, the NM unveiled in 2021 Policy Address is proposed as another metropolis in the northern part of Hong Kong. It encompasses an area of about 30,000 hectares (ha), covering Yuen Long and North Districts which include the boundary areas between Hong Kong and Shenzhen. The NM is located closely to several Boundary Control Points ("BCPs") including Shenzhen Bay, Lok Ma Chau, Lok Ma Chau Spur

[1] National policy directives include Outline of the 14th Five-Year Plan for National Economic and Social Development of the People's Republic of China and the Long-Range Objectives Through the Year 2035 (the "National 14th Five-Year Plan") and the Outline Development Plan for the Guangdong Hong Kong-Macao Greater Bay Area (the "Outline Development Plan for the GBA")

[2] Source: Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030", https://www.pland.gov.hk/pland_en/p_study/comp_s/hk2030plus/document/2030+_booklet.pdf

[3] Source: Conceptual Spatial Framework of HK2030+, https://www.pland.gov.hk/pland_en/p_study/comp_s/hk2030plus/document/2030+_booklet_CSF.pdf

Line, Lo Wu, Man Kam To, Heung Yuen Wai and Sha Tau Kok. HK2030+ envisions the Northen Metropolis will redefine the spatial development pattern in Hong Kong.

3.2.3 To further expand the concept and realize the NM, NMDS[4] is formulated on the basis of the HK2030+. The NMDS proposes to expand the Northern Economic Belt under the Hong Kong 2030+ to include new towns in Yuen Long, Tin Shui Wai and Fanling/Sheung Shui, various New Development Areas ("NDAs"), including the NTN New Town. The Northern Economic Belt, consolidated within the NM, will be the most vibrant area for urban development in the next 20 years (**Figure 3.2a refers**).

3.2.4 Close proximity of the NM to Shenzhen creates a favourable location for Innovation and Technology ("I&T") industry as another economic engine in driving the development of the NM, distinguishing it from the finance and business in the Harbour Metropolis but complementing to its positioning. This also presents opportunity in enhancing the co-operation between Hong Kong and Shenzhen, as well as fostering integration of Hong Kong into the overall national development. Moreover, the NTN New Town is intended to accommodate a population of 200,000[5] by fully unleashing its development potential with more efficient use of abandoned agricultural land and brownfield site.

3.2.5 In addition, Eastern Knowledge and Technology Corridor was outlined in the Conceptual Spatial Framework of HK2030+ to strategically connect a range of existing and planned I&T-related clusters and developments at the eastern part of Hong Kong as one of the two development axes. Situated along this corridor. Ping Che lies at the midway location connecting to the possible science park/industrial estate near Liantang/Heung Yuen Wai ("LT/HYW") BCP to its north, San Tin Technopole and Hong Kong-Shenzhen Innovation and Technology Park to its west, Tai Po Industrial Estate (repositioned as Tai Po InnoPark) and Hong Kong Science Park to its south (**Figure 3.2b refers**). The Ping Che area would be able to capture emerging opportunity more than just housing but economic and other complementary land uses along the corridor.

3.2.6 The juxtaposition of Application Site as part of the NTN New Town under the NM, as well as its location along the Eastern Knowledge and Technology Corridor allows Ping Che to capture flourishing development opportunities to cater for emerging housing and economic demands in support of the redefined spatial development patterns based on the Government policy directives and evolving planning circumstances.

3.3 Government's Multi-Pronged Approach to Increase Housing Supply

3.3.1 Hong Kong has been facing housing shortage as a territorial issue. the latest Long Term Housing Strategy ("LTHS") Annual Progress Report [6] in 2022 stated that the projected housing demand/housing supply target for the next 10-year period from 2023-2024 to 2032-33 would be 421,000 units. Based on the public/private split of 70:30 committed by the Government to balance housing mix, the public housing supply target will be 301,000 units and the private housing supply target will be 129,000 units respectively. In particular, the LTHS suggests that one of the strategic

[4] Source: Northern Metropolis Development Strategy, https://www.policyaddress.gov.hk/2021/eng/pdf/publications/Northern/Northern-Metropolis-Development-Strategy-Report.pdf

[5] Source: New Territories North New Development Area, 5 September 2021, https://www.devb.gov.hk/en/home/my_blog/index_id_459.html

[6] Source: Long Term Housing Strategy Annual Progress Report 2022, https://www.hb.gov.hk/eng/policy/housing/policy/lths/LTHS_Annual_Progress_Report_2022.pdf

directions for private residential properties is to stabilise the residential property market through steady land supply.

3.3.2 In meeting the acute housing demand, the Government has been adopting a multi-pronged approach in increase housing supply through searching diversified land supply sources while reviewing the opportunity to increase the development intensity of residential development in particular in the NDAs.

3.3.3 According to 2018's Striving for Multi-Pronged Land Supply – Report of the Task Force on Land Supply[7] released by The Task Force on Land Supply (the "Task Force"), development of brownfield sites, particularly those located in the New Territories, has already been regarded as one of the land supply options with the potential to increase land supply in both short-to-medium term and medium-to-long term. It is considered by the Task Force as a priority option for implementation[8]. Later in 2019, Planning Department ("PlanD") has completed a Study on Existing Profile and Operations of Brownfield Sites in the New Territories (the "Brownfield Study")[9] to examine the full picture of brownfield sites in the New Territories. Based on three criteria, namely, strategic location (distance to existing new towns), transport considerations (distance to the existing highways) and size of brownfield clusters (location of the brownfield sites to each other in forming a cluster), Ping Che and Ta Kwu Ling area, including the Application Site, has been identified with medium development potential, where the planned NTN New Town locates.

3.3.4 In the 2020 Policy Address[10], it was emphasized by the Government that the core of the housing problem lies in the shortage of land for housing development, where private developers have the capability and capacity to build more flats in supporting the Government's multi-pronged land creation strategy. It is emphasized that privately-owned land has always been an important source of housing supply.

3.3.5 In addition, the Government has been exploring opportunities in increasing the development intensity as one of the ways to increase housing supply. Back in the 2014 Policy Address[11], the Government announced that except for the north of Hong Kong Island and Kowloon Peninsula which are more densely populated, the maximum domestic PR ("DPR") that may be allowed for housing sites located in other Density Zones of the Main Urban Areas and New Towns would be raised generally by up to 20% as appropriate. In the latest 2022 Policy Address[12], the Government announced that, the NM, being as one of the strategic growth area in the future, is suggested to increase in its development intensity, with a maximum domestic plot ratio of 6.5 for residential sites and a maximum plot ratio of 9.5 for commercial sites as the guiding principle.

3.3.6 In view of the previous studies and policy directions on land and housing supply, the Application Site in Ping Che, locating in the NM, presents opportunity to unleash development potential and early provision of housing supply by private initiatives.

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[7] Source: Striving for Multi-Pronged Land Supply – Report of the Task Force on Land Supply, https://www.devb.gov.hk/filemanager/en/content_1171/Report%20(Eng).pdf

[8] Source: Paragraph 5.10, Striving for Multi-Pronged Land Supply – Report of the Task Force on Land Supply, https://www.devb.gov.hk/filemanager/en/content_1171/Report%20(Eng).pdf

[9] Source: Study on Existing Profile and Operations of Brownfield Sites in the New Territories, https://www.pland.gov.hk/pland_en/p_study/comp_s/Brownfield/Report/Brownfield%20Study_FR_ENG.pdf

[10] Source: Paragraph 96, The Chief Executive's 2020 Policy Address, https://www.policyaddress.gov.hk/2020/eng/p96.html

[11] Source: Paragraph 122, The Chief Executive's 2014 Policy Address, https://www.policyaddress.gov.hk/2014/eng/p122.html

[12] Source: Paragraph 56, The Chief Executive's 2022 Policy Address, https://www.policyaddress.gov.hk/2022/en/p56.html

3.4 High Density Development Proposed under New Territories North Study and Northern Metropolis Action Agenda

3.4.1 Completed and published in 2017, the Preliminary Feasibility Study on Developing the New Territories North (the "NTN Study")[13] recommended Ping Che (within Ta Kwu Ling NDA) together with nearby areas in the NTN for a comprehensive planning harnessing the development potential. It was also stated there is an intention of the NTN to develop into a modern new town[14]with a similar scale as the Fanling/Sheung Shui New Town in accordance with 2013 Policy Address. The NTN Study also suggested that transit-oriented development ("TOD") should be adopted in the planning of the Potential Development Areas ("PDAs") to provide opportunities to create core areas of highly concentrated activities and development intensity adjacent to planned or possible stations.

3.4.2 The Application Site falls within the Ta Kwu Ling PDA which forms the NTN New Town alongside HYW and Queen's Hill PDAs. Under Development Scenario II, a high-residential development scenario, the Application Site was planned as a commercial development with a PR of 6.5. While in the vicinity of the Application Site, it was planned as residential development with a PR of 7.5 and 5, as well as mixed use development with domestic plot ratio of 6.5 and non-domestic plot ratio ("non-DPR") of 1.5 **(Figure 3.4a refers).** In particular, the residential use setting at PR of 7.5[15], which is the maximum development intensity, has already taken into account of the urban design consideration. Such high development intensity was proposed in the Eastern NTN, where the Application Site locates, for residential use comparable to the PR of the metro area of Kowloon.

3.4.3 Located at the centre location with planned high development intensity, it is anticipated that the Application Site, located within Ta Kwu Ling NDA is positioned as high-density residential development with residential and mixed use development at its vicinity. The nearby proposed Science Park / Industrial Estate Boundary planned in the same study will also provide a favourable condition for the provision of ancillary office and hotel at the Application Site as a satellite location with connections to the Industrial Estate **(Figure 3.4b refers)**.

3.4.4 In addition, in accordance with the latest Northern Metropolis Action Agenda[16] published in 2023, the NTN New Town (where Ping Che and the Application Site fall within) is positioned as "Boundary Commerce and Industry Zone" to boost commerce and industries by utilising the three boundary crossings points (BCPs) in Heung Yuen Wai, Man Kam To and Lo Wu. It is suggested that the NTN New Town has potential to develop various BCP related economic uses and uses requiring larger land area for operation. Ultimately, developing into a BCP business district as a base for emerging industries complement to San Tin Technopole and Luohu District in Shenzhen. Ping Che area, where the Application Site falls within, is foreseen to have tremendous

[13] Source: The Preliminary Feasibility Study on Developing the New Territories North, https://www.pland.gov.hk/pland_en/p_study/comp_s/ntn_study/ntn_fr.pdf

[14] Source: Paragraph 1.1.7, The Preliminary Feasibility Study on Developing the New Territories North, https://www.pland.gov.hk/pland_en/p_study/comp_s/ntn_study/ntn_fr.pdf

[15] Source: Paragraph 3.8.5, The Preliminary Feasibility Study on Developing the New Territories North, https://www.pland.gov.hk/pland_en/p_study/comp_s/ntn_study/ntn_fr.pdf

[16] Source: Page 32, Northern Metropolis Action Agenda, https://www.nm.gov.hk/downloads/NM_Eng_Booklet_Web.pdf

opportunities under the aspirations of the NTN Study. The proposed development at the Application Site could complement with the transformation of the NTN.

3.5 Strategic Location of Ping Che in Unleashing Development Potential

3.5.1 Subsequent to the completion of the NTN Study in 2017, the Government recently has shown stronger commitment in shifting the development focus of Hong Kong from south to north under the NMDS. NMDS has proposed to implement eastward extension of the Northern Link[17] ("NOL") linking the Kwu Tung North NDA to Lo Wu and Man Kam To. As indicated in the NOL eastward extension, a Ping Che Station is planned under this railway line. There is an anticipated improvement of accessibility in Ping Che. In the future, Ping Che Station will be connected to the other new towns such as Kwu Tung North NDA enabled by rail and highway infrastructures, and further west to San Tin/Lok Ma Chau ("ST/LMC") Development Node. To the north of Ping Che, it is also only two stations from Ping Che Station to planned HYW Station in the NOL railway line and further north to the BCP in Liantang.

3.5.2 On top of that, the latest Policy Address 2022[18] has also emphasized the cross-broader interactions through leveraging on the proximity to the hinterland of the NM. Ping Che, by a strategic location in locating near to LT/HYW BCPs further connecting to Shenzhen and the central location of the NTN New Town connecting to the rest of the NM, is embedded with high development potential that are to be unleashed.

3.5.3 Additionally, the latest Northern Metropolis Action Agenda and Hong Kong Major Transport Infrastructure Development Blueprint has revealed that, the Ping Che Station[19] will be planned as part of both the NOLE and NENTL, which would further enhance the accessibility of Ping Che area **(Figure 3.5 refers)**.

3.5.4 In view of the latest planning circumstances, the Application Site is anticipated to be located close to the future Ping Che Station which would be subject to detailed alignment announced by the Government. The Application Site will be able to leverage on the strategic location and unleash its development potential. In particular, the Application Site has opportunity to undergo TOD by capitalizing on its connectivity for not only high-density residential development but also commercial component complementary to economic use in other parts of the NM.

3.6 Encouragement of "Other Specified Uses" annotated "Mixed Use" by the Government

3.6.1 It is commonly seen in Hong Kong that a mixture of uses is positioned close to each other, such as commercial cum residential building/development, large-scale retail and commercial facilities sitting underneath the high-density residential development, and comprehensive development area. The Government has been encouraging such kind of mixed use development in urban areas and new town development through introduction of a flexible zoning mechanism while at the same

[17] Source: Paragraph 79, Northern Metropolis Development Strategy, https://www.policyaddress.gov.hk/2021/eng/pdf/publications/Northern/Northern-Metropolis-Development-Strategy-Report.pdf

[18] Source: Paragraph 56, The Chief Executive's 2022 Policy Address, https://www.policyaddress.gov.hk/2022/en/p56.html

[19] Source: Page 35, Northern Metropolis Action Agenda, https://www.nm.gov.hk/downloads/NM_Eng_Booklet_Web.pdf

time with appropriate planning control to avoid possible nuisances and interface problem, such as the introduction of "OU(MU)" zone.

3.6.2 In particular, the Town Planning Board recognizes that there are merits in functionally and physically integrating different types of compatible uses within a building or over a spatial area, which helps creating vitality and diversity of different development. The Town Planning Board Guideline No. 42 Designation of "Other Specified Uses" annotated "Mixed Use" ("OU(MU)") Zone and Application For Development Within "OU(MU)" Zone under Section 16 of The Town Planning Ordinance ("TPB PG-NO.42")[20] under such background was prepared in 2011 to provide guidelines on the planning criteria for "OU(MU)" zone.

3.6.3 There is a list of planning criteria that are used to evaluate the suitability of area to be designated as "OU(MU)" zone. For example, the site is more suitable if the mixed use development will be compatible with the existing and planned land uses in the area, preferably in form of a street block basis having higher possibility for site amalgamation and realisation of greater potential of development benefited from the ownership pattern. In particular, areas that are planned for or near major activity nodes such as major railway interchange is suitable to bring vitality and vibrancy to the area. In terms of accessibility and transport capacity, it should preferably along a major transportation route that is served by a mass transit railway so that there is sufficient capacity to the traffic generated by the mixed use development. Besides, adequate provision of social welfare facilities should be ensured to cater for the needs of the residents. There are also other considerations such as the provision of other infrastructures and the overall land use reviews of the area.

3.6.4 In accessing planning application regarding "OU(MU)" zone, the proposed development should be in line the overall planning intention of the area, while ensuring the compatibility with the surrounding land uses. Another consideration is that proposed development under the "OU(MU)" zone should bring variety of uses and enhance the character, vitality and vibrancy to the area, would be favourably considered. Physical segregation should also be provided to separate residential uses from non-residential uses, together with appropriate design of the buildings for such segregation in terms of separate access/entrance/lift lobbies/staircases and any other appropriate means.

3.6.5 In view of the Application Site's advantage in terms of location, size, planning context and availability, it is considered appropriate to use mixed use development that will bring vibrancy to the Ping Che area alongside the development of NTN New Town.

[20] Source: TPB PG-NO. 42 Designation of "Other Specified Uses" annotated "Mixed Use" ("OU(MU)") Zone and Application for Development Within "OU(MU)" Zone under Section 16 of The Town Planning Ordinance, https://www.tpb.gov.hk/en/forms/Guidelines/TPB_PG_42.pdf

4. Indicative Scheme for Mixed Use Development at the Application Site

4.1 Unleashing Development Potential in a Prime Location

4.1.1 Upon the review of the existing policies and planning documents, it is ascertained that the Application Site, locating in proximity to the future Ping Che Station and at a strategic location within the wider NTN context connecting to other important development nodes and BCPs in the NM, is highly appropriate for unleashing its development potential in form of high-density development. However, the existing zoning of the Application Site is yet to be in line with the Government's planning direction, whereas the valuable land resource of the Application Site itself has yet to be fully utilised with its existing brownfield operations.

4.1.2 Being the sole landowner of private lots within the Application Site, the Applicant fully respects and is committed to echo with the Government's policy intention and development direction of the locality of where the Applicate Site locates. Hence, the Applicant initiates a mixed use development at the Application Site, as a proactive response to the Government's calling for private sector participation in fulfilling housing supply targets for the territory. With an optimized PR having due consideration of the updating planning contexts and policy directions the Government aspires in the newer generations of new towns, the development potential of the Application Site can be unleashed.

4.1.3 In addition to alleviating housing shortages issue committed by the Applicant, it is also seen by the Applicant that, the locational advantage of the Application Site in close proximity to the existing Ping Che Road and its speedy connection within the centre location of the NTN New Town further connecting to the LT/HYW BCPs and its nearby possible Science Park/Industrial Estate, will offer the Application Site the suitable non-domestic uses, as well as office and hotel as ancillary services with the BCP, together with retail, social welfare facilities and a PTT as supporting facilities for the existing and future population,. The Proposed Amendment is hence prepared by the Applicant to realize the planning intention of the Application Site as a proactive response and catalyst for sustainable growth.

4.1.4 To demonstrate the feasibility and merits of the Proposed Amendment, an Indicative Scheme has been prepared in support of the Proposed Amendment. It aims to facilitate an integrated and well-planned mixed-use development with a seamless integration with the residential, office, hotel, retail and social welfare facilities, and the planned transport infrastructure. The general planning and design principles of the Indicative Scheme is presented in **Section 4.2** below.

4.2 General Planning and Design Principles

4.2.1 **High Density Development at Prime Location while Ensuring Compatibility** – the Application Site is situated at the core area of NTN New Town, where it abuts to the Ping Che Road. In addition, given that NTN Study has suggested that high density development in form of TOD should be adopted near planned/possible station (with the future Ping Che Station under NOL Eastward Extension being located in close proximity to the Application Site), it demonstrates the suitability for high-density development with a mixture of different uses that are compatible with the future catchment of Ping Che Station (i.e. residential and commercial development with multiple ancillary services), to foster a 15-minute neighbourhood have as always been the prevailing planning concept introduced by the Government in new town planning. Together wit the latest guideline on the domestic and non-domestic PR of new town development in the v as

discussed in **Section 3.3**, the Application Site is well-justified and suitable for a high density mixed use development with a PR of 7 comprising of multiple programmes to fully utilise valuable land resources in a highly accessible location.

4.2.2 **Certainty for Provision of Housing Units by Private Initiatives** – The Proposed Amendment is intended to effectively deliver a large number of private housing units in assisting the Government to meet private housing supply target in the aforementioned 10-year period (2032-2033). Initiated by the private sector without the need to mobilize public resources, the Indicative Scheme is intended to provide more than 2,200 residential units by 2032. Provision of housing units in a timely manner would be ensured by optimizing the advantages of private lots solely under Applicant's ownership. A timely implementation helps alleviating the imminent territorial housing demand where the Government can focus on its public resources to plan for public housing developments and infrastructures in the NM.

4.2.3 **Mixed Use Development with Land Use Flexibility** – Considering the suitability of incorporating multiple land uses at this core location with unique context, mixed use development is considered appropriate at the Application Site. Apart from the provision of housing units as the priority, the Applicant sees the great potential of the Application Site of being a satellite office location embedded with hotel, retail, social welfare and transport facilities in capturing potential users from other I&T development clusters along the Eastern Knowledge and Technology Corridor and the NM. They are anticipated to be easily accessible from Ping Che area under the planned NOLE and NENTL. A mixed use development would enable the transformation of the Application Site from the existing brownfield uses to a flourishing high-quality mixed-use development catalyst in the NTN New Town. The proposed mixed-use development should also build in certain degree of flexibility with the view that the Application Site is located at a strategic location, to allow prompt response to future market situation, societal needs as well as complementary with the on-going detailed planning of the NTN New Town.

4.2.4 **Provision of Local Retail and G/IC Facilities Serving the Existing and Future Communities** – As mentioned earlier in **Section 2.4** that along the Ping Che Road, there is a small local retail cluster and Ping Che Nursing Home Limited surrounded by the Ta Kwu Ling Rural Centre Government Offices. In order to cater the raising demand for local retail alongside the development of NTN New Town, more local retail facilities are provided for both existing and future community. In addition, in view of the anticipated increasing demand for child care and elderly care facilities in serving the new families moving into the future NTN New Town and overall ageing population trend in Hong Kong, G/IC facilities, in particular Child Care Centre and Day Care Centre for the Elderly, would also be provided in the Indicative Scheme to serve the existing and future residential population as a public gain of the proposed development in the Application Site, whereas these facilities are intended to be located right next to the existing Ping Che Road to allow maximum accessibility.

4.2.5 **Public Transport Provision to Connect with Future Ping Che Station** – With the centrality and a relatively large size of the Application Site, there is an opportunity to provide a PTT to connect to the Ping Che Road and planned Ping Che Station. The proposed PTT will reserve space for accommodating public transport for future interchange with the Ping Che Station as a feeder service for rail to bus interchange and further access other parts of the NTN New Town.

4.2.6 **Road Improvement for Public Uses and Accessibility** – Road improvement work will be provided by utilizing the Applicant's resources for public uses and accessibility as public merits. Road junction improvement will be conducted in the Ping Che Road, while the existing unnamed local access road along the eastern boundary of the Application Site will also be upgraded to

standard carriageway with pedestrian footpaths on both sides to connect Ping Che Road to the further south of the Application Site, open for public use.

4.2.7 **Spearhead the Phasing Out of Brownfield Uses in Ping Che** – Despite being currently zoned as "OS" for the large part of the Application Site, there is a long-term intention by the Government to phase out the brownfield uses as reflected in the Brownfield Study and the NTN Study. A modern, quality and centrally managed mixed use development with ample landscape amenity will be able to remove the existing visual eye sore at this highly visible location on Ping Che Road. The Indicative Scheme will therefore act as a pioneer to facilitate the phasing out of the brownfield initiated by private sector and encourage similar private initiatives in the area to improve the overall quality of the built environment.

4.2.8 **Incorporation of Sensitive Building Design** – Despite being a pioneer in the Ping Che Area for facilitation of transformation and environmental improvement, Environmental Assessment conducted in support of the Indicative Scheme also ensure that early development at the Application Site would be sensitively designed and would not be susceptible to adverse environmental nuisance brought by existing brownfield use in the surroundings. Non-sensitive commercial block is placed near to the road to reduce the potential noise impact from the Ping Che Road to residential blocks. Furthermore, appropriate noise mitigation measures are provided to habitation spaces for residential units when necessary. To increase greenery coverage in the proposed development, multiple roof gardens at commercial block and sky gardens at residential blocks are provided. In terms of building disposition respecting wind ventilation, the residential blocks are orientated to align the major prevailing wind direction (annual and summer conditions) to facilitate the natural ventilation.

4.2.9 Please refer to **Appendix A** for the architectural drawing of the Indicative Scheme in support of the Proposed Amendment at the Application Site.

4.3 Key Development Parameters

4.3.1 The Indicative Scheme has been thoughtfully designed with due consideration to the technical considerations including landscape and visual, environmental, air ventilation, and transport and traffic arrangements. Please refer to **Table 4.1** for the key development parameters.

Table 4.1 Key Development Parameters of the Indicative Scheme

Key Development Parameters	Indicative Scheme			
Site Area	About 17,821.2m^2			
Gross Floor Area (GFA) & PR		GFA		PR
	Domestic	About 105,145m^2		About 5.9
	Non-domestic	About 19,603m^2 [1]		About 1.1
		Retail:	About 2,400m^2	
		Office:	About 11,500m^2	
		Hotel:	About 5,703m^2	
	Social Welfare Facilities [2]	About 1,953.6m^2 including: • About 787.6m^2 for a 60-place Day Care Centre for the Elderly • About 1,166m^2 for a 100-place Child Care Centre		
	Public Transport Terminus [3]	About 1,246m^2		
No. of Blocks	6			
Building Height (Main Roof) No. of Storeys	T1: About +169.7mPD (35 storeys excluding basement) T2: About +175.0mPD (48 storeys excluding basement) T3 and T4: About +171.85mPD (47 storeys excluding basement) T5 and T6: About +171.83mPD (47 storeys excluding basement)			
Site Coverage	Domestic	Below 15m	Not more than 75%	
		Above 15m	Not more than 37.5%	
	Non-domestic	Below 15m	Not more than 100%	
		Over 24m but not exceeding 27m	Not more than 90%	
		Above 27m	Not more than 62.5%	
No. of Flats	2,205 units			
Average Flat Size	About 47.7m^2			
Anticipated Population [4]	About 6,174			
No. of Hotel Rooms	About 70 rooms			
Local Open Space	Not less than 6,174m^2			
Greenery Provision	Not less than 3,564m^2 (20%)			
No. of Parking Spaces and	Private Car Parking Spaces:		725 (including 6 no. of parking space for disabled users)	

Loading / Unloading Spaces [5]	Motorcycle Parking Spaces:	33
	Light Goods Vehicle Loading / Unloading Bays	8
	Heavy Goods Vehicle Loading / Unloading Bays	10
	Lay-by for Taxi and Private car:	2
	Lay-by for Single Deck Tour Bus:	1
Anticipated Completion Year	2032	

[1] Excluding GFA for Clubhouse which could be exempted. According to the Building (Planning) Regulations 23(3)(a) and PNAP APP-104, for total domestic GFA of about 3,500m^2 could be exempted from GFA calculation for recreational use where the total domestic GFA ranging from more than 100,000m^2 to 125,000m^2.

[2] The GFA for the 60-place Day Care Centre for the Elderly (DCC for the Elderly) and the 100-place Child Care Centre (CCC) are calculated based on 2.2 times the respective Net Operational Floor Area (NOFA) requirement of 358m^2 for DCC for the Elderly and 530m^2 for the CCC as stipulated in HKPSG Chapter 3. The GFA of the said social welfare facilities is additional to the proposed GFA/PR of the Indicative Scheme, which is assumed to be exempted from PR calculation.

[3] The GFA for the PTT is additional to the proposed GFA/PR of the Indicative Scheme, which is assumed to be exempted from PR calculation.

[4]A person per flat (PPF) ratio of 2.8 is adopted with reference to the PPF of TPU (620, 622, 641 642, and 651, 653) as reported in the 2021 Population Census by the Census and Statistics Department.

[5] All parking spaces are provided underground. According to PNAP APP-2, private carpark that is provided underground (including car parking and loading/unloading areas) are 100% disregarded from the calculation of GFA.

4.4 Building Design of the Indicative Scheme

Overall Development Layout

4.4.1 The proposed mixed use development with a total PR of 7 has paid due consideration with the surrounding context of the Application Site and the changing planning circumstances. The non-domestic portion, which is represented by a commercial tower in the Indicative Scheme, comprising retail, office and hotel together with the proposed social welfare facilities sitting on a PTT is purposely planned with proximity to the Ping Che Road to facilitate access and synergise with the future Ping Che Station. The commercial tower will also serve as a node for the future users and the community by offering essential commercial floor spaces and accommodating a variety of commercial activities. Meanwhile, the domestic portion, which is to the southwest of the Application Site, is designed to accommodate 2,205 units to address the pressing housing demand. The domestic portion is represented by a composite tower and four residential towers with adequate setback being reserved from Ping Che Road to minimise potential noise impact. A basement carpark is also designed to reduce the overall building bulk. Podium gardens at commercial towers and sky gardens in residential tower are provided. The public realm within the Application Site will also be provided with landscaping area as reflected in the overall layout design to bring enhanced visual amenity to the area.

4.4.2 In the Indicative Scheme, an existing local road will be upgraded to a standard 7.3m carriageway with footpaths for vehicle and pedestrian to access the Application Site. There will be a total number of four accesses, including two vehicular accesses and one ingress and one egress point for the PTT. For the two vehicular accesses, one of them will be located at the southern side of the Application Site to serve the residential blocks while another access will be located at the mid-way along the access road to serve mainly the commercial building and as the secondary access for the residential blocks. For the access to the PTT, the ingress point will be located at the upgraded access road and the egress point will be located at Ping Che Road. In addition, a possible pedestrian connection to the future Ping Che Station has been reserved near the commercial tower,

which the connection will be subject to detailed design depending on the exact location of the future Ping Che Station.

Provision of Commercial, Social Welfare Facilities and a Public Transport Terminus

4.4.3 Considering the Application Site is in close proximity to the future Ping Che Station, PTT sitting on the G/F of the development, commercial and social welfare facilities will be provided in the Indicative Scheme. It will provide a total of non-domestic GFA of about 19,603 m^2. 2,400m^2 is designated for retail floor spaces. About 11,500m^2 is designated for office, and about 5,703m^2 is designated for a 70-room complementary hotel. These commercial will cater emerging needs for commercial activities related to the I&T industry, whereas the retail facilities serve the existing and future local community.

4.4.4 The Indicative Scheme is proposed to provide two types of social welfare facilities, namely DE and CCC. These two facilities are particularly proposed with thoughtful consideration of the anticipated demand for serving the increasing aging population as well as new families moving into the NTN New Town.

4.4.5 The GFA of the proposed DCC for the Elderly will be about 787.6 m^2 which is calculated based on the NOFA requirement of 358m^2 for a 60-place DCC for the Elderly as stipulated in Chapter 3 of the Hong Kong Planning Standards and Guidelines ("HKPSG"). It is proposed to be located on the 4/F of the commercial tower. The GFA of the proposed CCC will be about 1,166 m^2 which is calculated based on the NOFA requirement of 530m^2 for a 100-place CCC also as stipulated in Chapter 3 of HKPSG. It is proposed to be located on the 2/F and 3/F floor of the commercial tower. The location of the social welfare facilities is thoughtfully planned at a location along Ping Che Road, which is within the commercial tower with direct access to the proposed PTT. Together with the possible connection to the planned Ping Che Station, these facilities will be highly accessible by future users.

Rhythmic Building Height Profile

4.4.6 The Indicative Scheme is intended for a rhythmic building height profile from the future Ping Che Station towards the hinterland of Ping Che. Tower 1, which is the commercial tower of 35 storeys with a BH of 169.7mPD, is proposed to be located at the northern portion of the Application Site. Tower 2 to 5 with higher building heights are placed at the core area and southern part of the Application Site with a BH of not more than 175mPD. The proposed BH of different towers would enhance the visual interest of the Application Site to serve as an opening entrance to the future Ping Che Station. Overall, the Indicative Scheme will have an iconic commercial tower locating along the Ping Che Road with possible connection to the planned railway station. It will allow transition from the future vibrant urban centre from the north of the Application Site towards the south where the remaining higher residential towers are placed.

4.4.7 A rhythmic BH profile is designed for the Indicative Scheme. The commercial tower (T1) of +169.7mPD (35 storeys) is proposed at the northern portion of the Application Site facing the Ping Che Road, while 5 residential towers (T2 to T6) from +171.83mPD to +175mPD are distributed at the centre of the Application Site. The varying BH of the towers would formulate an undulating BH profile, adding visual interests and variety to the surrounding environment. Podiums of T1 and T2 are also designed with a 3-stepped terraced form allowing a gradual transition in the building height, thus enhancing visual permeability.

4.4.8 The commercial tower fronting Ping Che Road and possible connection to Ping Che Station could act as a landmark building welcoming visitors from the future railway, together with the residential

towers placed at the centre and southern portion of the Application site, the Indicative Scheme shows a lively and dynamic BH profile that is also compatible with the proposed high-dense developments in the Ta Kwu Ling PDA in the NTN Study (**Figure 3.4 refers**).

4.4.9 The building height of the Indicative Scheme has also taken into account optimizing the habitable space and operational requirement of domestic and non-domestic components, while not compromising compatibility with surroundings. Overall, the Floor-to-Floor height of residential floors are proposed to be about 3.15m, and about 4.2m for the office and hotel commercial uses.

Visual Mitigation Measures

4.4.10 The good design features includes:

- Building separation of the building bulk. The building bulk of the towers is sensitively designed with appropriate building separation to allow visual permeability, while complying with the building separation requirements as stipulated in PNAP APP-152 SBDG.
- Articulated façades and landscaping features. Articulated façades and landscaping features are proposed to enhance visual interest, to reduce collective visual mass, and to harmonize with surroundings.

Wind Enhancement Features

4.4.11 The good design features includes:

- Permeable design at ground floor;
- Chamfered design at building corner;
- Building orientation align with wind direction;
- Building separation;
- Reduced ground coverage of clubhouse;
- Permeable design at sky garden; and
- Building setback

4.4.12 For the permeable design at ground floor, there will be a 7.5m tall PTT with 3 sides opening to facilitate the east and southeast wind systems towards the downwind regions. The chamfered building corners would be adopted for the commercial building black and the podium, which allow smoother wind flow around the building structure. The chamfered building corners allows the building group (including commercial and residential buildings) to attract incoming east and southeast wind into the air path. For the building orientation, it is designed to align with wind direction. The tower blocks under the proposed scheme will have their N-E axis aligned with the prevailing wind direction from east and northeast. For building separation, the building gap will be ranged from 18m to 30m in the Indicative Scheme. The gap distance will facilitate more east and southeast wind flow between the buildings towards the downwind area. In terms of terraced podium design, stepping terrace approach is adopted under Indicative Scheme at the podium design of blocks T1 and T2 to minimize building mass. It also allows incoming mid and high-level wind flow along the stepping terraces and reach the downstream regions.

4.4.13 For podium height level, the Indicative Scheme has lower podium structure of 24.15mPD to allow better flow of incoming east wind over the podium structure and reach the downwind areas. There

would be reduced ground coverage of clubhouse. The Indicative Scheme has reduced area of clubhouse building. The small ground coverage is having lesser restriction to wind flow and allows more wind flow at ground level. It is also located at the downwind area of T5, allowing gap distance between clubhouse and T3 to enable wind flow from east and northeast direction. For permeable design at sky garden, there would be sky gardens in residential buildings to provide vast openings at façade of the building and allow more wind flow to travel through the building at the façade that facing east and southeast direction. The building setbacks proposed under the Indicative Scheme will also facilitate wind flows from multiple directions.

4.4.14 With these wind enhancement features, significant wind deterioration at district level is not anticipated with the Indicative Scheme. For the details, please refer to **Appendix E** for the AVA-EE.

Environmentally Sensitive Design

4.4.15 Overall, the Indicative Scheme will not generate nor susceptible to unacceptable environmental impact by incorporating environmentally sensitive design in the Indicative Scheme.

Air Quality

4.4.16 Sufficient setback of 50m and 10m of both Ping Che Road and unnamed access road (to be upgraded) have been reserved in the Indicative Scheme from vehicle emission.

Traffic Noise and Fixed Plant Noise

4.4.17 For noise impact, mitigation measures have been provided in the Indicative Scheme to address road traffic noise & fixed plant noise. Building setback from the local road and terraced podium design have been incorporated in the architectural design. The commercial tower which will be equipped with centralize air conditioning system is strategically designed at the north portion of the site fronting Ping Che Road. It can provide noise shielding to residential blocks to the south. Noise mitigation measures, including acoustic window / acoustic door (baffle type), fixed glazing (with maintenance window), have also been proposed at appropriate locations. With the proposed mitigation measures in place, all noise sensitive receivers (NSRs) comply with the HKPSG traffic noise criteria of 70 dB(A) and no NSRs will be subjected to unacceptable traffic noise impact.

4.4.18 For fixed plant noise, the results showed that the future NSRs would not be subjected to unacceptable industrial noise impact.

4.4.19 For other details, please refer to **Appendix F** regarding the Environmental Assessment.

Sewerage

4.4.20 An on-site Sewerage Treatment Plant ("STP") which is interim in nature is proposed on the Basement Level 1. It is anticipated that in the future NTN New Town Development under detailed study by the Government, the sewerage generated by the Indicative Scheme will be discharged to

the future upgraded public sewerage system. For details, please refer to **Appendix H** for the Sewerage Impact Assessment.

Compliance with Sustainable Building Design Guidelines (SBDG)

4.4.21 The Indicative Scheme fully comply with the requirements on building separation, building setback and site coverage of greenery as stipulated in PNAP APP-152. For building separation, given the Application Site is less than 20,000m^2, the residential blocks are at least 15m apart from each other to avoid a continuous projected façade length of 60m or above. For building setback, a minimum 7.5m (Width) x 15m (Height) cross-sectional area, measuring from centreline of the street to building structure, is provided along full frontage of Ping Che Road. For the site coverage of greenery, it fully complies with the minimum requirement of 20% for site area ranged from 1,000m^2 to 20,000m^2, with at least 10% coverage at Primary Zone.

4.5 Landscape Design

Landscape Design Concept

4.5.1 During the formulation of the Landscape Master Plan ("LMP"), a careful mix of hard and soft landscaping has been provided. Compensatory planting will also be cultivated at appropriate locations. Key design landscape design concept are as follows:

- Provide a quality and sustainable environment with adequate landscape area for the enjoyment of the residents of the proposed development;
- Provide sufficient landscape treatment along the boundary to minimize the potential visual impact of the built form; and
- Incorporate new trees and shrubs to enhance the greenery.

4.5.2 As the entrance of the Application Site, the commercial tower (T1) would feature a vibrant green wall for the aesthetic appeal and create a pleasing visual element for the future building users and visitors arriving from Ping Che Road and Ping Che Station. Ample green coverage and open space provision would promote a sense of harmony with the surrounding natural elements. Near residential tower (T6) facing the roundabout, a feature signage wall and water feature have been incorporated to create another access point of the Application Site with sense of arrival and visual appeal.

4.5.3 Diverse and sufficient open spaces such as sun lawn, rose garden and multi-functional deck are provided throughout the Indicative Scheme for the enjoyment of future building users. Leisure areas such as water play area and Tai Chi courtyard are also designed to add variety to open spaces

within the Indicative Scheme. Meanwhile, ornamental tree and shrub plantings are proposed along the proposed development to soften the built form and maximize the greenery coverage.

Local Open Space Provision

4.5.4 The provision of local open space will be in accordance with the Hong Kong Planning Standard and Guidelines (HKPSG) of 1m^2 per residents (i.e. not less than 6,174m^2 of local open space will be provided within the Application Site).

Greenery Provision

4.5.5 Over 20% of the greenery area within the Application Site will be accessible by residents at pedestrian and podium level in complying with SBDG greenery requirement, with 10% provided on ground level (i.e. the Primary Zone). Other green features such as edge planting with shrubs and trees is designed to soften the development edge for screening purpose .

Tree Preservation Proposal

4.5.6 Trees are mainly found on the northern and southern boundary of the Application Site. No registered or potential Old and Valuable Trees or protected species were recorded during the individual tree survey.

4.5.7 A total number of 130 trees are identified within the Application Site. Out of 130 identified trees, 4 Leucaena leucocephala (銀合歡) are identified, which it is an undesirable species that should be removed and therefore excluded in the compensatory tree planting proposal as according to para. 8 and 25 in DEVB TC(W) no. 4/2020. A replanting ratio of minimum 1:1 in terms of quantity will be adopted.

4.5.8 Therefore, a total 130 nos. of tree are recommended to be felled. The general health condition and structural form of the existing trees are ranging from fair to poor. The species combination is mainly composed of tree species commonly found in Hong Kong. Justifying by several factors, including health, form, structural condition, species, size, location, maturity and the character of the Indicative Scheme, and cost-effectiveness, no tree is recommended to be retained in-situ or to be preserved through transplantation. Trees with unrecoverable defects and poor conditions are suggested to be removed from the site aiming to improve the sustainability of the future landscape and due to safety concerns. Considerations on building disposition, EVA requirement, good quality open spaces for residents, and proper and good quality planting establishment are taken into account for the new tree planting proposal. 5 native species and 3 exotic species are proposed in the Indicative Scheme to maintain the landscape features and the local biodiversity, and further enhance the existing environment. Overall, there will be no net loss of trees to the local landscape context resulted in the Indicative Scheme.

4.5.9 For details, please refer to **Appendix B Landscape Master Plan and Tree Preservation Proposals**.

4.6 Traffic and Transport Arrangement

Vehicular and Pedestrian Access

4.6.1 At present, the Application Site is served by a local access road located along the eastern side of the Site that connects to the existing Ping Che Road. The local access road also serves other village

developments in the area. Under the Indicative Scheme, road junction improvement is proposed in Ping Che Road for providing the ingress and egress of vehicles to the existing unnamed local assess road.

4.6.2 Together, the local access road will be upgraded to a standard 7.3m single carriageway with footpaths on both sides. Two vehicular accesses are provided at the local access road to serve the Indicative Scheme. One access will be located at the southern part of the Application Site to serve the residential blocks in form of a roundabout while another access will be located at the mid-way along the access road to serve mainly the commercial tower and as the secondary access for the residential towers. Such road improvement proposal mobilized by the Applicant's resources will benefit both existing and future vehicles and pedestrian accessing to the Application Site, and to connect the main Ping Che Road to the further south of the Application Site for public use.

4.6.3 Upon upgrade of the local access road, the eastern part of the Application Site will be fully accessible by pedestrians. Overall, the pedestrian walking experience will be enhanced, with the commercial tower, comprising of retail, G/IC, office and hotel components, situated at the northern entrance of the Application Site that is accessible from Ping Che Road and the reserved potential connection to the Ping Che Station.

Provision of a Public Transport Terminus

4.6.4 Taking into consideration the future planning at Ping Che and the sizeable area of the Application Site, a public transport terminus (PTT) is proposed at the northern part of the Application Site fronting Ping Che Road. By placing the PTT at this convenient location, it could serve as a potential interchange providing feeder services complementary to the future Ping Che Station with a reserved connection from the PTT to the future station.

4.6.5 The PTT will comprise of a double width bus bay and a green minibus bay. The ingress point is located at the upgraded access road and the egress point is located at Ping Che Road to enhance circulations within the PTT.

Provision of Internal Transport Facilities

4.6.6 The internal transport facilities for the Indicative Scheme will be provided in accordance with the high-end standard under the HKPSG. Overall, 725 private car parking spaces (including 6 no. of parking space for disabled users), 33 motorcycle parking spaces and 8 light goods vehicle loading/unloading bays, 10 heavy goods vehicle loading/unloading bays, 2 lay-bys for taxi and private car and 1 lay-by for single-deck tour bus will be provided to fulfil the HKPSG requirements.

4.6.7 The carparking provision will be provided at basement level, which according to PNAP APP-2, private carpark that is provided underground are disregarded from the GFA/PR calculation.

4.6.8 For details, please refer to the **Appendix I Traffic Impact Assessment**.

5. Amendment Proposal

5.1 Considerations for an Appropriate Zoning

5.1.1 In light of the Government's policy for a high-density development in the NTN New Town, the Application Site is considered a suitable location for development by private initiatives which is discussed in details in **Section 4**. With consideration for the need to demonstrate flexibility in responding to changing market needs, an appropriate zoning is considered necessary for the Application Site to put forward the Indicative Scheme for a proposed mixed use development with a combination of housing units (more than 2,200 flats) in contributing to the 10-year housing supply target set by the Government, commercial spaces (office and hotel) complementary to the economic facilities along the boundary, and social welfare facilities, retail and public transport facilities serving the existing and future community of the NTN New Town.

5.2 Clear Planning Intention

5.2.1 The proposed zoning should carry a clear planning intention and development direction for the type of uses on the Application Site. In case of this Application Site to be used for high-density mixed use development, including residential, commercial (retail, office and hotel) and additional social welfare facilities and PTT as illustrated in the Indicative Scheme to optimize the use of valuable land resources whilst serving the emerging demands of the community, it could only be enabled if the Application Site is provided with clear planning intention and certainty for the market to take forward the said development.

5.3 Appropriate Zoning Control

5.3.1 The proposed zoning should have appropriate zoning control over the proposed use, scale and intensity by designating restriction on the PR and BH and guidelines on the provision of suitable social welfare facilities and local transport improvement (including the PTT and upgrading of the substandard local road along the eastern boundary of the Application Site). Appropriate zoning control would ensure that the Indicative Scheme will be compatible with the surroundings while at the same time committing public planning gains as illustrated in the Indicative Scheme.

5.4 Appropriate Zoning Flexibility

5.4.1 The proposed zoning should allow flexibility and interchangeability of domestic and non-domestic PR, in order to allow responsiveness with the changing market needs, evolving socio-economic aspirations as well as the on-going detailed planning of the NTN New Town by the Government. Given the sizable area of the Application Site, flexibility could be built in for different programme to be either mixed vertically within a building or horizontally over the development area, while at the same time with appropriate control to avoid possible nuisances and interface problem between the proposed uses. Providing flexibility would also encourage creative and innovative design solutions at this prominent location of the NTN New Town near to the planned Ping Che Station.

5.5 The Proposed Amendment

5.5.1 In light of the discussion in the above Sections, this Planning Application proposes amendment to the Plan and Notes of the OZP by rezoning the Application Site from "OS" and "AGR" and a

portion of area shown as 'Road' to a tailor-made "Other Specified Use" annotated "Mixed Use" ("OU(MU)") zone.

5.5.2 The planning intention of the "OU(MU)" zone at the Application Site is "*intended primarily for high-density residential development and commercial development. Flexibility for the development/redevelopment/conversion of residential or other uses, or a combination of various types of compatible uses including commercial, residential, educational, cultural, recreational and entertainment uses, either vertical within a building or horizontally over a spatial area, is allowed to meet changing market needs. Physical segregation has to be provided between the non-residential and residential portions within a new/converted building to prevent non-residential uses from causing nuisance to the residents.*"

5.5.3 Making reference to the TPB PG-No. 42, Schedule I (for non-domestic building or non-residential portion of a building upon development/redevelopment/conversion) and Schedule II (for residential building or residential portion of a building upon development/redevelopment conversion) are included in the proposed "OU(MU)" zone with appropriate Column 1 and 2 uses relevant to the Application Site.

5.5.4 In Remarks (a) in the Notes of the proposed "OU(MU)" zone, it is stated that a total maximum PR of 7 will be stipulated on the Application Site, of which the domestic PR should not exceed 5.9. While in Remarks (c), it is stated that any floor space that is constructed or intended for use solely for Government, Institution or Community facilities (i.e. the social welfare facilities proposed under the Indicative Scheme) and public transport terminus or station will be disregarded from the PR calculation as mentioned in Remarks (a). This is to ensure that the provision of additional facilities serving the community will be provided alongside with the much needed residential and commercial provision to optimize land resources at the Application Site.

5.5.5 In addition, a maximum building height of 175mPD is stipulated in Remarks(b) and on the Plan of the proposed "OU(MU)" zone as statutory planning control. Remarks (d) to (f) of the Notes are also included in the Notes with reference to the TPB PG-No. 42 on disregarding GFA for ancillary uses, inclusion of a minor relaxation clause and details on segregation requirement for residential and non-residential portions within buildings.

5.5.6 A set of ES is also proposed for the proposed "OU(Mixed Use)" zone to provide more detailed guidelines for future development at the Application Site. Additional guidelines include:

- Upgrading of the local access road along the eastern boundary with footpaths on both sides for public access to connect Ping Che Road to further south;
- Non-domestic development to be provided adjacent to the Ping Che Road, with future possible connection to the planned Ping Che Station;
- A GFA of about 1,246m^2 for a PTT to be located on G/F of the proposed commercial development along Ping Che Road. The GFA is indicative only and subject to detailed design and will be disregarded from total PR calculation;
- A GFA of about 787.6m^2 for a 60-place Day Care Centre for the Elderly and a GFA about 1,166m^2 for a 100-place Child Care Centre to be provided. The GFA is indicative only and subject to detailed design and will be disregarded from total PR calculation;
- Adopt a "rhythmic building height" design to allow flexibility for creativity to create an interesting skyline at this prominent location at the future centre of NTN New Town; and
- Provision of wind enhancement features to enhance air ventilation of local environment,

with examples of measures as recommended in the conducted AVA-EE.

5.5.7 The Proposed Amendment on the Plan is shown in **Figure 5.1**. The Proposed Amendment to the OZP including the introduction of an "Other Specified Uses" annotated "Mixed Use" and its Schedule of Use and Explanatory Statement to be included in the OZP are illustrated in **Figures 5.2a to 5.2c** and **Figure 5.3a and 5.3b** respectively.

6. Planning Justifications

6.1 Respecting the Planning Intention for High-Density Development in the New Territories North New Town

6.1.1 The Proposed Amendment fully respects the planning intention for high-density development in Ping Che for the NTN New Town. As discussed in **Section 3.4**, the Application Site was earmarked for commercial development with PR 6.5 surrounded by high-dense residential of 5.0 and mixed use development of 6.5 (domestic) and 1.5(non-domestic) under the high-residential development scenario II in the NTN Study completed in 2017. The Brownfield Study completed in 2019 reaffirms that the Ping Che area, including the Application Site, is with medium development potential upon phasing out of sporadic brownfield operations.

6.1.2 Subsequently, the Government has been exploring opportunities to intensify the development intensity of new towns or NDAs, and has intention to introduce more economic activities to foster a more balanced job-house ratio and an impetus of new economic growth engine in the NM. In the latest 2022 Policy Address, the Government reaffirms the guiding principles for development intensity in the NM, which is a maximum PR of 6.5 for residential sites and maximum PR of 9.5 for commercial sites.

6.1.3 In view of the Government's commitment for the NTN New Town and the call for optimizing development potential in the NM, the Applicant is intended to put forward the Proposed Amendment for a Mixed Use development with a total of PR7.0, of which domestic PR not exceeding 5.9. This is to create a certainty for provision of more than 2,200 housing units while at the same time injecting economic vibrancy and commercial elements complementary with the wider area. The proposed development scale also fully aligns with the Government's guiding principles of maximum development intensity in the NM, in particular at a location adjacent to a planned railway station.

6.2 Providing the Right Degree of Flexibility on Mix of Uses and Layout at the Centre Location of the NTN New Town

6.2.1 In accordance with the latest policy and planning direction, the development of NM and its Economic Belt will be the main focus of development in Hong Kong in near future. Together with promotion of more I&T industry development as an economic engine in the NM, the Application Site would be benefited from its strategic location at the centre of the NTN New Town with speedy connection to different part of the NM via the planned Ping Che Station. In particular, with its close proximity of the Application Site to the LT/HYW BCP and the Heung Yuen Wai Industrial Estate/ Science Park, will create a market demand at the Application Site to include satellite office component with complementary hotel lying along the Economic Belt in the NM in additional to the provision of housing units.

6.2.2 Therefore, a tailor-made "OU(Mixed Use)" zone is considered appropriate at the Application Site. With the high degree of flexibility built-in to the zoning according to the TPB-PG no. 42, the interchangeability of domestic and non-domestic component allow the Applicant to be highly resilient to changing market needs, evolving socio-economic aspirations as well as the interface with the on-going detailed planning of the NTN New Town by the Government. Nonetheless, the development restrictions set at the zone, i.e. total maximum PR of 7.0 (of which the domestic PR should not exceed 5.9) will provide appropriate guidelines to maintain the planning intention. While it is also stated in the ES that certain social welfare facilities, public transport terminus and local road improvement will be required to achieve public benefits as part of the proposed

development. Moreover, given the sizable area of the Application Site, the "OU(Mixed Use)" zoning could allow high degree of flexibility for different programmes to be mixed vertically with a building or horizontally over the development area, while not exceeding the maximum BH of 175mPD and avoid nuisance and interface problem between uses. This will provide opportunities for creative and innovative design for a vibrant and attractive building cluster at the future centre of the NTN New Town.

6.3 Meeting the Main Planning Criteria for "OU(MU)" Zone

6.3.1 The Proposed Amendment at the Application Site fully meets the main planning criteria for designation of the "OU(MU)" zoning as outlined in Section 5 of the TPB PG-No. 42, which is summarized in **Table 6.1** below.

Table 6.1 Evaluation of Main Planning Criteria for Designation of "OU(MU)" Zone under TPB PG-No.42

Main Planning Criteria	The Proposed Amendment at the Application Site
Land Use Compatibility and Existing Site Conditions	ü Given the prominent location at the future centre of the NTN New Town and near to the planned Ping Che Station, suitable for high-density Mixed Use development based on consideration of TOD and 15-minute city planning concept ü High density development is in-line with Government's planning intention of the NTN New Town and recent call for optimizing development intensities within the NM ü The Application Site is about 17,821.2m^2, which is considered sizeable for mixed use development while facilitating amalgamation of private lots and Government land. ü The Applicant possesses sole ownership of all private lots on the Application Site, therefore with certainty to take forward the proposed mixed use development. ü The Application Site is currently a brownfield site with close proximity to the planned Ping Che railway station ü The Application Site is not located within a core central business district
Accessibility and Transport Capacity	ü The Application Site is currently conveniently access to the Ping Che Road by vehicular transport and public transport ü In the future, the Application Site will be located near to the planned Ping Che railway station ü The Applicant is also committed to provide additional road improvements, an additional PTT and connection to the future Ping Che railway station in the proposed mixed use development

	ü Traffic Impact Assessment (**Appendix D**) has been conducted and confirmed the local and district transport network have the sufficient capacity to cater for the proposed mixed use development
Provision of Other Infrastructures	ü A series of technical assessments have been conducted and confirmed the infrastructural capacity in support of the proposed mixed use development. Suitable mitigation measures have been proposed if appropriate. Please refer to **Appendix F to I** for respective technical assessments on environmental, drainage, sewerage and water supply
Provision of Community Facilities	ü With the genuine intention to serve the local community, the "OU(Mixed Use)" zone has included requirement for provision of a 60-place day care centre for the elderly and a 100-place child care centre. These facilities are to be located nearer to Ping Che Road for the convenience of future users. Detailed GFA and layout of these social welfare facilities will be subject to detailed design and liaison with relevant Government departments
Land Use Reviews	ü Not Applicable as the Application Site was not previously zoned as Commercial/Residential". Nonetheless, the Application is currently majority zoned as "OS", partly zone as "AGR" and a small portion in area shown as 'Road'. Rezoning to "OU(Mixed Use)" will facilitate phasing out of sporadic brownfield operations polluting the rural environment to a modern standard and quality development at the centre of the future NTN New Town

6.4 Meeting Acute Housing Demand by Private Sector Initiatives

6.4.1 The Proposed Amendment with a major high-density residential component, is in line with the Government's on-going policy to speed up the much-needed housing supply. As discussed earlier in **Section 3.3**, it is emphasized in the 2020 Policy Address that privately-owned land has always been an important source of housing supply. It is essential in the future that more private sector initiated residential development in constituting the housing supply. With due consideration of the current shortage identified by the Government and its policy directions in encouraging more private sector participation or even initiation in supplying housing units in the 10-year period, the Indicative Scheme, with the production of more than 2,200 flats, will make optimal use of scarce

land resources to private timely support to the Government's housing initiatives and contribute to meeting the territorial housing need by increasing private housing supply.

6.4.2 With the private lots in the Application Site under sole ownership by the Applicant, it makes the Application Site readily available for development. The provision of the said housing units by 2032 as its completion year can be ensured to meet the acute housing demand without mobilizing public resources in focusing on the new development in other NDAs in Hong Kong. The Proposed Amendment will be a demonstrator case of participation by local landowners to deliver the message where the private sector is committed to mobilize its resources initiate development that is in-line the Government's policy.

6.5 Improving the Environmental Quality through Phasing Out of Brownfield Uses

6.5.1 On the other hand, majority part of the Ping Che area has been used for brownfield operations in the past decades. The sporadic proliferation of brownfield operations has resulted in degradation of the living environment and created industrial/residential interface problems to the local communities. The existing uses of the Application Sites are also yet to be fully capitalize its locational advantage and sizeable area at a prominent location. Through phasing out the brownfield uses at the Application Site by a modern standard and quality mixed use development at a highly visible location on Ping Che Road, it will become a spearhead development to encourage other brownfield uses in the vicinity to be phased out also by private initiatives to realize Government's planning intention of Ping Che as part of the NTN New Town.

6.5.2 As detailed in **Section 4.5**, the Indicative Scheme has introduced a mixture of thoughtfully designed landscape amenity alongside sufficient quality local open spaces and landscape areas across different levels within the Application Site. It will provide a considerable upgrading of the landscape and visual amenity in replace of the brownfield uses in a holistic manner, to be enjoyed not only by future residents and users at the Application Site, but also the experience of existing local communities.

6.6 Connectivity Improvement through Provision of Public Transport Facilities and Road Improvement Works

6.6.1 The Applicant has the intention to provide public transport facilities and implement road improvement works to enhance the connectivity of the Application Site as a public planning gain. Aforementioned, the location of the Application Sites at the future centre of NTN New Town in proximity to the future Ping Che Station create the opportunity for a transport hub in catching railway patronages and providing necessary feeder services for passengers to get access to the vicinity of the Application Site and other parts of the NTN New Town.

6.6.2 To realize this, a PTT with a GFA of about 1,246m^2 is proposed near Ping Che Road, to provide with bus and green minibus lay-bys, where detailed layout and GFA will be subject to detailed design and liaison with relevant Government departments. To facilitate the interchange function with the future railway, a possible connection to the future Ping Che Station is reserved, with detailed location to be determined. In addition to necessary road improvement work as part of the proposed mixed use development, the Applicant takes the opportunity to upgrade the unnamed and substandard local road along the eastern boundary of the Application Site, to a standard 7.3 carriage way with footpath on both sides. This upgraded road will be open and use by public, and replace the current substandard access connecting Ping Che Road to the further south of the Application Site. The aforementioned improvement to public transport facilities and road

improvement committed by the Applicant will be beneficial for the local community in the surroundings without the need to mobilize public resources.

6.7 Supporting Community Needs and Improving Quality of Life

6.7.1 Apart from housing provision, the Applicant is committed to provide commercial facilities alongside with retail floor spaces to serve needs of existing and future communities. The Proposed Amendment proposes a non-domestic PR of about 1.1 at the Application Site, of which, under the Indicative Scheme, included 2,400m^2 GFA for local retail, about 11,500m^2 GFA for satellite office in support of the economic activities at the boundary and about 5,703m^2 GFA for complementary hotel in support of the office. These non-domestic components are intended to located nearer to the Ping Che Road and proximity to the future Ping Che Railway Station to create a economic vibrancy and centrality for the NTN New Town.

6.7.2 In addition, to provide community support for existing and local communities, the Proposed Amendment also require provision of social welfare facilities, including a 60-place Day Care Centre for the Elderly and a 100-place Child Care Centre, to serve the anticipated increase in young families in the area and responding to the territorial ageing population issue. It is also recommended that these social welfare facilities to be provided nearer to the Ping Che Road to enhance convenience to future users. Detailed layout and GFA of these social welfare facilities will be subject to detailed design and liaison with relevant Government departments.

6.8 Ensuring Compatibility with Surrounding Environment

6.8.1 The Proposed Amendment has incorporated appropriate development control parameters, in terms BH restrictions of maximum 175mPD to ensure compatibility with surrounding environment. As stated in the proposed ES of the "OU(MU)" zone, a rhythmic building height profile has been recommended to create an interesting skyline and centrality as a welcoming entrance from the future Ping Che Railway Station. It is also demonstrated in the Indicative Scheme that the floor-to-floor height adopted is reasonable. Carparks are all placed at basement location to avoid bulky structure and to minimize BH. Wind permeable design is also encouraged with a number of wind enhancement features suggested in the ES of the "OU(MU)" zone, proven feasible in the Indicative Scheme, to enhance the overall outdoor environment.

6.8.2 Findings in the Visual Impact Assessment (**Appendix C refers**) and Air Ventilation Assessment (**Appendix E refers**) confirmed that the Proposed Amendment is fully compatible with the surrounding environment. with the surrounding environment.

6.9 Generating No Adverse Impacts to Surroundings

6.9.1 Various technical assessments have been carried out to ascertain the feasibility of the Proposed Amendment. These include **Appendix B** – Landscape Master Plan and Tree Preservation Proposals**, Appendix C** – Visual Impact Assessment**, Appendix D** – Traffic Impact Assessment**, Appendix E** – Air Ventilation Assessment**, Appendix F** – Environmental Assessment**, Appendix G** – Drainage Impact Assessment**, Appendix H** – Sewerage Impact Assessment**, Appendix I –** Water Supply Impact Assessment.

6.9.2 Findings of the technical assessments confirmed that the Proposed Amendment is technically feasible. It will not generate, nor be suspectable to adverse impacts at the Application Site and the surrounding environment, with appropriate mitigation measures and improvement works incorporated.

6.10 Setting a Desirable Precedent for Public-Private Partnership in Delivering the New Territories North New Town in an Efficient Manner

6.10.1 With the justifications laid out in earlier sections, overall speaking, the Proposed Amendment at the Application Site is a proactive response by the private initiatives (a local landowner) to Government's policy direction/planning intention, including (i) high density development at the New Territories North New Town; (ii) phasing out of brownfield operations; (iii) optimizing development potential within the NM; (iv) call for private sector support in delivering the 10-year housing target.

6.10.2 The Proposed Amendment seeking for a tailor-made "OU(MU)" is considered appropriate at the Application Site, given its sizeable area and location at the centre of future NTN New Town near the planned railway station. The development mix and scale are also confirmed to be justifiable, compatible and technically feasible. The Proposed Amendment also meets with all the main planning criteria for designation of "OU(MU)" zoning as laid out in the TPB-PG no. 42. The nature of "OU(MU)" zone also provide appropriate flexibility for future development at the Application Site with resilience to changing market conditions, evolving socio-economic aspirations and more importantly, the on-going planning of the NTN New Town by the Government.

6.10.3 The Applicant, being the sole owner of the Application Site, also means that the Application Site is readily available and the provision of more than 2,200 private residential units, vibrant commercial programme, social welfare facilities, PTT and access road improvement will be feasible by 2032 without the need of mobilizing public resources. Agreement of the Proposed Amendment will set a desirable precedent to showcase a model of public-private partnership in delivering quality development in the NTN New Town to generate public benefits in an effective manner.

7. Conclusion

7.1.1 This S12A Planning Application is submitted for the Proposed Amendment to the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14 by rezoning the Application Site from "Open Storage" ("OS"), "Agriculture" ("AGR") and an area shown as 'Road' to a tailor-made "OU" annotated "Mixed Use" zone to facilitate the proposed mixed use development including residential and commercial (hotel and office) components, as well as social welfare and public transport facilities. The Proposed Amendment is a proactive response to the changing planning circumstances in the local and wider context of the NM. It also demonstrates an efficient use of land uses and addresses the pressing needs of society for more housing units with sufficient ancillary facilities at a prime location near a planned railway station.

7.1.2 This Supporting Planning Statement demonstrated the suitability and technical feasibility of the Proposed Amendment. By 2032, the Indicative Scheme will provide more than 2,200 housing units with a series of ancillary facilities, in particular a combination of office, hotel, as well as retail facilities, serving as a catalyst to the phasing out of existing brownfield uses and the enhancement of the overall quality of the built environment under private initiative. The Proposed Amendment will optimise the development potential of the Application Site at a convenient location to other NDAs and BCPs given the future Ping Che Station to be located in close proximity in the vicinity of the Application Site.

7.1.3 The Proposed Amendment is fully justified with a number of planning merits. Apart from fully response to Government's direction in the NM and planning intention of the NTN New Town, the proposed "OU(MU)" zoning is considered suitable at the Application Site to providing appropriate degree of flexibility for responding to changing market needs, socio-economic aspirations and on-going detailed planning of the NTN New Town. The development mix and scale is considered justifiable, compatible and technically feasible. In addition to the aforementioned residential and commercial components, suitable social welfare facilities, public transport terminus as well as local access road improvement will also be provided as part of the Proposed Amendment to serve the local community by private initiatives, without the need of taping into the public resources. It is therefore concluded that the Proposed Amendment sets a desirable precedent to showcase a model of public-private partnership in delivering the NTN New Town in an effective manner.

7.1.4 Taking into account the merits and justifications presented in this Supporting Planning Statement, we sincerely seek the favourable consideration from the TPB to support this S12A Planning Application.

Figures



100 200 300 400 500m

LEGEND

Application Site

Boundary of Planning Scheme

ZONING

V	"Village Type Development"
I(D)	"Industrial (Group D)"
OS	"Open Storage"
G/IC	"Government, Institution or Community"
O	"Open Space"
AGR	"Agriculture"
GB	"Green Belt"

Figure No.	*Scale*	*Figure Title*
2.1	NA	**Location Plan**
ARUP	*Date* Oct 2023	*Source* Extracted from the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14

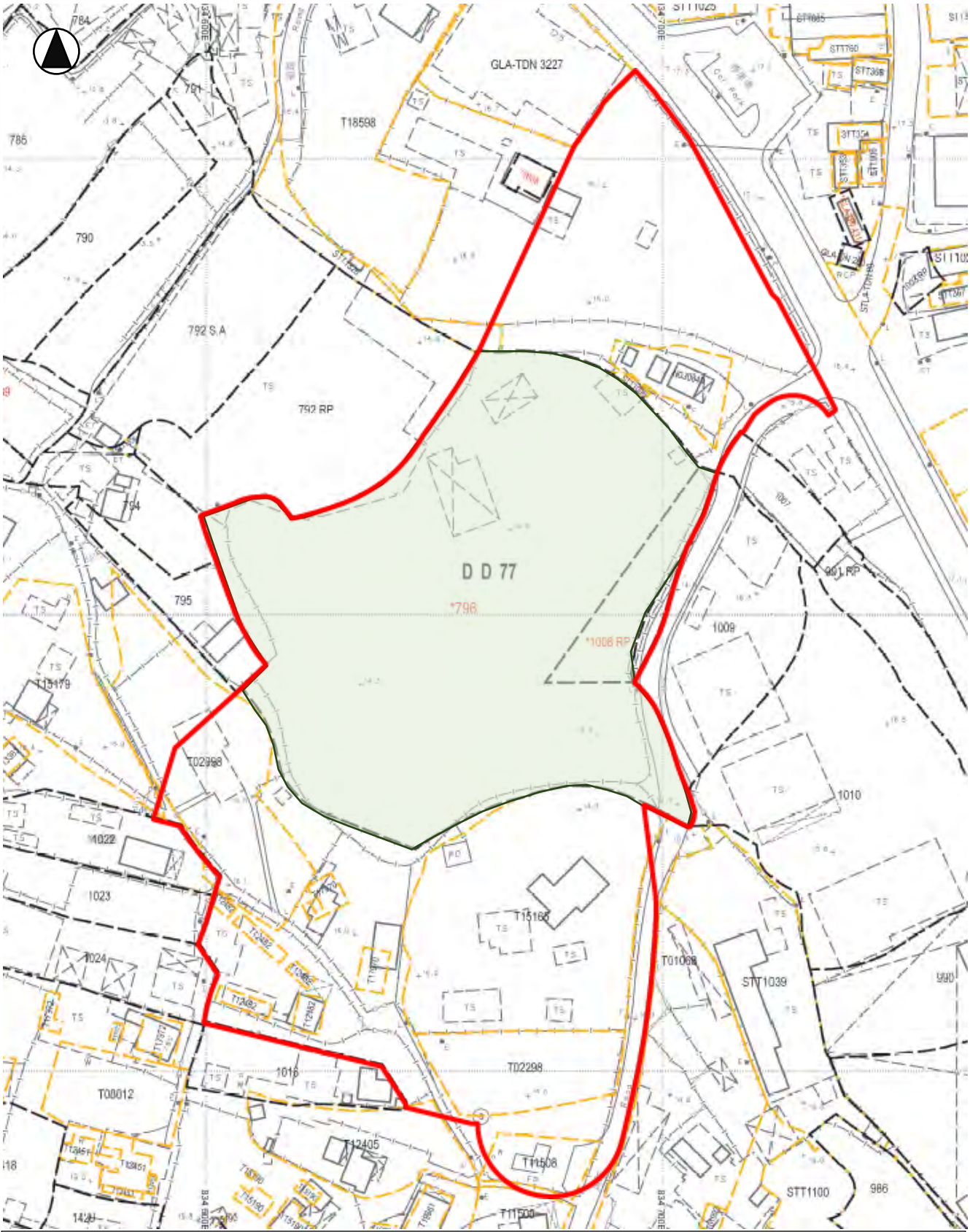
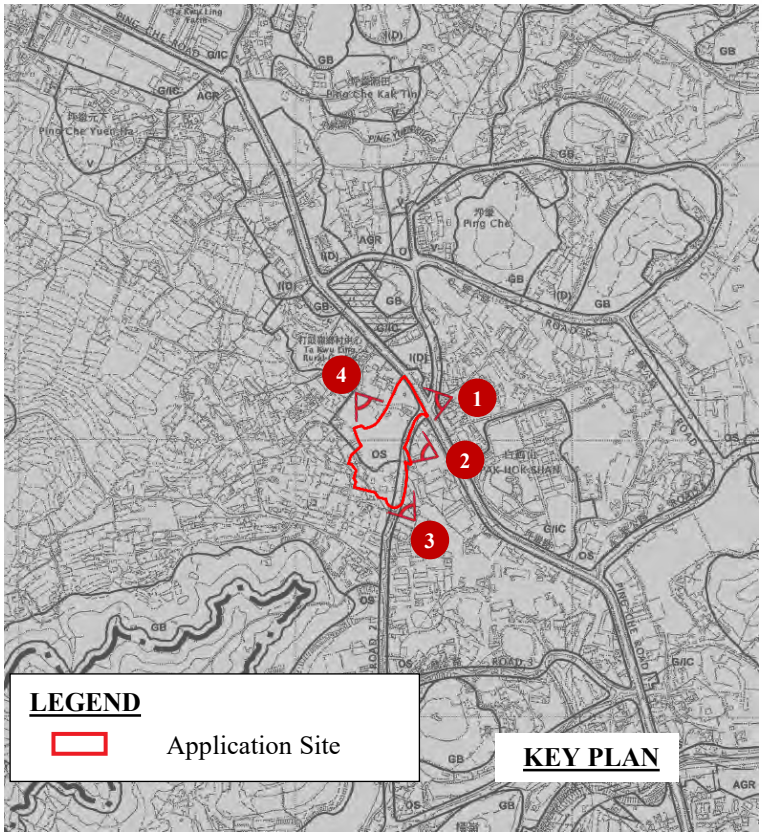


Figure No.	Scale	Figure Title
2.2	NA	**Lot Index Plan**
ARUP	Date: Oct 2023	Source: Extracted from Lot Index Plan No. ags_S00000116210_0001



1 Existing open storage operation



2 Existing temporary structures



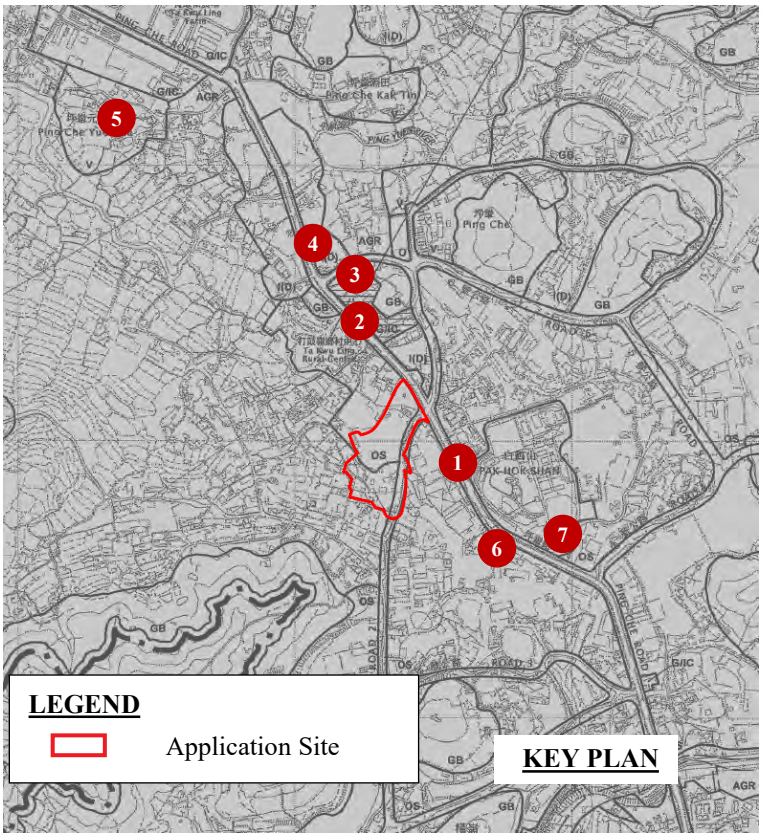
3 A strip of trees, vegetation, and temporary structures



4 Existing temporary structure



Figure No.	*Scale*	*Figure Title*
2.3	-	**Existing Condition of the Application Site**
ARUP	*Date* Oct 2023	*Source* Key Plan: OZP; Site photos taken on 11 Aug 2023



1 **Ping Che Road**



2 **Ta Kwu Ling Rural Centre Government Office**



3 **Ping Che Commercial Centre and Ping Che Nursing Home Limited**



4 **Existing scrap metal collection plant**



5 **Ping Che Yuen Ha**



6 **Hong Kong Baptist Assembly**



7 **Existing rural workshop**



Figure No.	Scale	Figure Title
2.4	-	Surrounding Context of the Application Site
ARUP	Date: Oct 2023	Source: Site photos taken on 11 Aug 2023

OPEN STORAGE

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Agricultural Use Eating Place (Canteen only) Government Refuse Collection Point Government Use (not elsewhere specified) On-Farm Domestic Structure Open Storage (not elsewhere specified) Public Convenience Public Utility Installation Public Vehicle Park (excluding container vehicle) Rural Workshop Shop and Services (Service Trades only) Utility Installation for Private Project Vehicle Repair Workshop Warehouse (excluding Dangerous Goods Godown)	Asphalt Plant/Concrete Batching Plant Cargo Handling and Forwarding Facility Cement Manufacturing Container Storage/Repair Yard Container Vehicle Park/Container Vehicle Repair Yard Dangerous Goods Godown Eating Place (not elsewhere specified) Industrial Use (not elsewhere specified) Open Storage of Cement/Sand Open Storage of Chemical Products/ Dangerous Goods Petrol Filling Station Shop and Services (not elsewhere specified) Vehicle Stripping/Breaking Yard Wholesale Trade

Planning Intention

This zone is intended primarily for the provision of land for appropriate open storage uses and to regularize the already haphazard proliferation of open storage uses. It provides for the orderly development of land for open storage uses that cannot be accommodated in conventional godown premises.

Figure No.	*Scale*	*Figure Title*	**Extracted Schedule of Use of the Approved Ping Che & Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14 – "Open Storage" ("OS")**
3.1a	-		
ARUP	*Date* Oct 2023	*Source*	Extracted from the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14

Ling Rural Centre and Ta Kwu Ling Farm), the workshops adjoining ex-Ping Yeung Public School, the industrial workshops to the east of Ping Che Village as well as the concrete products factory near Tai Po Tin. These areas are zoned "I(D)" with a view to promoting gradual redevelopment of these sites and achieving environmental improvement of the Area.

9.3.3 In view of the limited infrastructure in the Area and the special requirements of different industrial undertakings (e.g. higher ceiling, extensive parking and manoeuvring space), the development restrictions for the "I(D)" zone in the Area are as follows :

(a) Maximum plot ratio of 1.0 and a maximum site coverage of 60%; and

(b) Maximum building height limit of 13m.

9.3.4 To improve the general environment of the Area, new industrial developments within the "I(D)" zone are encouraged to be constructed with permanent materials. Each establishment shall include water supply, drainage and sewage disposal facilities; to minimise pollution, new sites shall be connected to a Government reticulatory sewage system or provided with satisfactory on-site sewage treatment facilities.

9.3.5 To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the plot ratio/site coverage/building height restrictions stated in paragraph 9.3.3 above may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

9.4 Open Storage ("OS") : Total Area 124.52 ha

9.4.1 This zone is intended primarily for the provision of land for appropriate open storage uses and to regularise the already haphazard proliferation of open storage uses. It provides for the orderly development of land for open storage uses that cannot be accommodated in conventional godown premises. In addition, upgrading of existing workshop/warehouse and provision of new industrial development, though not encouraged, may be permitted on application to the Board. Development proposals for such purposes have to demonstrate clearly that the operations could not be accommodated in conventional flatted factories or godown premises, and the proposed open storage uses would have no adverse environmental, drainage and traffic impacts on the surrounding areas. The Board will consider each development proposal on its individual merits. Sympathetic consideration may be given to industries having extensive land requirement and not polluting in nature.

9.4.2 Certain open storage uses such as container storage, vehicle stripping or breaking yard and open storage of chemical products or dangerous goods etc. which may cause environmental nuisance, safety hazards or transport problems require planning permission from the Board. Other storage uses, such as storage of agricultural products, construction materials (except open storage of cement/sand) and equipment, which are unlikely to

Figure No.	*Scale*	*Figure Title*	**Extracted Explanatory Statement of the Approved Ping Che & Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14 – "Open Storage" ("OS") (Sheet 1 of 2)**
3.1b	-		
ARUP	*Date* Oct 2023	*Source*	Extracted from the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14

cause adverse environmental and traffic problems, are always permitted in this zone.

9.4.3 In view of the proliferation of open storage uses in the southern part of the Area, especially areas near Wang Leng, Pak Hok Shan and along Ping Che Road, there are sites zoned "OS" in and around these areas. The south-western part (located to the west of Ping Che Road) covers the open storage yards and industrial workshops located along Sha Tau Kok Road and Ping Che Road and those situated to the west and east of Wang Leng. Moreover, there are "OS" sites located to the east of Ping Che Road covering the area to the east of Ping Che Village, the open storage yards around Pak Hok Shan and the industrial workshops to the west of Shui Lau Hang.

9.4.4 To facilitate the open storage uses on the areas to the east and north-east of Ping Che Village, improvement works such as the upgrading of both the access roads from Wo Keng Shan Road and Ng Chow Road, widening of the carriageway and providing passing bays with a view to improving the overall safety of the road users were carried out. The improvement works were completed in April 2003.

9.4.5 Planning control will be exercised through the granting of planning permission and justifications are required to demonstrate that there will be no traffic, environmental, drainage and sewage impacts to the surrounding areas and that adequate parking, vehicular access and vehicle manoeuvring space will be provided within the application site.

9.5 Government, Institution or Community ("G/IC") : Total Area 17.63 ha

9.5.1 This zone is intended primarily for the provision of Government, institution or community facilities serving the needs of the local residents and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments. The Ta Kwu Ling Rural Centre located along Ping Che Road and to the west of Ping Che is to accommodate government, community as well as retail/commercial facilities at a convenient location and serve as a focal point of the Area.

9.5.2 As detailed planning proceeds, other land within the Area may be designated from other uses to this category to meet the envisaged demand of the growing population of the Area. Caritas Centre, ex-Ping Yeung Public School, Ta Kwu Ling District Rural Committee Building, Wun Chuen Sin Kwoon, Ta Kwu Ling Farm, Baptist Assembly, an electric sub-station and a telephone exchange near Hung Leng Village are zoned "G/IC" on the Plan to reflect the existing uses.

9.6 Government, Institution or Community (1) ("G/IC(1)") : Total Area 1.31 ha

9.6.1 This zone is intended primarily for the expansion of the adjoining religious institution use (Wun Chuen Sin Kwoon) with associated columbarium use. Any development within this zone shall be low-density and low-rise in

Figure No.	*Scale*	*Figure Title*	**Extracted Explanatory Statement of the Approved Ping Che & Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14 – "Open Storage" ("OS") (Sheet 2 of 2)**
3.1c	-		
ARUP	*Date* Oct 2023	*Source*	Extracted from the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14

AGRICULTURE

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Agricultural Use Government Use (Police Reporting Centre only) On-Farm Domestic Structure Public Convenience Religious Institution (Ancestral Hall only) Rural Committee/Village Office	Animal Boarding Establishment Barbecue Spot Burial Ground Field Study/Education/Visitor Centre Government Refuse Collection Point Government Use (not elsewhere specified) House (New Territories Exempted House only, other than rebuilding of New Territories Exempted House or replacement of existing domestic building by New Territories Exempted House permitted under the covering Notes) Picnic Area Place of Recreation, Sports or Culture (Horse Riding School, Hobby Farm, Fishing Ground only) Public Utility Installation Religious Institution (not elsewhere specified) School Utility Installation for Private Project

Planning Intention

This zone is intended primarily to retain and safeguard good quality agricultural land/farm/fish ponds for agricultural purposes. It is also intended to retain fallow arable land with good potential for rehabilitation for cultivation and other agricultural purposes.

Remarks

(a) Any filling of pond, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the interim development permission area plan without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.

(Please see next page)

Figure No.	*Scale*	*Figure Title*	**Extracted Schedule of Use of the Approved Ping Che & Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14 – "Agriculture" ("AGR") (Sheet 1 of 2)**
3.1d	-		
ARUP	*Date* Oct 2023	*Source*	Extracted from the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14

AGRICULTURE (Cont'd)

Remarks (Cont'd)

(b) Any filling of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the draft Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/10 without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance. This restriction does not apply to filling of land specifically required under prior written instructions of Government department(s) or for the purposes specified below:

(i) laying of soil not exceeding 1.2m in thickness for cultivation; or

(ii) construction of any agricultural structure with prior written approval issued by the Lands Department.

Figure No.	*Scale*	*Figure Title*	**Extracted Scheduled of Uses of the Approved Ping Che & Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14 – "Agriculture" ("AGR") (Sheet 2 of 2)**
3.1e	-		
ARUP	*Date* Oct 2023	*Source*	Extracted from the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14

nature and shall be compatible and blend in harmoniously with its surrounding environment.

9.6.2 Within this zone, development and/or redevelopment is subject to a maximum gross floor area of 3,099m², a maximum site coverage of 15.8% and a maximum building height of 19m above the mean site formation level. The maximum number of niches for columbarium use under Column 1 of the zone shall not exceed 6,776. Provision of additional number of niches other than that specified above may be considered by the Board through the planning permission system. Planning applications to the Board should be supported by technical assessments. The maximum number of niches for columbarium use within this zone as a whole shall not exceed 12,848.

9.6.3 To provide flexibility for design, minor relaxation of the gross floor area/ site coverage/building height restrictions stated in paragraph 9.6.2 above may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

9.7 Open Space ("O") : Total Area 0.47 ha

This zone is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of local residents as well as the general public. Two existing football pitches and sitting out areas near Ping Che Village and the ex-Sing Ping Public School are zoned "O".

9.8 Agriculture ("AGR") : Total Area 265.30 ha

9.8.1 This zone is intended primarily to retain and safeguard good quality agricultural land/farms/fish ponds for agricultural purposes. It is also intended to retain fallow arable land with good potential for rehabilitation for cultivation and other agricultural purposes. The Area has been one of the established agricultural bases in the NENT and most of the agricultural land in the Area is of good quality according to the grading exercise undertaken by the Agriculture, Fisheries and Conservation Department which has taken into account the existing availability and quality of infrastructural and marketing facilities. Notwithstanding the proliferation of open storage and industrial uses in the Area and the general decline in agricultural activities in the territory, there is a significant amount of actively cultivated land concentrated in the northern and southern parts, along Ng Tung River of the Area.

9.8.2 The land under active cultivation is intermixed with livestock sheds and fallow agricultural land which has good potential for rehabilitation for cultivation purpose. Temporary domestic structures of small scale have been erected around the agricultural land and livestock sheds. Apart from the village housing inside the recognized villages, these domestic structures remain the key accommodation for the rural population.

9.8.3 In general, there are four major "AGR" zones in the Area and two of these zones are located in the northern part (to the north of Pak Hok Shan). The "AGR" zone in the north-east comprises actively cultivated land near Ping Yeung Village and the ex-Sing Ping Public School as well as the fallow

Figure No.	*Scale*	*Figure Title*	**Extracted Explanatory Statement of the Approved Ping Che & Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14 – "Agriculture" ("AGR") (Sheet 1 of 2)**
3.1f	-		
ARUP	*Date* Oct 2023	*Source*	Extracted from the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14

agricultural land at Shek O.

9.8.4 The "AGR" zone in the north-west comprises actively cultivated land near Lei Uk Village, Tai Po Tin Village and Ha Shan Kai Wat Village and the adjoining fallow agricultural land. Owing to the limited provision of infrastructure and the need to preserve the rural character, existing industrial and open storage uses clustered in the areas to the south of Lei Uk Village and to the east of Ha Shan Kai Wat Village should be relocated in the long run. Proliferation of industrial activities and open storage uses in the area should be deterred since these haphazard developments would worsen interface problems and traffic conditions around existing villages.

9.8.5 In the south-western part of the Area, despite the infiltration of open storage and industrial development, much of the land along Ng Tung River and Kwan Tei River is still under active cultivation, the area to the south of Wang Leng is one of the examples. These plots of cultivated land are usually intermixed with temporary domestic structures. In order to encourage farming activities and protect the arable land, these plots of land are zoned "AGR".

9.8.6 The agricultural land at the south-eastern part of the Area is largely categorised as good quality and much of it is still under active cultivation. Plots of cultivated land near Hung Leng, Leng Tsai and Ng Tung River are some of the examples. The "AGR" zoning is designated to preserve existing agricultural use. Several open storage yards and car-repairing workshops located to the north of Sha Tau Kok Road (near Leng Tsai) are non-conforming existing uses which should be relocated to other areas in the long run.

9.8.7 As filling of land/pond may cause adverse drainage and environmental impacts on the adjacent areas, permission from the Board is required for such activities. However, filling of land specifically required under prior written instructions of Government department(s), or for the purposes of genuine agricultural practice including laying of soil not exceeding 1.2m in thickness for cultivation, and construction of agricultural structure with prior written approval from the Lands Department is exempted from the control.

9.9 Green Belt ("GB") : Total Area 87.24 ha

9.9.1 The planning intention of this zone is primarily for defining the limits of urban and sub-urban development areas by natural features and to contain urban sprawl as well as to provide passive recreational outlets. There is a general presumption against development within this zone.

9.9.2 The "GB" sites within the Area include the footslopes of Cheung Shan (in the east) and Tsung Shan in the west, the vegetated knolls and clusters of trees scattered within the Area.

9.9.3 Limited developments may be permitted if they are justified on strong planning grounds. Developments requiring planning permission from the

Figure No.	*Scale*	*Figure Title*	**Extracted Explanatory Statement of the Approved Ping Che & Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14 – "Agriculture" ("AGR") (Sheet 2 of 2)**
3.1g	-		
ARUP	*Date* Oct 2023	*Source*	Extracted from the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14

(6) Any use or development of land or building falling within the boundaries of the Plan but not within the boundaries of the interim development permission area plan, unless always permitted in terms of the Plan, shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the first draft outline zoning plan without permission from the Town Planning Board.

(7) Except as otherwise specified by the Town Planning Board, when a use or material change of use is effected or a development or redevelopment is undertaken, as always permitted in terms of the Plan or in accordance with a permission granted by the Town Planning Board, all permissions granted by the Town Planning Board in respect of the site of the use or material change of use or development or redevelopment shall lapse.

(8) Road junctions, alignment of roads, and boundaries between zones may be subject to minor adjustments as detailed planning proceeds.

(9) The following uses or developments are always permitted on land falling within the boundaries of the Plan except where the uses or developments are specified in Column 2 of the Notes of individual zones:

(a) maintenance, repair or demolition of a building;

(b) provision, maintenance or repair of plant nursery, amenity planting, open space, rain shelter, refreshment kiosk, footpath, bus/public light bus stop or lay-by, cycle track, taxi rank, public utility pipeline, electricity mast, lamp pole, telephone booth, telecommunications radio base station, automatic teller machine and shrine;

(c) maintenance or repair of road, watercourse, nullah, sewer and drain;

(d) geotechnical works, local public works, road works, sewerage works, drainage works, environmental improvement works, marine related facilities and waterworks (excluding works on service reservoir) and such other public works co-ordinated or implemented by Government;

(e) rebuilding of New Territories Exempted House;

(f) replacement of an existing domestic building i.e. a domestic building which was in existence on the date of the first publication in the Gazette of the notice of the interim development permission area plan, by a New Territories Exempted House; and

(g) provision, maintenance or repair of a grave of an indigenous New Territories villager or a locally based fisherman and his family members for which permission has been obtained from Government.

(10) In any area shown as 'Road', all uses or developments except those specified in paragraphs (9)(a) to (9)(d) and (9)(g) above and those specified below require permission from the Town Planning Board:

road and on-street vehicle park.

Figure No.	*Scale*	*Figure Title*	**Extracted Covering Notes of the Approved Ping Che & Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14 – 'Road'**
3.1h	-		
ARUP	*Date* Oct 2023	*Source*	Extracted from the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14

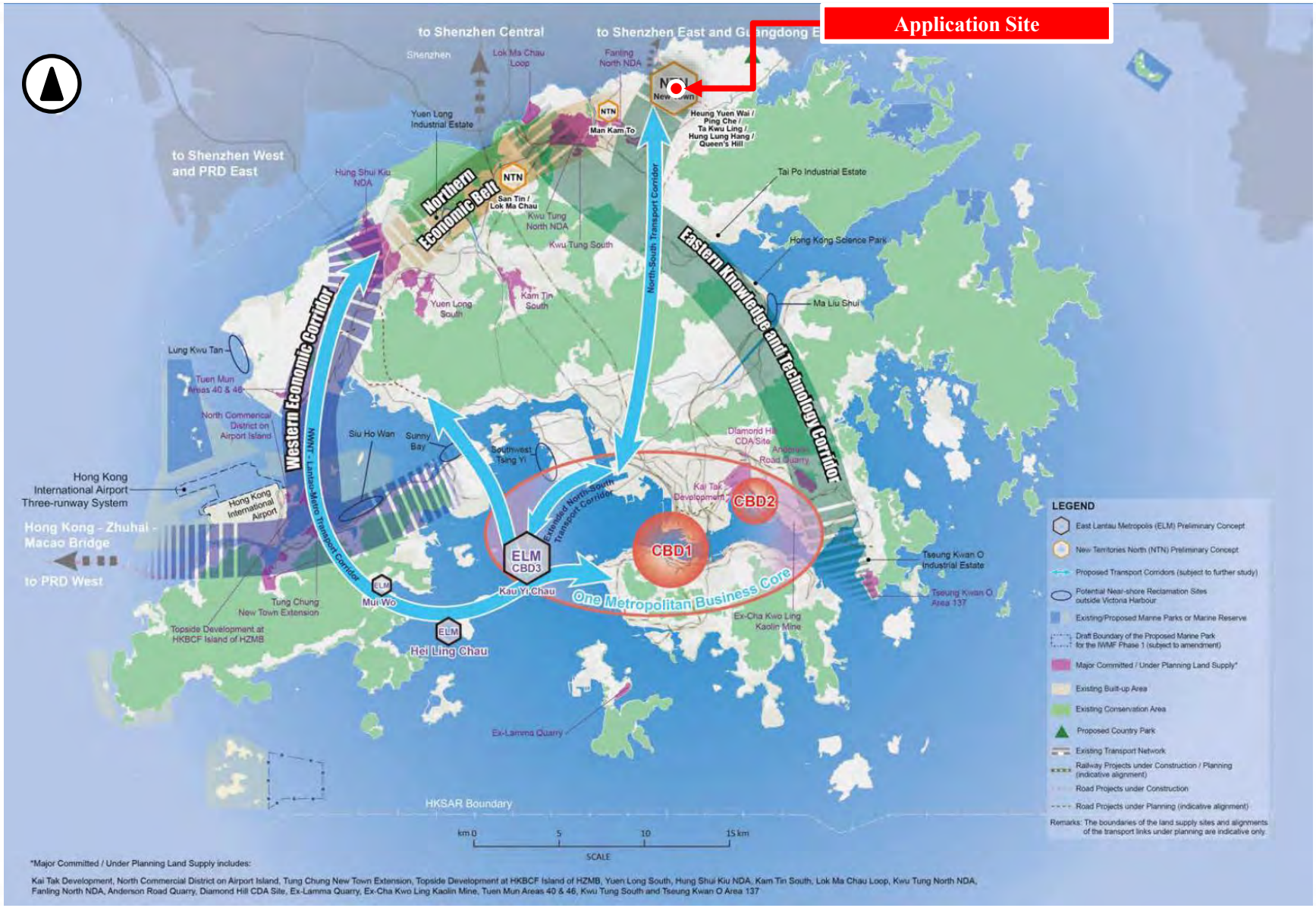


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Figure Title	Source	Date	Figure No.
NTN New Town, Ping Che and the Application Site within the Northern Metropolis	Extracted from Northern Metropolis Development Strategy	Oct 2023	**3.2a**
		Scale: -	



ARUP

Figure Title	Source	Date	Figure No.
Location of the Application Site along the Eastern Knowledge and Technology Corridor under HK2030+'s Conceptual Spatial Framework	Based on Eastern Knowledge and Technology Corridor under Hong Kong 2030+'s Conceptual Spatial Framework	Oct 2023	**3.2b**
		Scale: -	

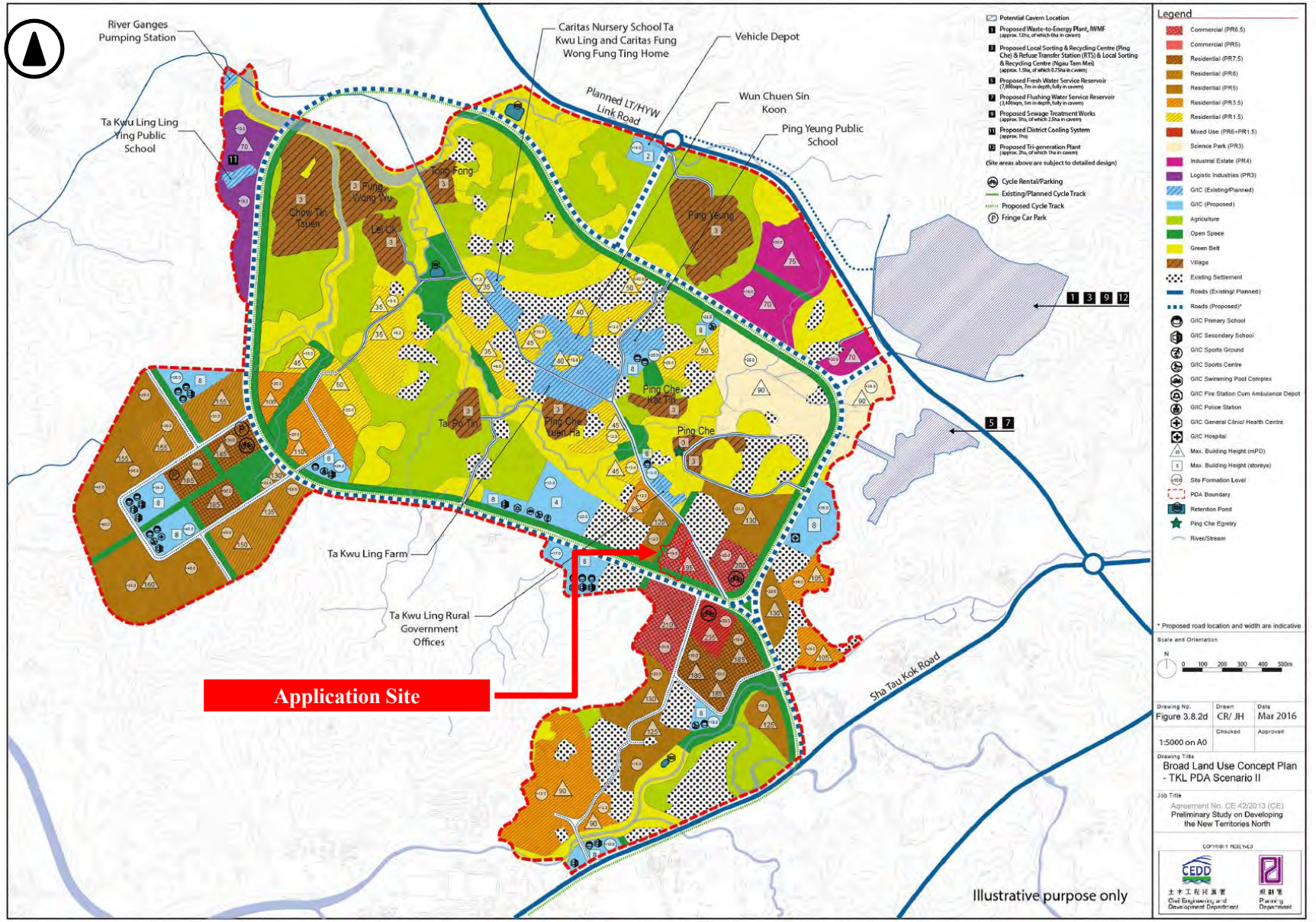

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Figure Title

High-density Development Intensity at the Application Site and its Vicinity under the Scenario II (Higher Residential Scenario)

Source

Extracted from Figure 3.8.2d Broad Land Use Concept Plan – TKL PDA Scenario II in the Preliminary Feasibility Study on Developing the New Territories North Final Report

Date Oct 2023

Scale -

Figure No. 3.4a

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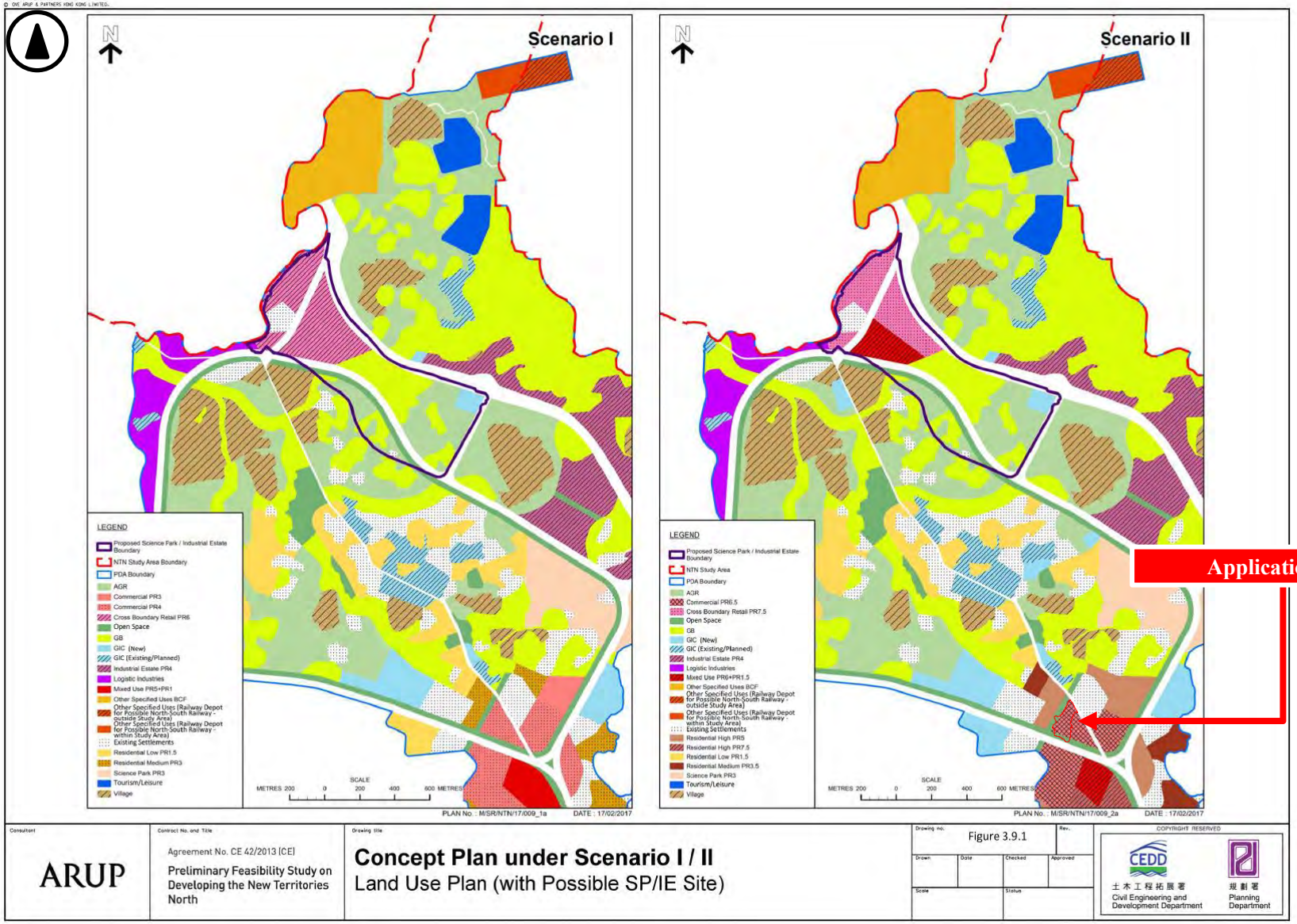

Consultant: ARUP

Contract No. and Title: Agreement No. CE 42/2013 (CE)
Preliminary Feasibility Study on Developing the New Territories North

Drawing title: **Concept Plan under Scenario I / II**
Land Use Plan (with Possible SP/IE Site)

Drawing no.: Figure 3.9.1
Rev.
Drawn | Date | Checked | Approved
Scale | Status

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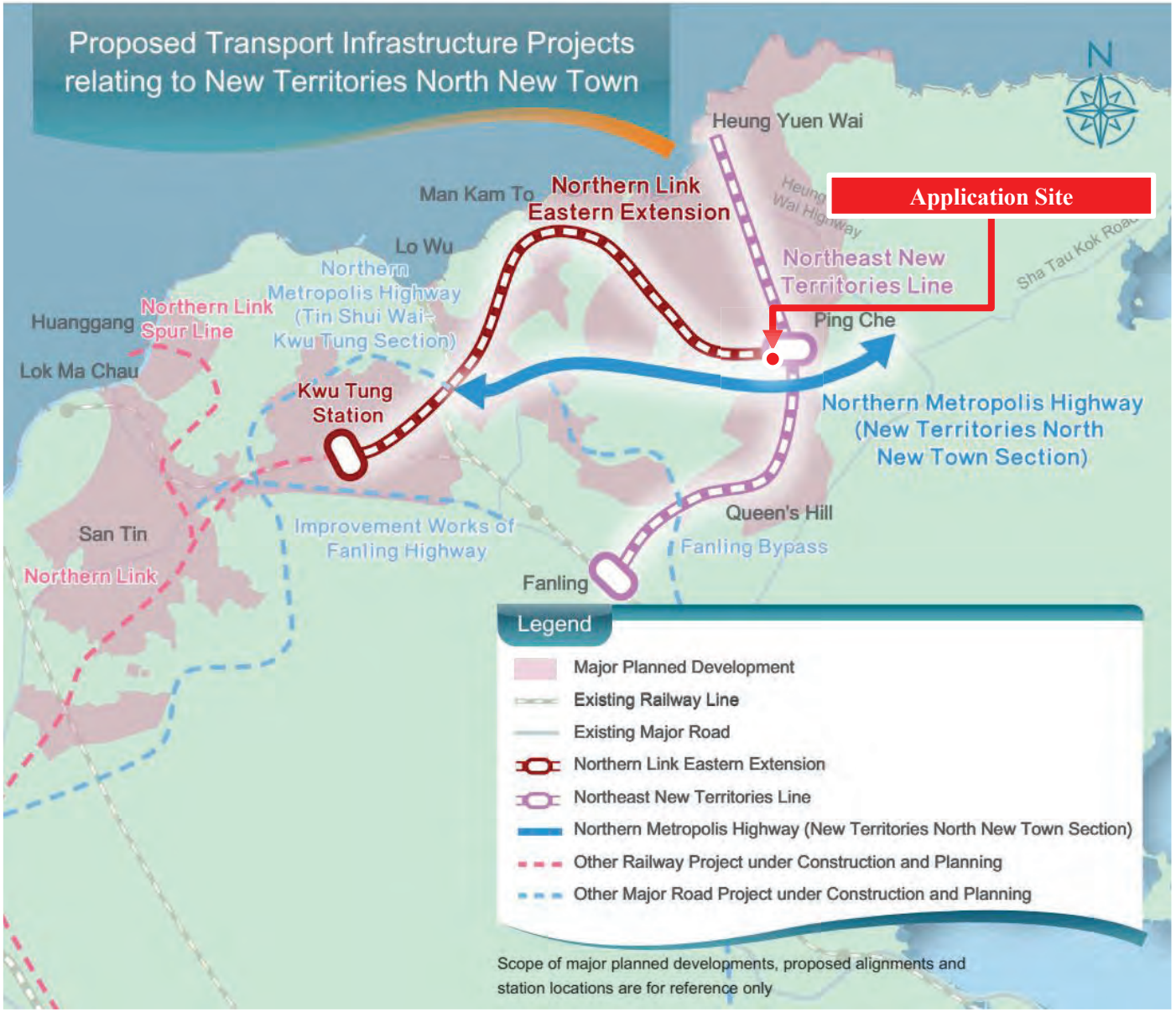
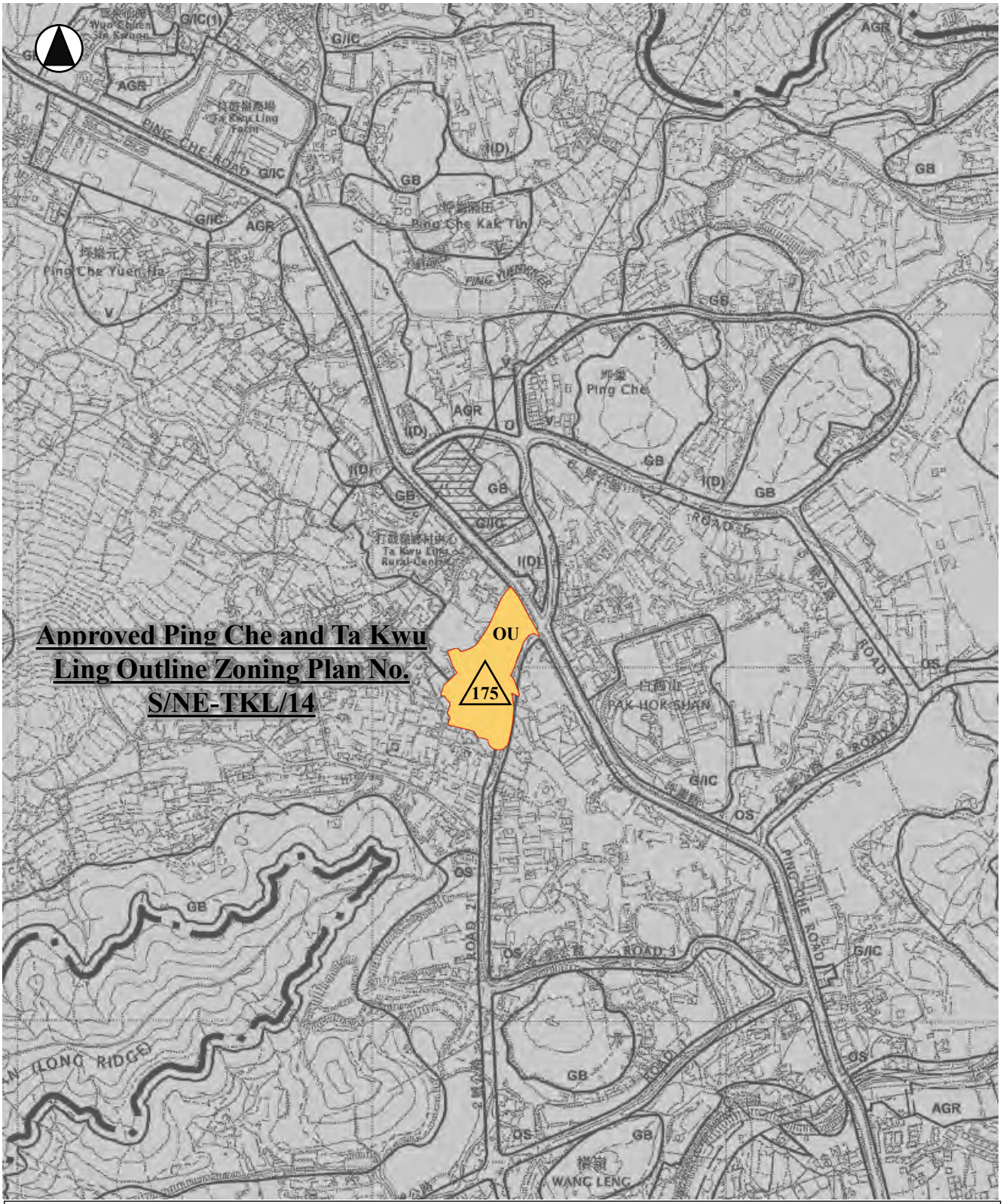
Figure Title	Source	Date	Figure No.
Proposed Science Park / Industrial Estate Boundary within Ta Kwu Ling NDA in the NTN Study	Extracted from Figure 3.9.1 Concept Plan under Scenario I/II in the Preliminary Feasibility Study on Developing the New Territories North Final Report	Oct 2023	**3.4b**
		Scale: -	



ARUP

Figure Title	Source	Date	Figure No.
Planned Northern Link Eastward Extension and Northeast New Territories Line under Hong Kong Major Transport Infrastructure Development Blueprint	Extracted from Proposed Transport Infrastructure Projects relating to New Territories North New Town, Hong Kong Major Transport Infrastructure Development Blueprint	Aug 2024	**3.5**
		Scale -	



LEGEND

Application Site

Boundary of Planning Scheme

ZONING

V	"Village Type Development"	**O**	"Open Space"
I(D)	"Industrial (Group D)"	**OU**	"Other Specified Uses"
OS	"Open Storage"	**AGR**	"Agriculture"
G/IC	"Government, Institution or Community"	**GB**	"Green Belt"

Figure No.	*Scale*	*Figure Title*	**Proposed Amendments to the Approved Ping Che & Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14**
5.1	-		
ARUP	*Date* Oct 2023	*Source*	Extracted from the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14

OTHER SPECIFIED USES

Column 1 *Uses always permitted*	*Column 2* *Uses that may be permitted with orwithout conditions on application to the Town Planning Board*

For "Mixed Use" Only

Schedule I: for non-residential building or non-residential portionof a building upon development/redevelopment/conversion

Ambulance Depot
Commercial Bathhouse/ Massage Establishment (in non-residential building only)
Eating Place
Educational Institution
Exhibition or Convention Hall
Government Use (not elsewhere specified)
Hotel
Information Technology and Telecommunications
Industries
Institutional Use (not elsewhere specified)
Library
Off-course Betting Centre
Office
Place of Entertainment
Place of Recreation, Sports or Culture
Private Club
Public Clinic
Public Convenience
Public Transport Terminus or Station
Public Utility Installation
Public Vehicle Park (excluding container vehicle)
Recyclable Collection Centre
Religious Institution
School
Shop and Services
Social Welfare Facility (excluding those involving residential care)
Training Centre
Utility Installation for Private Project
Wholesale Trade
Broadcasting, Television and/or Film Studio
Commercial Bathhouse/ Massage Establishment (not elsewhere specified)
Flat
Government Refuse Collection Point
Hospital
Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances
Petrol Filling Station
Residential Institution
Social Welfare Facility (not elsewhere specified)

(Please see next page)

Figure No.	*Scale*	*Figure Title*	**Proposed Schedule of Use and Remarks of the "Other Specified Uses" Annotated "Mixed Use" Zone ("OU(MU)") (Sheet 1 of 2)**
5.2a	-		
ARUP	*Date* Oct 2023	*Source*	N/A

OTHER SPECIFIED USES

Column 1 *Uses always permitted*	*Column 2* *Uses that may be permitted with orwithout conditions on application to the Town Planning Board*

For "Mixed Use" Only (Cont'd)

Schedule II: for residential building or residential portion of a building upon development/redevelopment/conversion

Flat
Government Use (Police Reporting Centre, Post Office only)
House
Residential Institution
Social Welfare Facility (residential care facility only)
Utility Installation for Private Project

Eating Place
Educational Institution
Government Refuse Collection Point
Government Use (not elsewhere specified)
Hotel
Institutional Use (not elsewhere specified)
Library
Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances
Office
Place of Entertainment
Place of Recreation, Sports or Culture
Private Club
Public Clinic
Public Transport Terminus or Station
Public Utility Installation
Public Vehicle Park (excluding container vehicle)
Religious Institution
School
Shop and Services
Social Welfare Facility (not elsewhere specified)
Training Centre

Planning Intention

This zone is intended primarily for high-density residential development and commercial development. Flexibility for the development/redevelopment/conversion of residential or other uses, or a combination of various types of compatible uses including commercial, residential, educational, cultural, recreational and entertainment uses, either vertical within a building or horizontally over a spatial area, is allowed to meet changing market needs. Physical segregation has to be provided between the non-residential and residential portions within a new/converted building to prevent non-residential uses from causing nuisance to the residents.

Figure No.	*Scale*	*Figure Title*	**Proposed Schedule of Use and Remarks of the "Other Specified Uses" Annotated "Mixed Use" Zone ("OU(MU)") (Sheet 2 of 2)**
5.2b	-		
ARUP	*Date* Oct 2023	*Source*	N/A

OTHER SPECIFIED USES (Cont'd)

For "Mixed Use" Only (Cont'd)

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a total maximum plot ratio (PR) of 7 (of which the domestic plot ratio should not exceed 5.9), or the plot ratio of the existing building, whichever is the greater.

(b) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of the maximum building in terms of metres above Principal Datum as stipulated on the Plan, or the height of the existing, whichever is the greater.

(c) In determining the maximum plot ratio for the purpose of paragraph (a) above, any floor space that is constructed or intended for use solely as Government, institution or community facilities, and public transport terminus or station may be disregarded.

(d) In determining the maximum plot ratio for the purposes of paragraph (a) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, or caretaker's quarters and recreational facilities for the use and benefits of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.

(e) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio and/or building height restrictions stated in paragraphs (a) and (b) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

(f) Upon development/redevelopment/conversion of a building to a mixed use development, the residential and non-residential portions within a building shall be physically segregated through appropriate building design. The provision of residential and non-residential uses on the same floor will not be permitted. Under exceptional circumstances, relaxation of the requirement for physical segregation and no inter-mixing on the same floor may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

Figure No.	*Scale*	*Figure Title*	**Proposed Explanatory Statement of the "Other Specified Uses" Annotated "Mixed Use" Zone ("OU(MU)") (Sheet 1 of 3)**
5.3a	-		
ARUP	*Date* Oct 2023	*Source*	N/A

9.8 "Other Specified Uses" ("OU") – Total Area 1.78 ha

9.8.1 This zone is intended for specific development(s) and/or uses, which is/are specified in the annotation of the zone.

Mixed Use

9.8.2 A site (about 1.78 ha) zoned as "OU" annotated "Mixed Use" ("OU(Mixed Use)") is located at the southwestern side of Ping Che Road is near the planned/proposed Ping Che Station. The planning intention of this zone is primarily for high-density residential development and commercial development. Development within this zone is subject to a maximum PR of 7 (of which the domestic PR should not exceed 5.9) and a maximum building height (BH) of 175mPD.

9.8.3 In order to enhance the connectivity to the surrounding area, a local access road to the east of the site is proposed to be upgraded with footpaths on both sides for public access from Ping Che Road to further south to the site.

9.8.4 A Public Transport Terminus (PTT) of about 1,246m^2 Gross Floor Area (GFA) is proposed on the ground floor of the non-domestic towers to provide public transport interchange services.

9.8.5 A Gross Floor Area (GFA) of about 1,246m^2 for a Public Transport Terminus (PTT) is proposed on the ground level of the commercial building to provide public transport interchange services to serve the need arising from future development. The GFA of the PTT is subject to detailed design. In determining the maximum PR/GFA development or redevelopment on land zoned as "OU(MU)", any floor space that is constructed or intended for use solely as public transport terminus or station will be disregarded.

9.8.6 A GFA of about 787.6m^2 for a 60-place Day Care Centre for the Elderly and a GFA about 1,166m^2 for a 100-place Child Care Centre are to accommodate the need arising from the future residents and ageing population in Ping Che Area. The GFAs of the Day Care Centre for the Elderly and Child Care Centre are subject to detailed design. In order to facilitate provision of Government, institution or community facilities, in determining the maximum PR/GFA of the development/redevelopment on land zoned "OU(MU)", any floor space that is constructed or intended for use solely as Government, institution or community facilities will be disregarded.

9.8.7 In order to enhance the air ventilation of the local environment, development/redevelopment within this zone should consider adopting suitable design and wind enhancement features, for example permeable design of the PTT, chamfered corner design of podium structure, orientation of building blocks align with wind flow direction, terraced podium design, opening design of sky garden etc. A mix of building heights for developments within "OU(MU)" can also be considered for visual interest and enhance visual permeability.

Figure No.	Scale	Figure Title	Proposed Explanatory Statement of the "Other Specified Uses" Annotated "Mixed Use" Zone ("OU(MU)") (Sheet 2 of 3)
5.3b	-		
ARUP	Date: Oct 2023	Source: N/A	

9.8.8 Rhythmic building height profile with maximum BH not more than 175mPD shall be adopted to encourage creation of an interesting skyline at this prominent location at the future centre of the NTN New Town. Building separations of appropriate widths shall be adopted to enhance the visual and wind permeability.

9.8.9 Development or redevelopment within the above zones are subject to a maximum BH restriction as stipulated on the Plan, or the height of the existing building, whichever is the greater.

9.8.10 Minor relaxation of the PR and/or BH restrictions for the "OU" zone may be considered by the Board on application under section 16 of the Ordinance. Each application for minor relaxation of PR / BH restrictions will be considered on its own merits.

Figure No.	Scale	Figure Title	Proposed Explanatory Statement of the "Other Specified Uses" Annotated "Mixed Use" Zone ("OU(MU)") (Sheet 3 of 3)
5.3c	-		
ARUP	Date: June 2024	Source:	N/A

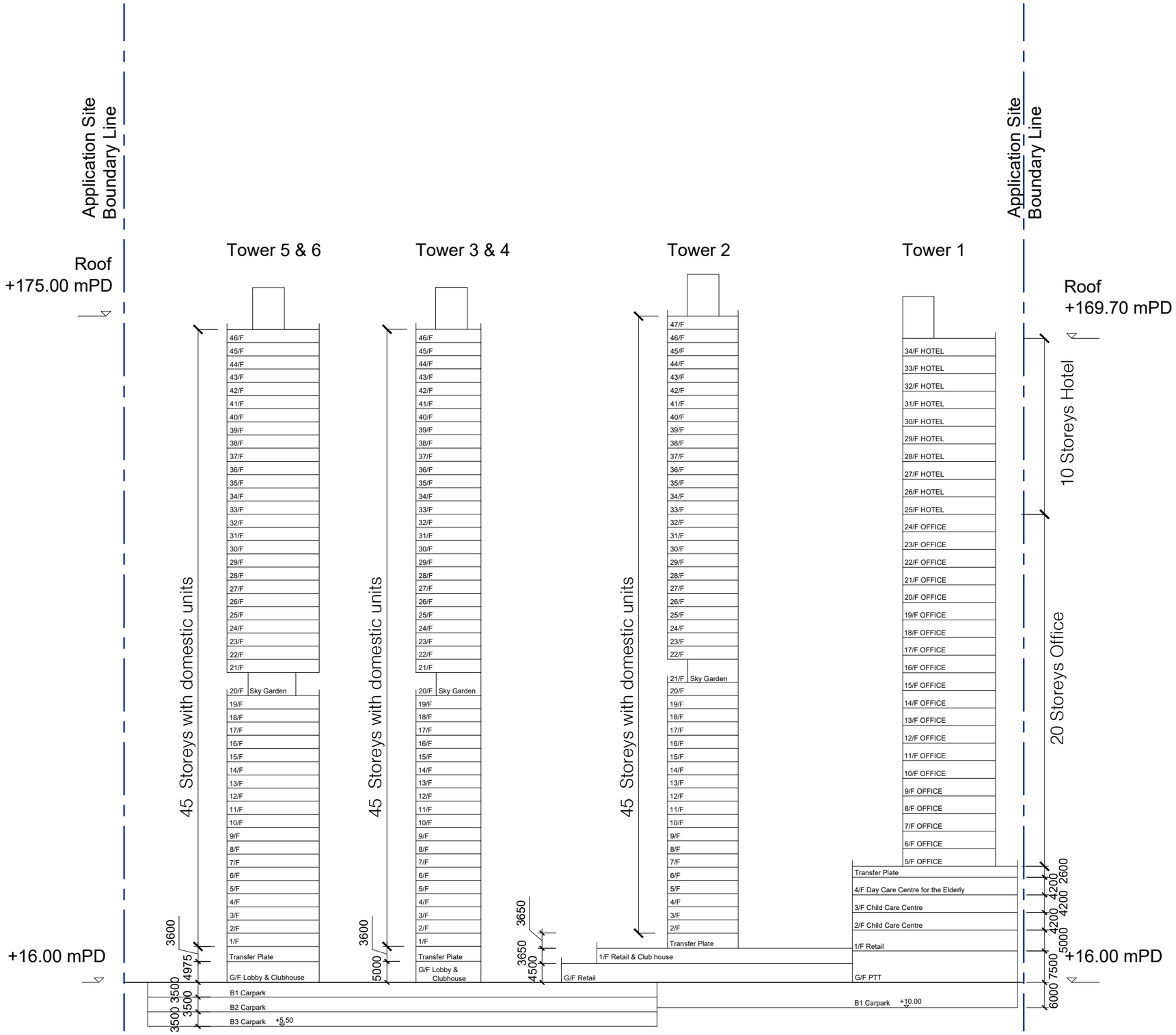
Appendix A Indicative Architectural Drawings



BLOCK PLAN SK-1
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

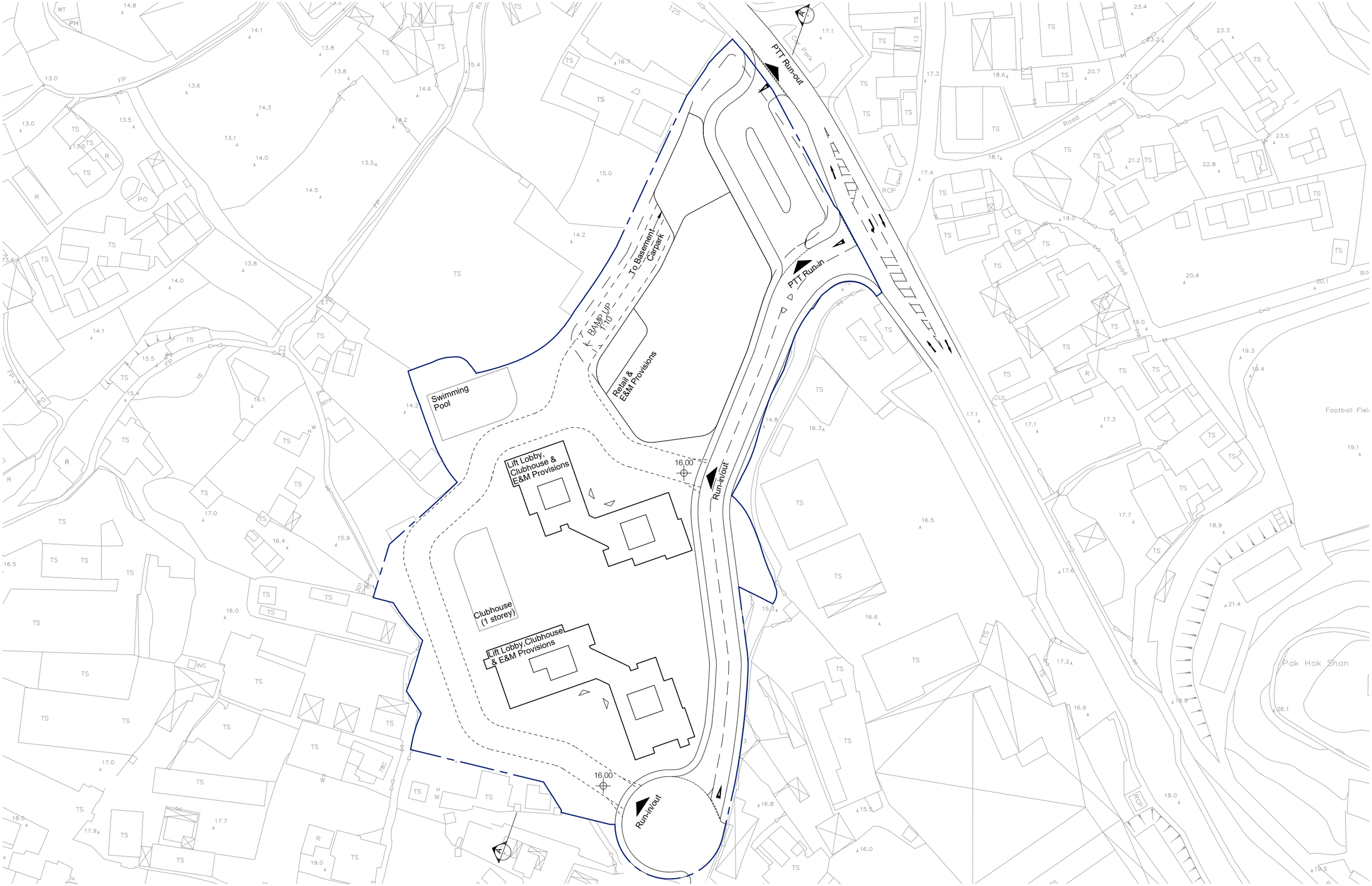
SINGULAR STUDIO LTD
11 DECEMBER 2023



SCHEMATIC SECTION AA' SK-2
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

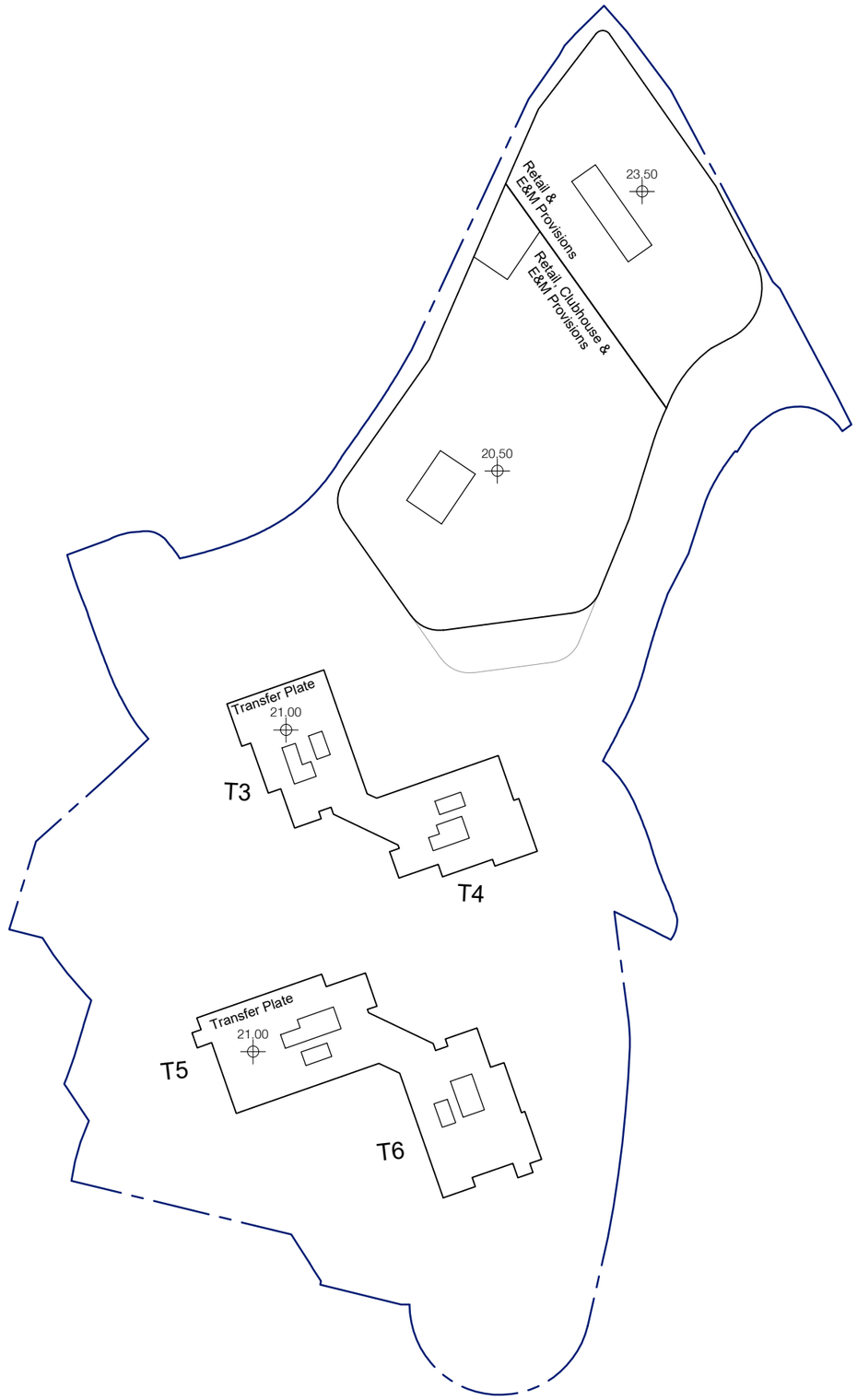
SINGULAR STUDIO LTD
6 OCTOBER 2023



GROUND FLOOR PLAN SK-3
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

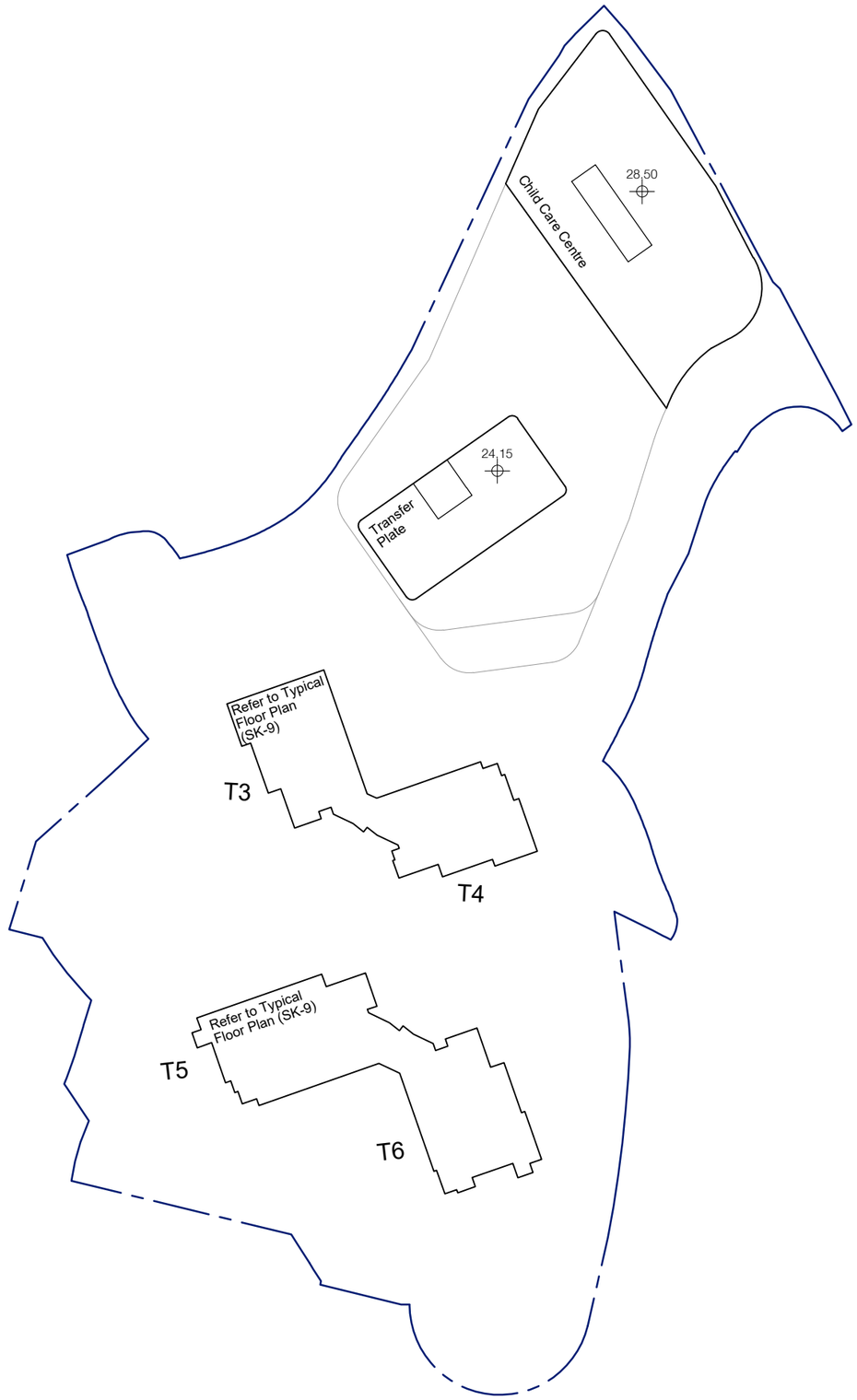
SINGULAR STUDIO LTD
11 DECEMBER 2023



FIRST FLOOR PLAN SK-4
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

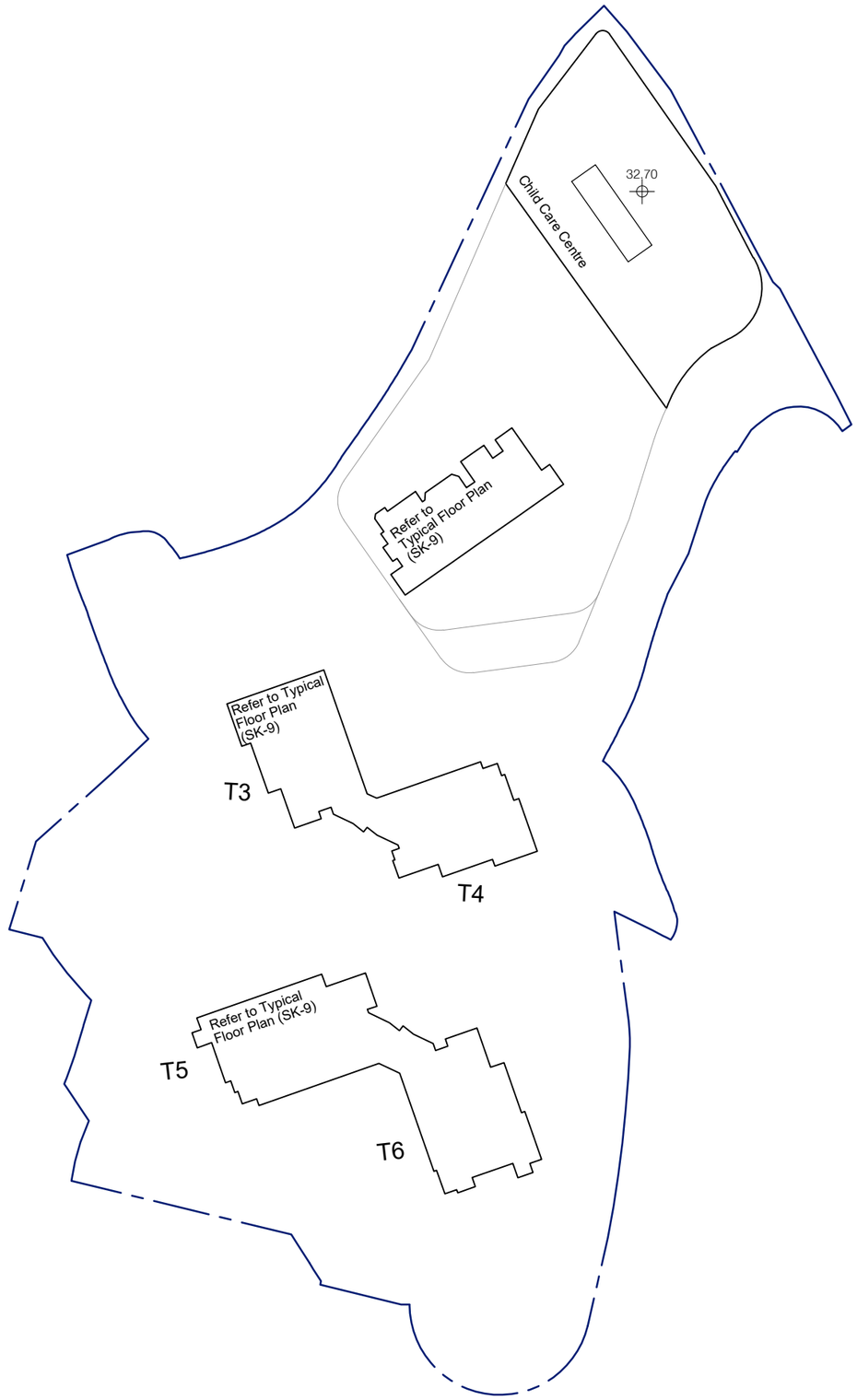
SINGULAR STUDIO LTD
12 OCTOBER 2023



SECOND FLOOR PLAN SK-5
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

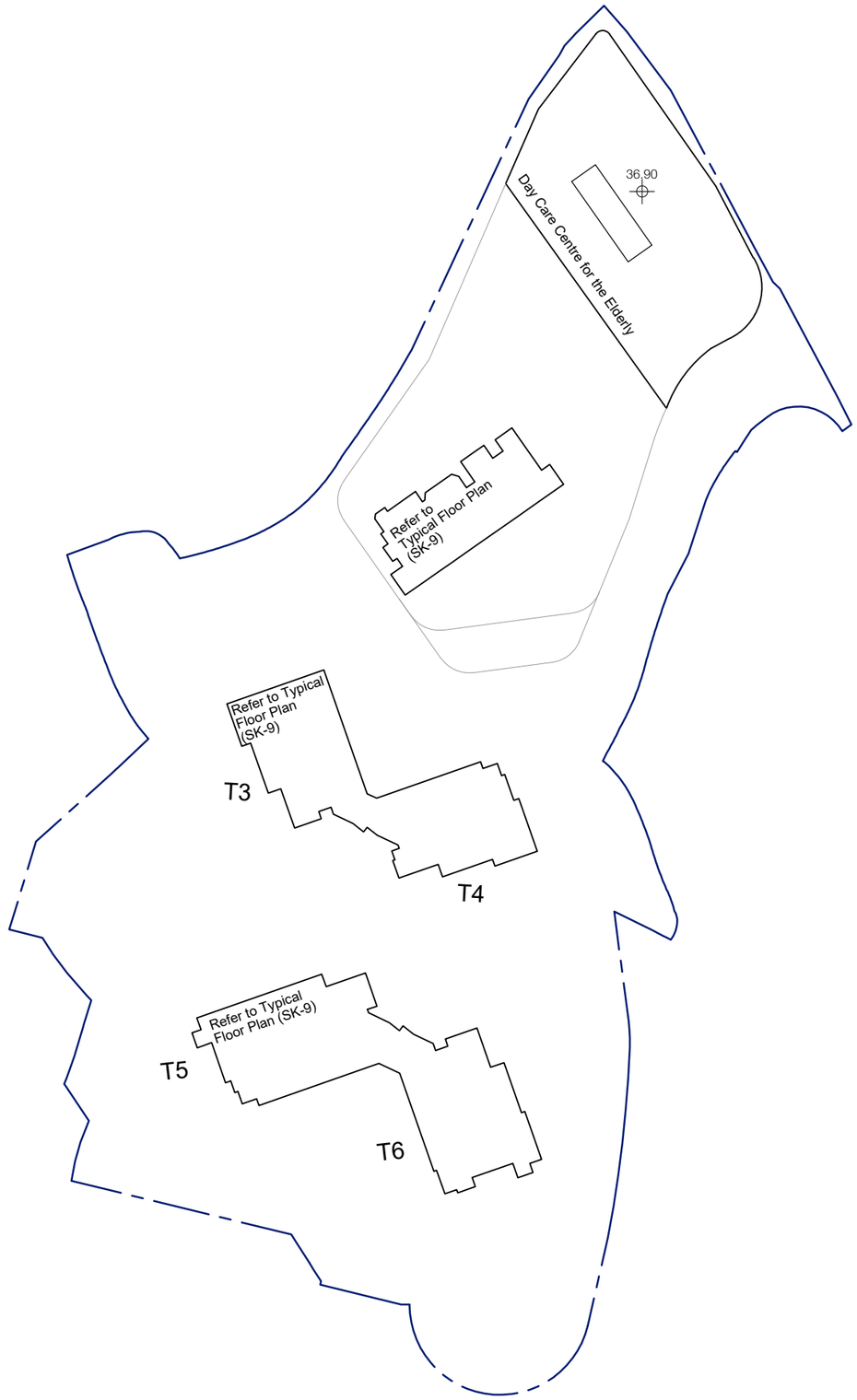
SINGULAR STUDIO LTD
12 OCTOBER 2023



THIRD FLOOR PLAN SK-6
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

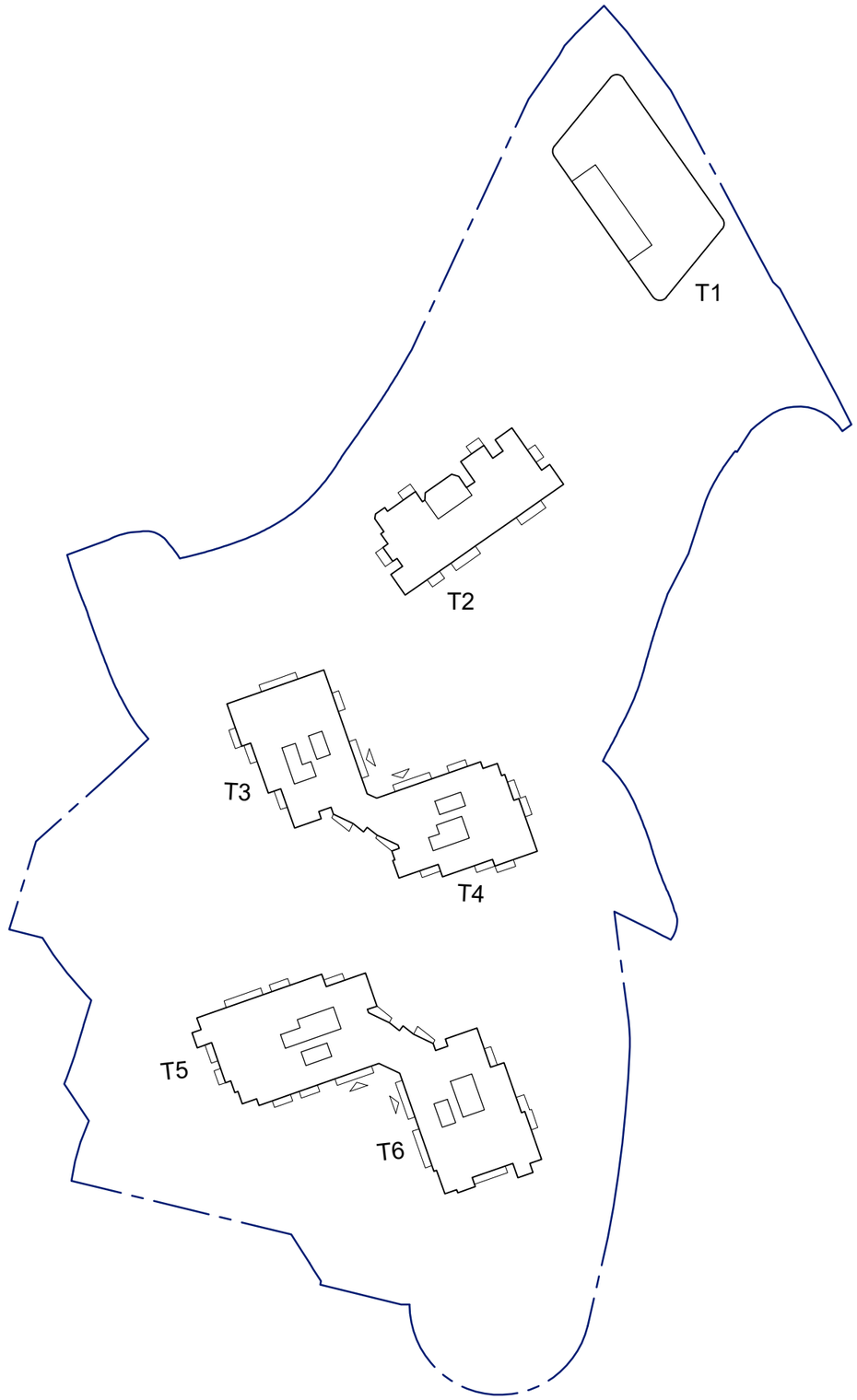
SINGULAR STUDIO LTD
12 OCTOBER 2023



FOURTH FLOOR PLAN SK-7
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

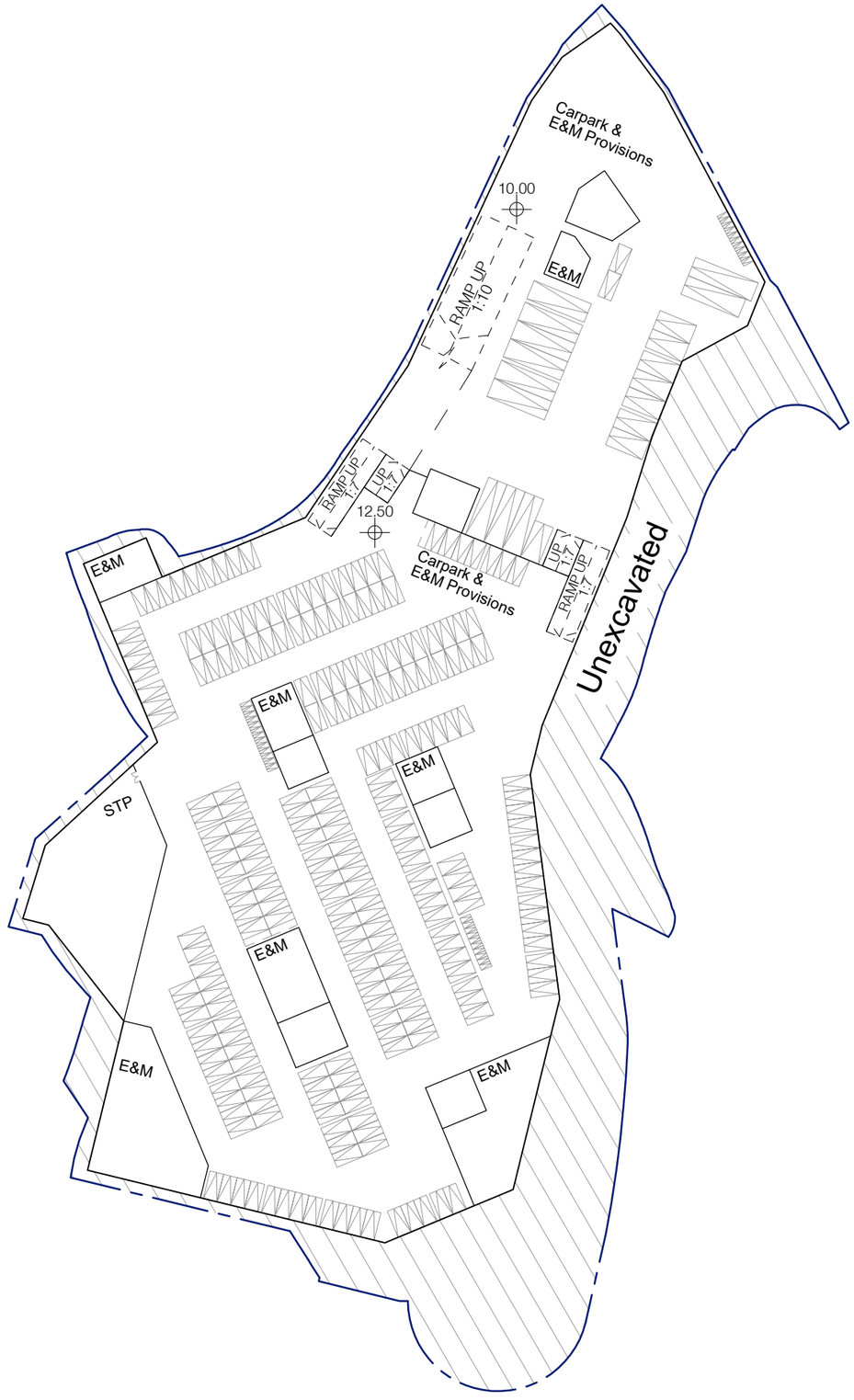
SINGULAR STUDIO LTD
12 OCTOBER 2023



TYPICAL FLOOR PLAN SK-9
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

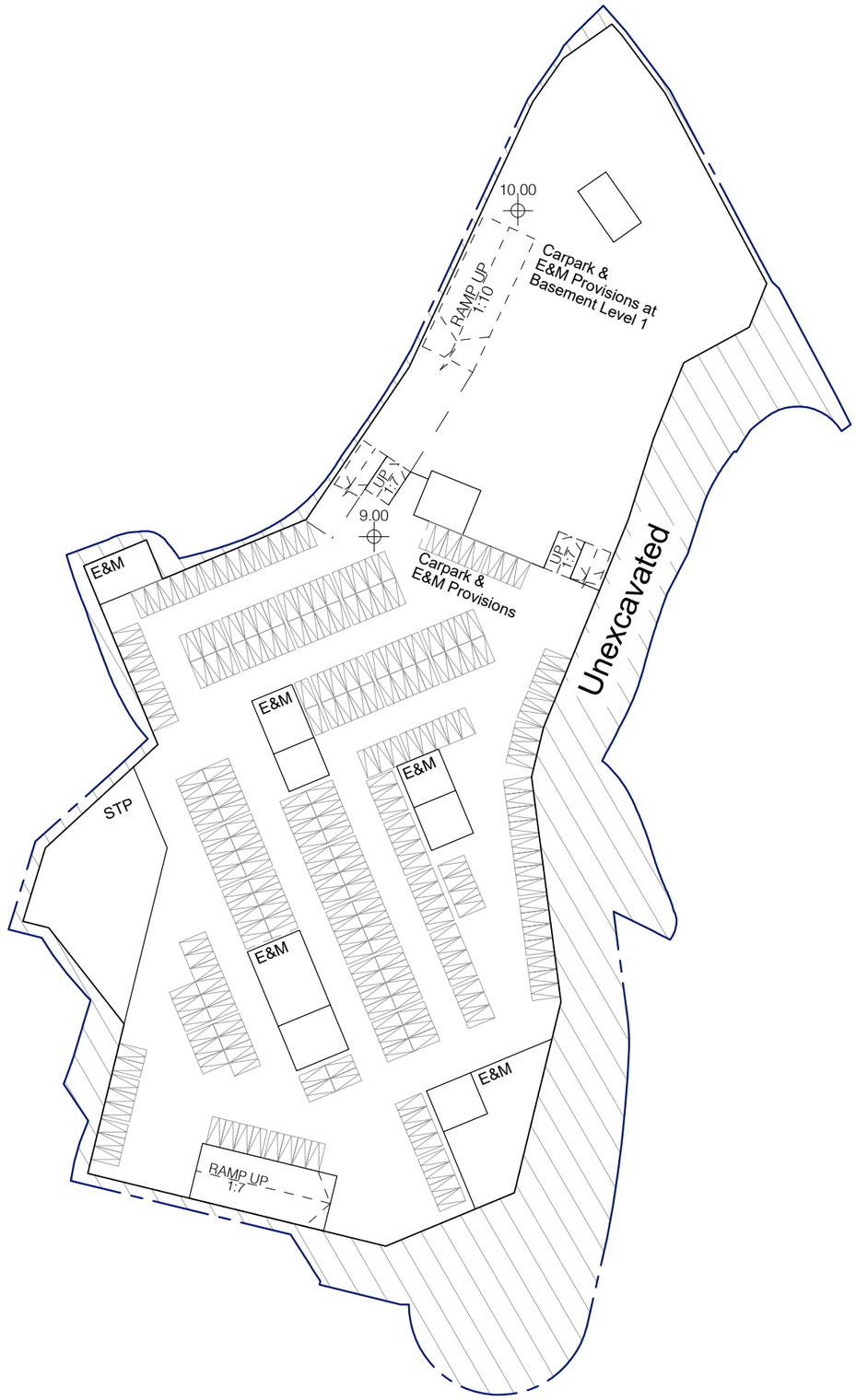
SINGULAR STUDIO LTD
12 OCTOBER 2023



BASEMENT LEVEL 1 PLAN SK-10
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

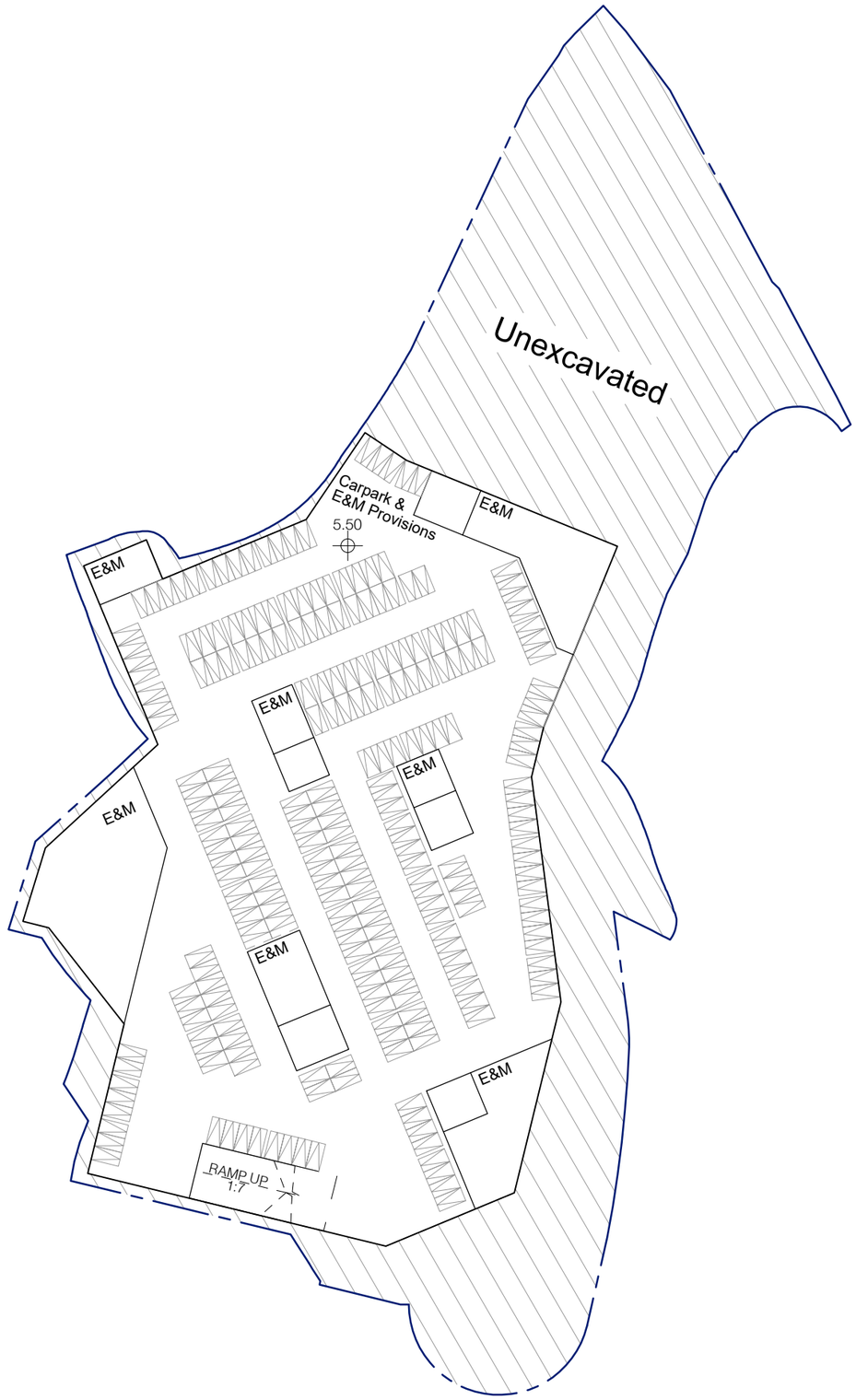
SINGULAR STUDIO LTD
15 MARCH 2024



BASEMENT LEVEL 2 PLAN SK-11
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

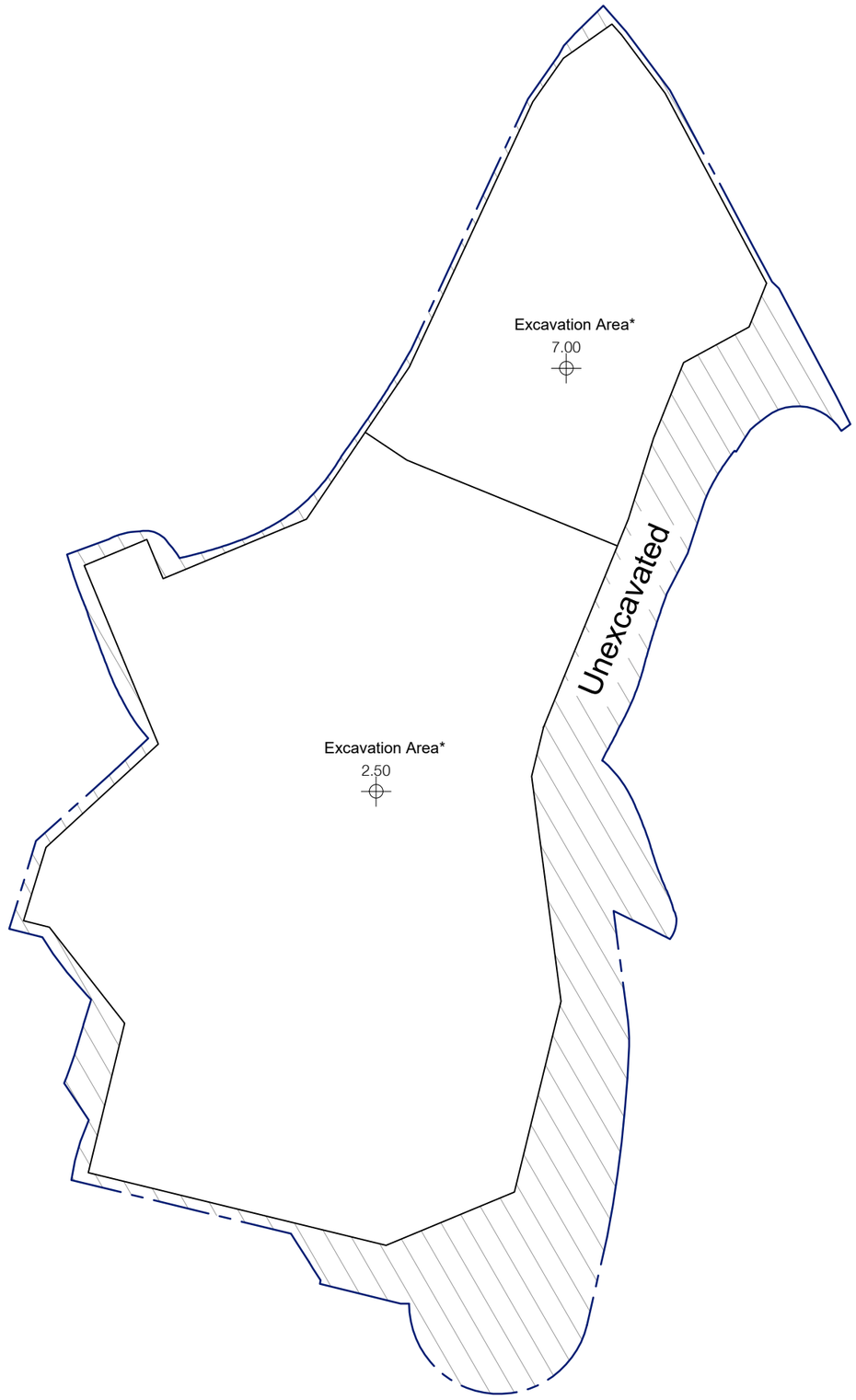
SINGULAR STUDIO LTD
15 MARCH 2024



BASEMENT LEVEL 3 PLAN SK-12
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
15 MARCH 2024



*The excavation area is about 13,500m^2 and the excavation depth is about 13.5m. The excavation area and depth are subject to future detailed design on foundation based on further geotechnical information.

EXCAVATION PLAN SK-13
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
11 DECEMBER 2023



BLOCK PLAN (BASELINE SCHEME) SK-14
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
12 OCTOBER 2023



BLOCK PLAN (WITH DIVERSION OF WATER MAINS) SK-15
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
11 DECEMBER 2023

~9m (>7.5m from the centreline of the street)

~9m

~30m

~18m

~18m

~20m

~20m

1.5

1.5

PTT Run-out

PTT Run-in

Run-in/out

Run-in/out

Possible connection to Ping Che Station

Commercial (30 storeys)

T1
169.70

PTT, Retail, Child Care Centre & Day Care Centre (6 storeys)

Retail (1 storey) & Clubhouse (1 storeys)

T2
175.00

To Basement Carpark

Swimming Pool

T3
171.85

T4
171.85

21.00
Clubhouse (1 storey)

T5
171.83

T6
171.83

41.10

24.15

41.10

27.75

20.50

16.00

16.00

Car Park

Road

Road

Football Field

Pak Hok Shan

PROPOSED DESIGN MEASURES OF INDICATIVE SCHEME SK-16
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
5 APRIL 2024

Appendix B Landscape Master Plan and Tree Preservation Proposals

ARUP

Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Landscape Master Plan and Tree Preservation Proposals

Draft | December 2023

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

295450

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2	**SITE DESCRIPTION**	**4**
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3	**EXISTING TREES**	**5**
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3.2	Impacts of Existing Trees	6
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Figure 1.2	Tree Survey Plan - Overall
Figure 1.3	Tree Recommendation Plan - Overall
Figure 1.4	Compensatory Tree Planting Plan - Overall
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Figure 1.5	Lansdcape Master Plan - Overall
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Table 3.2	Proposed Species for Compensatory Tree Planting
Table 4.1	Summary of Local Open Space Provision
Table 4.2	Summary of Greenery Coverage

Appendix

Appendix A Tree Assessment Schedule

Appendix B Tree Survey Photo Record

1 INTRODUCTION

1.1 Background

1.1.1 This report contains the Tree Preservation Proposal and Landscape Master Plan (LMP) which forms part of the Supporting Planning Statement in support of the Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP in D.D.77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories.

1.1.2 The Landscape Master Plan (LMP) intends to demonstrate the overall landscape design of the Indicative Scheme at the Application Site and provide other relevant information as required in the Planning Department's Practice Note for Professional Persons No. 1/2019. The LMP is attached in **Figure 1.5 to 1.5b**.

1.2 Land Use Zoning

1.2.1 The Applicant proposes amendments to the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14 ("the OZP") by rezoning the Application Site from "Agriculture" ("AGR") and "Open Storage" ("OS") to a tailor-made "Other specified Uses" annotated "Mixed Use" ("OU(MU)") to facilitate the proposed residential and commercial development (**Figure 1.1** refers).

2 SITE DESCRIPTION

2.1 Existing Site Context

2.1.1 The Application Site has a site area of about 17,821.2m^2. It is a piece of formed land currently sed as an open storage with a cluster of trees observed at the northern and southern part of the Application Site. As shown in **Image 1.1**, no permanent structures are erected in the site, a public access road runs along the eastern boundary and lead to Application Site.

Image 1.1 Aerial Photo



3 EXISTING TREES

3.1 Key Findings

3.1.1 Total 130 nos. of trees are found within the Application Site boundary and summarized in the following table (**Table 3.1**). The general health condition and structural form of the existing trees are ranging from fair to poor.

3.1.2 Tree Survey Plan showing the locations of exiting tree and tree groups within the survey boundary is attached in **Figure 1.2**. Details of tree condition are included in the Tree Assessment Schedule in **Appendix A**. Photographic records are shown in **Appendix B.**

Table 3.1 Summary of Identified Individual Surveyed Trees

Scientific name	Chinese name	Quantity
Artocarpus heterophyllus	波羅蜜	3
Bombax ceiba	木棉	1
Carica papaya	木瓜	1
Casuarina equisetifolia	木麻黃	1
Celtis sinensis	朴樹	4
Cinnamomum camphora	樟樹	15
Citrus maxima	柚	2
Dimocarpus longan	龍眼	52
Ficus microcarpa	榕樹	16
Leucaena leucocephala	銀合歡	4
Litchi chinensis	荔枝	6
Livistona chinensis	蒲葵	4
Macaranga tanarius	血桐	1
Machilus nanmu	潤楠	1
Mangifera indica	芒果	2
Podocarpus macrophyllus	羅漢松	1
Psidium guajava	番石榴	1
Vernicia fordii	油桐	12
Dead Tree	死樹	3
		130

Identified Trees with High Value for Priority Preservation

3.1.3 There is no Registered Old and Valuable Tree (OVT), stonewall trees, rare and protected species of tree or vegetation, and tree of particular interest identified during the survey**.**

3.2 Impacts of Existing Trees

3.2.1 Total 130 existing trees are in direct conflict with the Application Site of proposed residential and commercial development, they are inevitably be affected during the work stage. Given their poor health condition and low survival rate after transplanting, they are all proposed to be felled with compensation. The Tree Recommendation Plans are in **Figure 1.3.**

3.2.2 In addition, out of 130 affected trees, 4 *Leucaena leucocephala* (銀合歡) are identified. The undesirable species should be removed and excluded in the compensatory tree planting proposal as according to para. 8 and 25 in DEVB TC(W) no. 4/2020 that it is not necessary for the following types of tree removal, (a) removal of common undesirable species characterised by their aggressive and invasive growing habits and ability to prevent natural succession of native species.

3.3 Preliminary Compensatory Tree Planting Proposal

3.3.1 To compensate the tree loss, 126 nos. of new trees shall be compensated within the Application Site. The proposed compensatory tree locations are indicated in the Compensatory Tree Planting Plan (**Figure 1.4** to **Figure 1.4b).**

3.3.2 To maintain the landscape features and the local biodiversity of the existing environment, and further enhance the existing environment, 5 native species and 3 exotic species are proposed throughout the Development Site. A summary of plant materials (categories of planting, species list, size and origin) is provided as below:

Table 3.2 Proposed Species for Compensatory Tree Planting

Botanical Name	Symbol	Chinese Name	Origin	Specification (1)
Celtis sinensis	Cel.sin	朴樹	Native	Heavy Standard Tree
Cinnamomum burmannii	Cin.bur	陰香	Native	Heavy Standard Tree
Schima superba	Sch. Sup.	木荷	Native	Standard Tree
Sterculia lanceolata	Ste. Lan.	假蘋婆	Native	Standard Tree
Cinnamomum burmannii (2)	Cin. Bur.	陰香	Native	Light Standard Tree
Garcinia subelliptica (2)	Gar. Sub.	菲島福木	Exotic	Light Standard Tree

Botanical Name	Symbol	Chinese Name	Origin	Specification (1)
Lagerstroemia speciosa (2)	Lag. Spe.	大花紫薇	Exotic	Light Standard Tree
Magnolia grandiflora(2)	Mag. Gra.	荷花玉蘭	Exotic	Light Standard Tree

(1) *Specification:*
Light Standard Tree shall be in accordance with GS clause 3.13
Standard Tree shall be in accordance with GS clause 3.14
(2) *Recommended Species for Skyrise Greenery/ Green Roof*

3.3.3 *Schima superba* (木荷), *Garcinia subelliptica* (菲島福木), and *Cinnamomum burmannii* (陰香) are chosen for serving a number of landscape features such as screening undesirable views and providing pedestrians with shades, these species will be planted in the vicinity of boundary walls and within roadside amenity planting areas.

3.3.4 Ornamental species are proposed for augmenting the aesthetics, such as *Lagerstroemia speciose* (大花紫薇), *Magnolia grandiflora* (荷花玉蘭), *Sterculia lanceolata* (假蘋婆) will be compensated within the proposed residential commercial development.

3.3.5 The planting works shall make reference to the requirements as stipulated in the General Specification for Building 2017 Edition – Section 25. A detailed Tree Preservation & Tree Felling Application in accordance with LAO PN. 6/2023 process will be carried out at a later detailed design stage.

Minimum Soil Depth for Planting

3.3.6 According to the General Specification for Building 2017 Edition – Section 25, the proposed soil depths shall make reference to the following requirements:

Plant Category	Minimum Soil Depth
Trees	1,200mm
Small palms and shrubs	600mm
Ground covers/ turf and climbers	300mm

4 LANDSCAPE DESIGN PROPOSAL

4.1 Landscape Design Objective

4.1.1 The design objectives for the proposed Indicative Landscape Master Plan is to:

- Provide a quality and sustainable environment with adequate landscape area for the enjoyment of the building users and the visitors of the proposed development;
- Provide sufficient landscape treatment along the boundary to minimize the potential visual impact of the built form; and
- Incorporate new trees and shrubs to enhance the greenery.

4.1.2 The landscape design at the G/F has included a welcoming entrance for the future building users and visitors, a feature signage wall and water feature have been incorporated to create a sense of arrival and add visual appeal to the site. In addition, the building façade of the proposed development would feature a vibrant green wall to further enhance the site's aesthetic appeal and create a pleasing visual element for the future building users and visitors arriving from Ping Che Road and Ping Che Station. Its vibrant greenery will contribute to a visually appealing environment and promote a sense of harmony with surrounding natural elements. A sun lawn with feature pavilion has been located between the residential towers and club house to serve as a city living room for the future building users and visitors to meet up and relax. Multi-functional sport ground and landscape terrace have been proposed as flexible outdoor spaces for the building users to enjoy and use for sitting out. In addition, it has preserved sufficient activity spaces including swimming pool, water play area, Tai Chi courtyard, and feature tree walk for the future building users and the public to have leisure activities. Ornamental tree and shrub plantings are proposed along the proposed development to soften the built form and maximize the greenery.

4.1.3 The landscape design at the 1/F adjoining the transfer plate of residential building features a sculpture plaza and podium gardens which provides ample space for seating and relaxation. Ornamental trees have been placed around the open lawn area and multi-functional sport ground to enhance the ambiance, provide shade and maximise greening. For the landscape design at the 2/F adjoining the commercial building, it has preserved sufficient space for sky gardens to further elevate the biodiversity of the Application Site and sufficient activity spaces such as multi-functional deck, sitting out area, and food and beverage area for the future building users to relax.

4.1.4 Please refer to **Figure 1.5** to **Figure 1.5b** for the details of the landscape proposal and **Figure 1.8a** to **Figure 1.8b** for the landscape section drawings.

4.2 Provision of Local Open Space and Green Coverage

4.2.1 In accordance with Hong Kong Planning Standard and Guidelines (HKPSG), the standards of provision of open space set out in section 1.8 of Chapter 4 Recreation, Open Space and Greening. In comprehensive residential developments, the standard of provision for Local Open Space is 1m² per residents throughout the Territory. Please refer to **Figure 1.6** for the Local Open Space Provision. The provision of local open space is summarized as follows:

Table 4.1 Summary of Local Open Space Provision

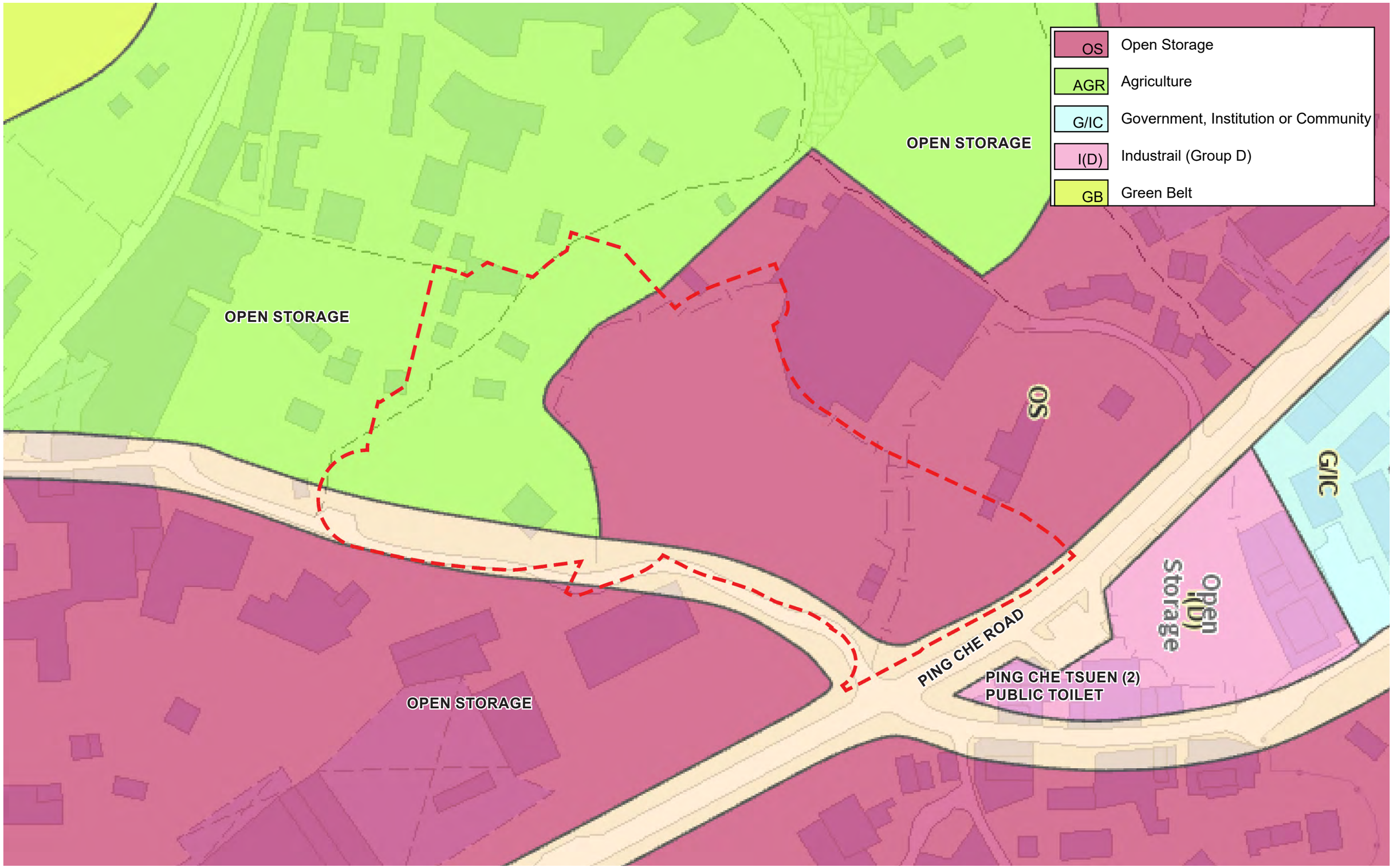
	Area
Application Site Area	17,821.2 m^2
Proposed Resident Population	6,174
Local Open Space Provision (Not less than 1m^2 per residents)	Not less than 6,174 m^2

4.2.2 According to PNAP APP-152, for a site between 1,000 m^2 and 20,000 m^2 in area, the total greenery area should be 20% or more (**Figure 1.7**). The greenery coverage is summarized as follows:

Table 4.2 Summary of Greenery Coverage

	Area
Application Site Area	17,821.2 m^2
Overall Greenery	Not less than 3,564 m^2 (20%)

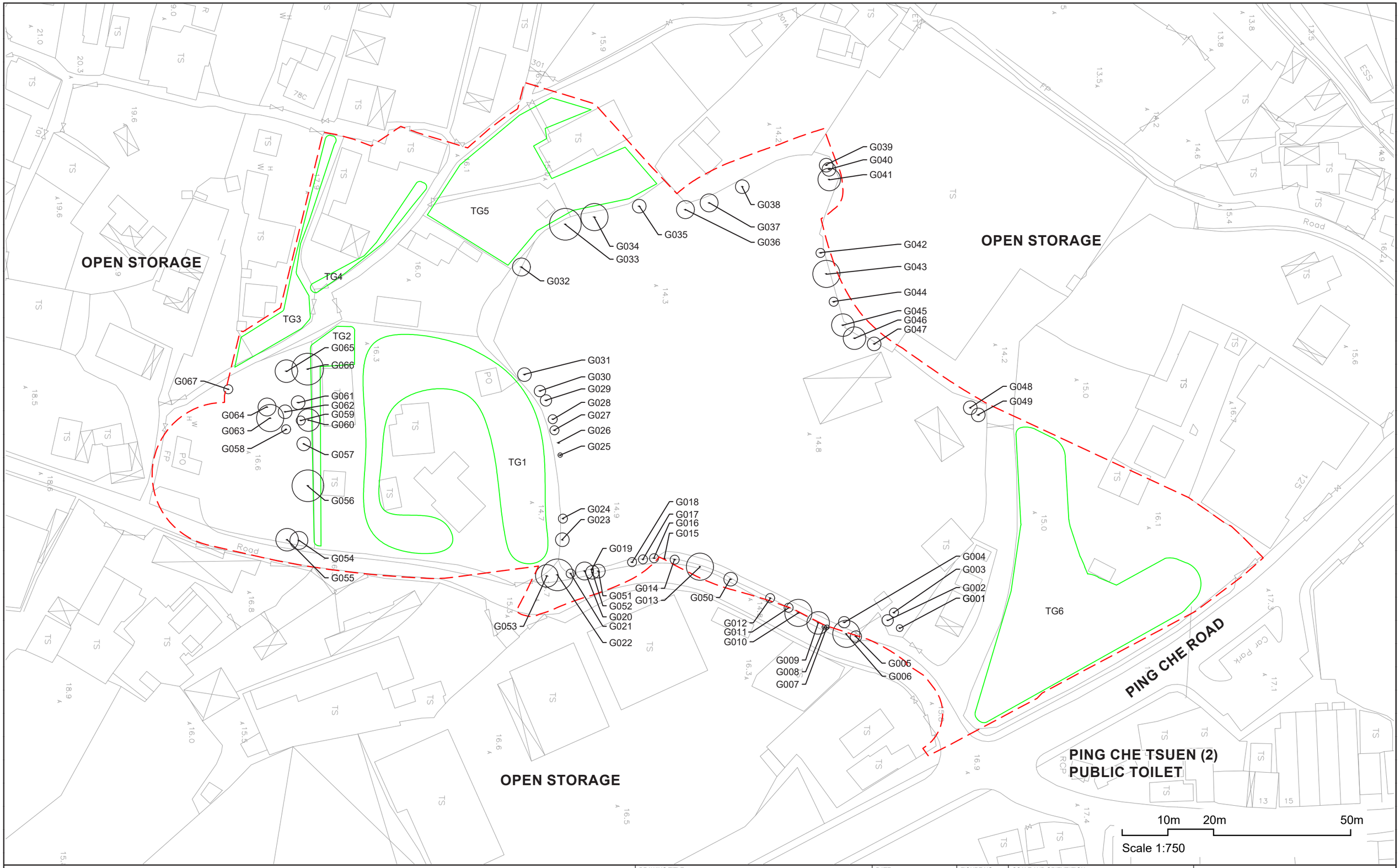
Figures



LEGEND

DEVELOPMENT SITE BOUNDARY

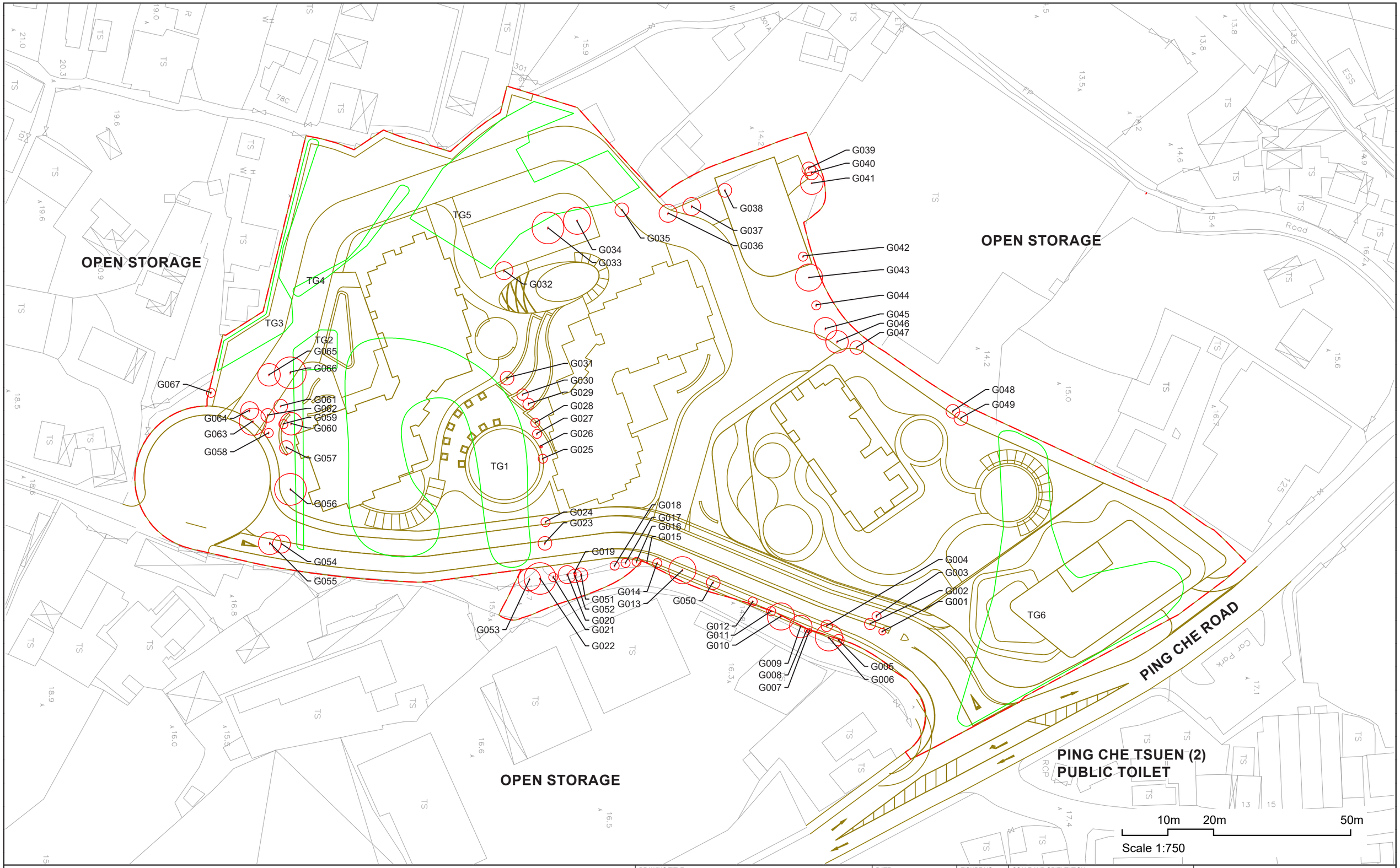
DRAWING TITLE: Outline Zoning Plan	DATE: DEC 2023	FIGURE NO.: FIG 1.1	SCALE AND ORIENTATION: 1:1100@A3	N
	DRAWN: YW	JOB TITLE: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories		ARUP
	CHECKED: CY			
	APPROVED: CY			



LEGEND

- Tree Surveyed Area
- Existing Tree
- Tree Group

DRAWING TITLE: Tree Survey Plan - Overall	DATE: DEC 2023	FIGURE NO.: FIG 1.2	SCALE AND ORIENTATION: 1:750@A3	N
	DRAWN: YW	JOB TITLE: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories		ARUP
	CHECKED: CY			
	APPROVED: CY			



LEGEND

- Tree Surveyed Area
- Proposed Development Layout
- Existing Trees to be Fell
- Tree Group

DRAWING TITLE	Tree Recommendation Plan - Overall
DATE	DEC 2023
FIGURE NO.	FIG 1.3
SCALE AND ORIENTATION	1:750@A3
DRAWN	YW
CHECKED	CY
APPROVED	CY
JOB TITLE	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

N

ARUP



LEGEND

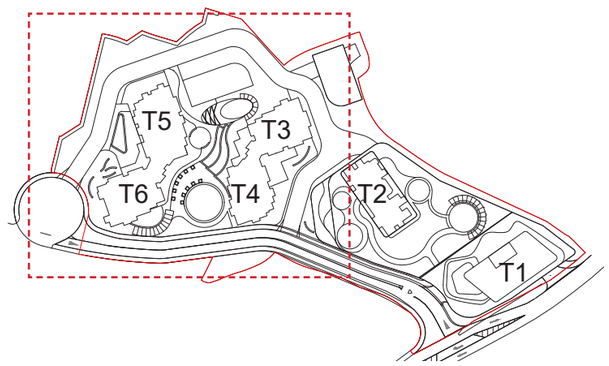
DEVELOPMENT SITE BOUNDARY

NEW PLANTING TREES

DRAWING TITLE: Compensatory Tree Planting Plan - Overall	DATE: DEC 2023	FIGURE NO.: FIG 1.4	SCALE AND ORIENTATION: 1:750@A3	N
	DRAWN: YW	JOB TITLE: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories		ARUP
	CHECKED: CY			
	APPROVED: CY			



KEY PLAN



5m 10m 25m

Scale 1:800

LEGEND

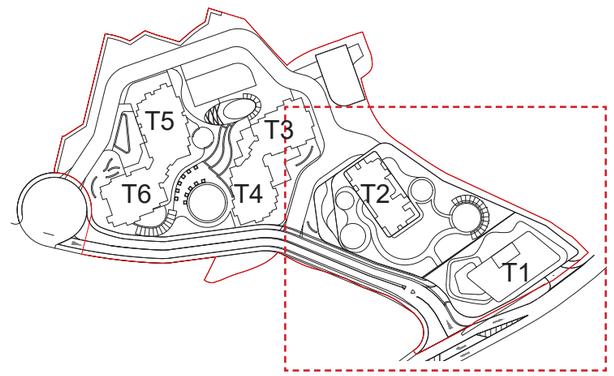
DEVELOPMENT SITE BOUNDARY

NEW PLANTING TREES

DRAWING TITLE: Compensatory Tree Planting Plan (Sheet 1of 2)	DATE: DEC 2023	FIGURE NO.: FIG 1.4a	SCALE AND ORIENTATION: 1:800@A3	N
	DRAWN: YW	JOB TITLE: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories		ARUP
	CHECKED: CY			
	APPROVED: CY			



KEY PLAN



5m 10m 25m

Scale 1:800

LEGEND

DEVELOPMENT SITE BOUNDARY

NEW PLANTING TREES

DRAWING TITLE: Compensatory Tree Planting Plan (Sheet 2of 2)	DATE: DEC 2023	FIGURE NO.: FIG 1.4b	SCALE AND ORIENTATION: 1:800@A3	N
	DRAWN: YW	JOB TITLE: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories		ARUP
	CHECKED: CY			
	APPROVED: CY			

AREA RESERVED FOR THE DIVERSION OF EXISTING WATER MAINS

FIGURE 1.5A

FIGURE 1.5B

OPEN STORAGE

CLUBHOUSE
FFL 21.00

RESIDENTIAL TOWER - T5
FFL 16.00
WL 15.70
FFL 171.83
FFL 16.00

RESIDENTIAL TOWER - T6
FFL 171.83

RESIDENTIAL TOWER - T3
FFL 171.85
FFL 171.85

RESIDENTIAL TOWER - T4
FFL 16.00
FFL 16.00

WL 15.70

OPEN STORAGE

RESIDENTIAL TOWER - T2
FFL 175.00
FFL 24.15
FFL 20.50
FFL 24.15

1/F PODIUM GARDEN
FFL 24.15

2/F SKY GARDEN
FFL 169.70

COMMERCIAL TOWER - T1
FFL 41.10

PING CHE ROAD

OPEN STORAGE

PING CHE TSUEN
(2) PUBLIC TOILET

10m 20m 50m
Scale 1:750

LEGEND
- DEVELOPMENT SITE BOUNDARY
- GREEN WALL EXTENT
- SITE ENTRY
- BUILDING ENTRY
- CARPARK ENTRANCE
- EVA

DRAWING TITLE: Landscape Master Plan - Overall	DATE: DEC 2023	FIGURE NO.: FIG 1.5	SCALE AND ORIENTATION: 1:750@A3	N
	DRAWN: YW	JOB TITLE: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories		ARUP
	CHECKED: CY			
	APPROVED: CY			

AREA RESERVED FOR THE DIVERSION OF EXISTING WATER MAINS

CLUBHOUSE
FFL 21.00

RESIDENTIAL TOWER - T5
FFL 171.83

RESIDENTIAL TOWER - T3
FFL 171.85

RESIDENTIAL TOWER - T6
FFL 171.83

RESIDENTIAL TOWER - T4
FFL 171.85

RESIDENTIAL TOWER - T2
FFL 175.00

WL 15.70

WL 15.70

FFL 16.00

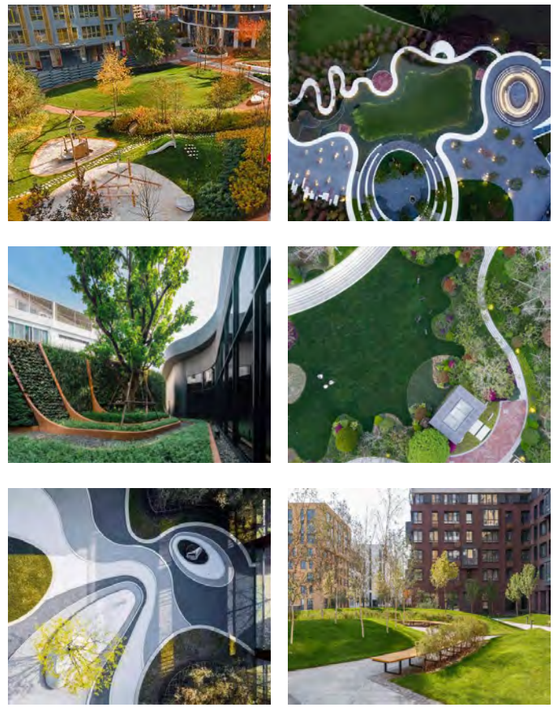
FFL 16.00

FFL 16.00

FFL 16.00

FFL 20.50

REFERENCE IMAGE



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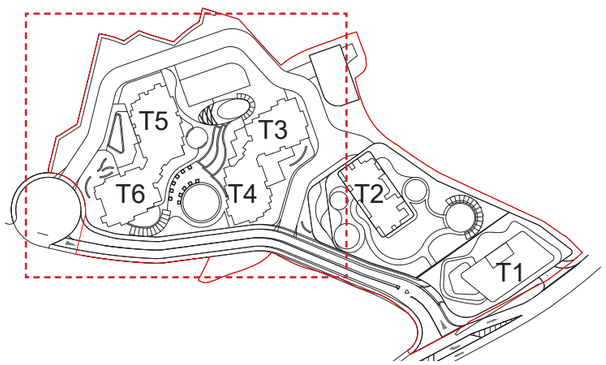


5m 10m 25m

Scale 1:800

LEGEND

- DEVELOPMENT SITE BOUNDARY
- SITE ENTRY
- BUILDING ENTRY
- CARPARK ENTRANCE
- EVA

1. GREEN BUFFER
2. WATER FEATURE
3. SIGNAGE WALL
4. FEATURE TREE WALK
5. MULTI-FUNCTIONAL SPORT GROUD
6. TAI CHI COURTYARD
7. SUN LAWN WITH FEATURE PAVILION
8. SWIMMING POOL
9. BARBECUE SPACE (BACKYARD GARDEN)
10. LANDSCAPE TERRACE

DRAWING TITLE	Landscape Master Plan (Sheet1 of 2)
DATE	DEC 2023
FIGURE NO.	FIG 1.5a
SCALE AND ORIENTATION	1:800@A3
DRAWN	YW
CHECKED	CY
APPROVED	CY
JOB TITLE	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

N

ARUP

WL
15.70

FFL
171.85

RESIDENTIAL
TOWER - T3

FFL
171.85

RESIDENTIAL
TOWER - T4

FFL
16.00

FFL
20.50

FFL
175.00

RESIDENTIAL
TOWER - T2

FFL
24.15

FFL
24.15

FFL
24.15

COMMERCIAL
TOWER - T1

FFL
169.70

FFL
41.10

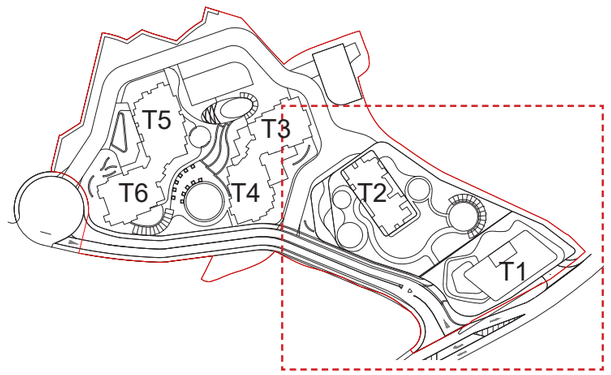
REFERENCE IMAGE








KEY PLAN



5m 10m 25m

Scale 1:800

LEGEND

- DEVELOPMENT SITE BOUNDARY
- SITE ENTRY
- BUILDING ENTRY
- CARPARK ENTRANCE
- EVA
- GREEN WALL EXTENT
- ① SIGNAGE WALL
- ② GREEN ROOF
- ③ MULTI-FUNCTIONAL SPORT GROUD
- ④ OPEN LAWN
- ⑤ F&B DECK
- ⑥ SCULPTURE PLAZA
- ⑦ ROSE GARDEN
- ⑧ F&B SITTING
- ⑨ MULTI-FUNCTIONAL DECK

DRAWING TITLE
Landscape Master Plan (Sheet 2 of 2)

DATE
DEC 2023

DRAWN
YW

CHECKED
CY

APPROVED
CY

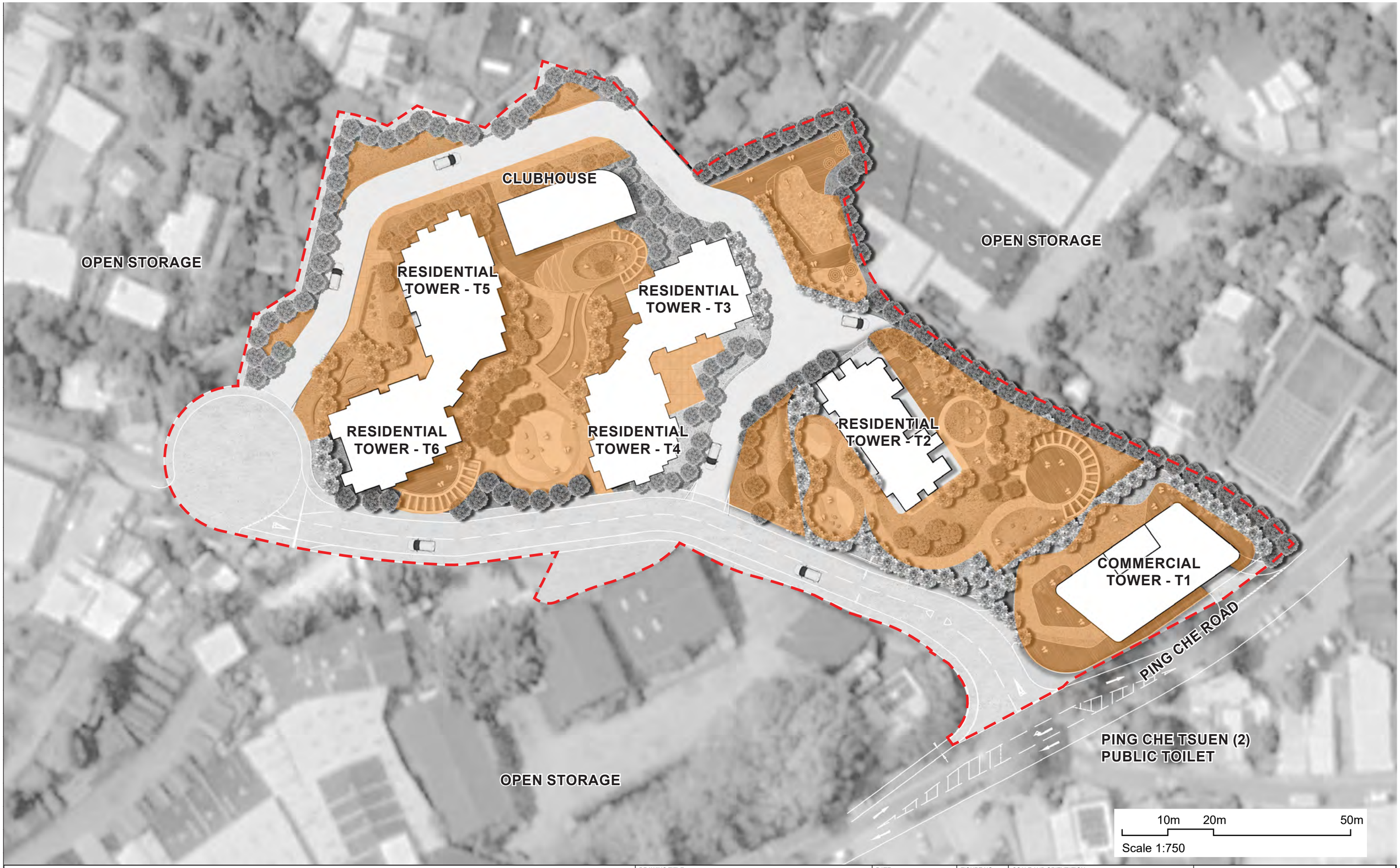
FIGURE NO.
FIG 1.5b

SCALE AND ORIENTATION
1:800@A3

JOB TITLE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

N

ARUP



LEGEND

DEVELOPMENT SITE BOUNDARY

LOCAL OPEN SPACE PROVISION : NOT LESS THAN 6,174 sqm

DRAWING TITLE: Local Open Space Provision	DATE: DEC 2023	FIGURE NO.: FIG 1.6	SCALE AND ORIENTATION: 1:750@A3
	DRAWN: YW	JOB TITLE: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	N
	CHECKED: CY		
	APPROVED: CY		ARUP



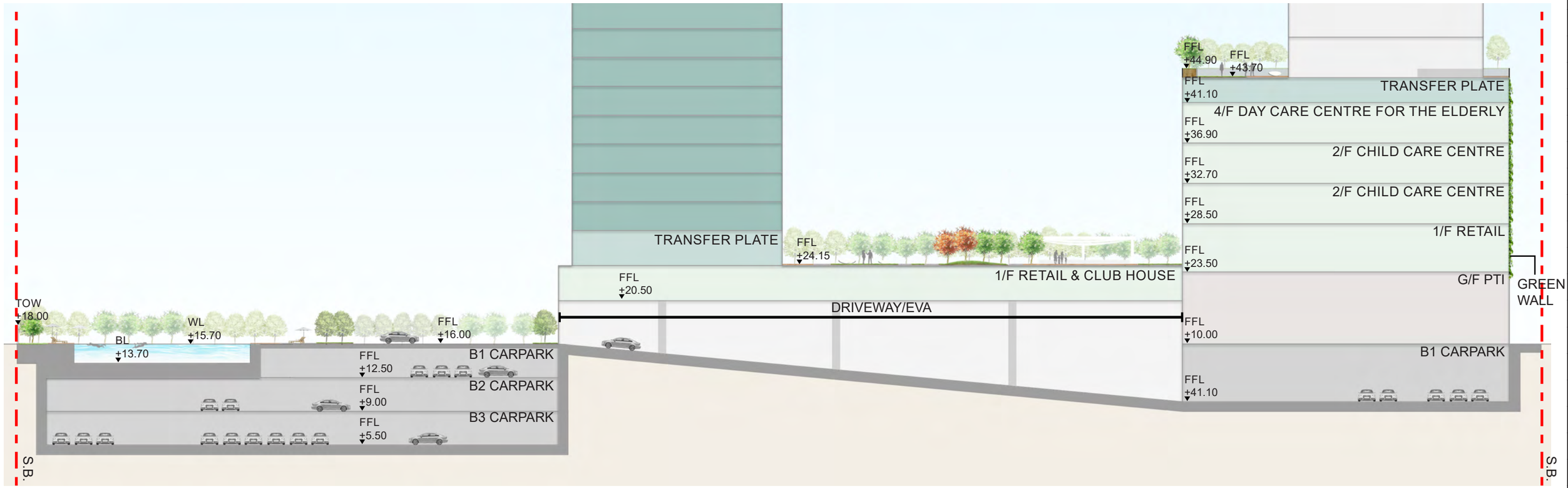
LEGEND

- DEVELOPMENT SITE BOUNDARY
- GREEN WALL EXTENT
- GREEN COVERAGE: NOT LESS THAN 3,393 sqm (20%) OF THE DEVELOPMENT SITE AREA

DRAWING TITLE	Greenery Coverage
DATE	DEC 2023
FIGURE NO.	FIG 1.7
SCALE AND ORIENTATION	1:750@A3
DRAWN	YW
CHECKED	CY
APPROVED	CY
JOB TITLE	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

N

ARUP

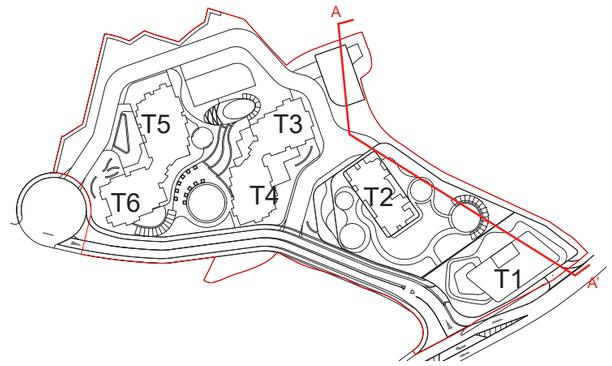


SCALE 1:400

0 5 10 15 20 m



GREEN WALL REFERENCE IMAGE



KEY PLAN

LEGEND

These drawings are for illustrative purposes only. The architectural design, finishes or any other related detailed design components are subject to refinement and changes at the detailed design stage.

DRAWING TITLE: Landscape Section A - A'

DATE: DEC 2023

FIGURE NO.: FIG 1.8a

SCALE AND ORIENTATION:

DRAWN: YW

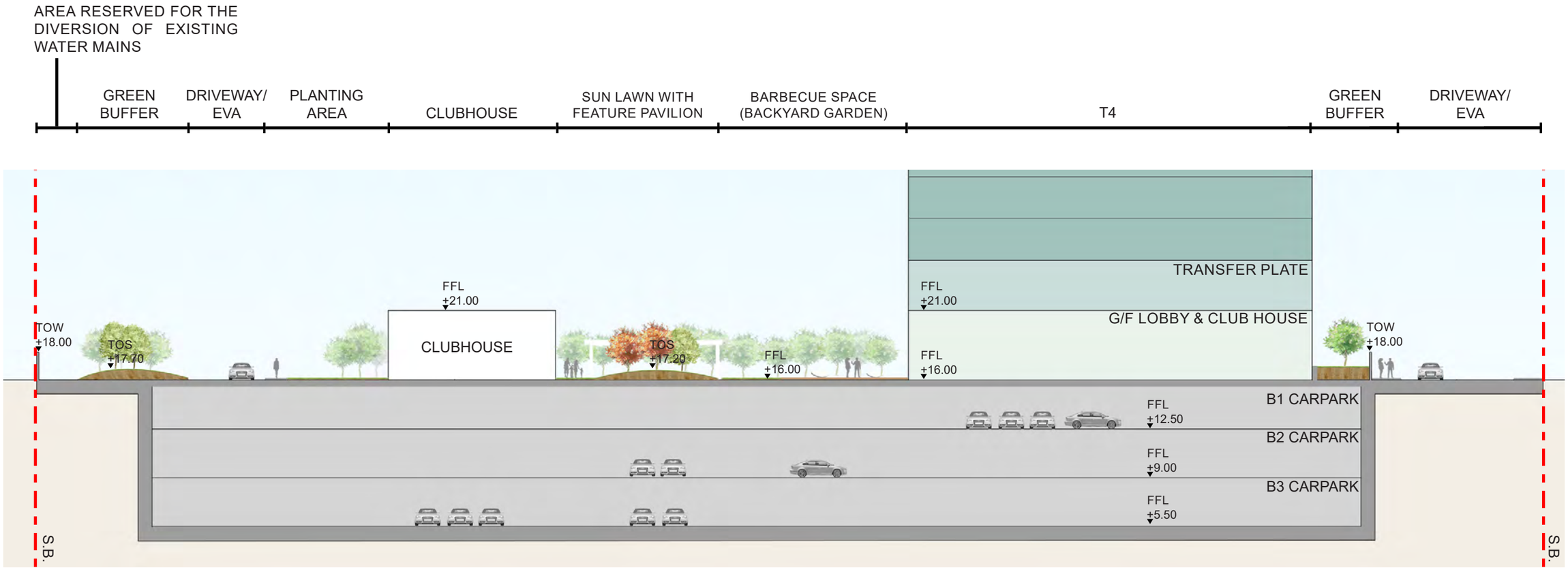
CHECKED: CY

APPROVED: CY

JOB TITLE: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

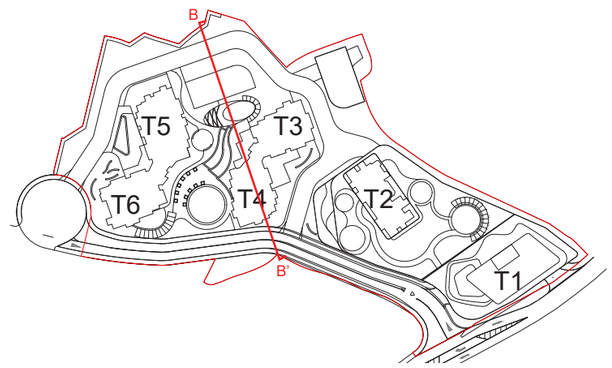
N

ARUP



SCALE 1:300

0 5 10 15 20 m



KEY PLAN

LEGEND

These drawings are for illustrative purposes only. The architectural design, finishes or any other related detailed design components are subject to refinement and changes at the detailed design stage.

DRAWING TITLE
Landscape Section B - B'

DATE
DEC 2023

DRAWN
YW

CHECKED
CY

APPROVED
CY

FIGURE NO.
FIG 1.8b

SCALE AND ORIENTATION

JOB TITLE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

N

ARUP

Appendix A

Tree Assessment Schedule

Individual Tree Tree Assessment Schedule (Individual Tree Survey)

Prepared by Ian Law
Field Study was conducted in Aug 2023

Tree No.	Scientific Name	Chinese Common Name	Measurement			Amenity (High/ Medium / Low)	Tree Condition (Good /Fair/ Poor)			Suitability for Transplanting	Conservation Status	Recommendation (Retain/ Transplant/ Fell)	Justification [1]	Department to provide expert advice to LandsD	Additional Remarks
			Height (m)	DBH (mm)	Crown Spread (m)		Form	Health	Structure	(High/ Medium/ Low)					
G001	*Dimocarpus longan*	龍眼	2	95	1.5	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Impractical to form root ball, imbalanced tree form, broken stem, leaning trunk
G002	*Podocarpus macrophyllus*	羅漢松	2	300	2.5	Low	Poor	Fair	Poor	Low	-	Fell	A, D ,E	LandsD/ Tree Unit	Growing on slope, Impractical to form root ball, broken stem and branches, covered with climber
G003	*Bombax ceiba*	木棉	2	95	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Imbalanced tree form, Impractical to form root ball, broken stem, leaning trunk
G004	*Dimocarpus longan*	龍眼	3	120	2.5	Low	Poor	Fair	Poor	Low	-	Fell	A, C, D, E	LandsD/ Tree Unit	Impractical to form root ball, imbalanced tree form, leaning trunk
G005	*Ficus microcarpa*	榕樹	3	100	2.5	Low	Fair	Fair	Poor	Low	-	Fell	A, C, D, E	LandsD/ Tree Unit	Impractical to form root ball, imbalanced tree form, leaning trunk
G006	*Dimocarpus longan*	龍眼	4	250	6	Low	Fair	Fair	Poor	Low	-	Fell	A, C, D, E	LandsD/ Tree Unit	Co-dominant scaffolds, imbalanced tree form, impractical to form root ball
G007	*Dimocarpus longan*	龍眼	5	200	1	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Leaning trunk , impractical to form root ball, imbalanced tree form, cross beanches
G008	*Dimocarpus longan*	龍眼	5	200	1	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Leaning trunk , impractical to form root ball, imbalanced tree form, cross beanches, co-dominant scaffolds
G009	*Ficus microcarpa*	榕樹	4	450	5	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Impractical to form root ball, imbalanced tree form, leaning trunk, mechanical injury, dead branches
G010	*Mangifera indica*	芒果	7	500	6	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Impractical to form root ball, imbalanced tree form, dead branches
G011	*Ficus microcarpa*	榕樹	2	95	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Sparse foliage, covered with climber, dead branches, broken stem, impractical to form root ball
G012	*Macaranga tanarius*	血桐	3	95	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Sparse foliage, lion tail, iimbalance tree form, dead branches, abrupts bend
G013	*Celtis sinensis*	朴樹	6	400	6	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Impractical to form root ball, imbalanced tree form, leaning trunk, abrupts bend, covered with climber, dead branches
G014	*Vernicia fordii*	油桐	3	100	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Sparse foliage, dead branches, broken stem, impractical to form root ball, abrupts bend
G015	*Dead Tree*	死樹	2	150	0.2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Dead Tree
G016	*Celtis sinensis*	朴樹	5	150	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Cracks on the trunk, Sparse foliage, dead branches, broken stem, impractical to form root ball, abrupts bend
G017	*Vernicia fordii*	油桐	4	150	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Cracks on the trunk, Sparse foliage, dead branches, broken stem, impractical to form root ball, abrupts bend, climbers
G018	*Vernicia fordii*	油桐	4	200	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Cracks on the trunk, Sparse foliage, dead branches, broken stem, impractical to form root ball, leaning trunk
G019	*Dead Tree*	死樹	3	100	0.4	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Dead Tree
G020	*Vernicia fordii*	油桐	6	200	4	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Impractical to form root ball, imbalanced tree form, dead branches, abrupts bend
G021	*Leucaena leucocephala*	銀合歡	4	150	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Imbalanced tree form, Impractical to form root ball, broken stem, leaning trunk, invasive species
G022	*Ficus microcarpa*	榕樹	7	500	7	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Imbalanced tree form, Impractical to form root ball, leaning trunk, climber, broken stem
G023	*Vernicia fordii*	油桐	4	200	3	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Leaning trunk , impractical to form root ball, imbalanced tree form, dead branches, broken stem
G024	*Vernicia fordii*	油桐	4	180	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Leaning trunk , impractical to form root ball, imbalanced tree form, dead branches, broken stem, wounds
G025	*Vernicia fordii*	油桐	4	300	1	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Lion tail, sparse foliage, dead branches, broken stem, impractical to form root ball, wounds
G026	*Dead Tree*	死樹	2	200	0.2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Dead Tree, fungal fruiting bodies
G027	*Vernicia fordii*	油桐	4	300	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Lion tail, sparse foliage, dead branches, broken stem, impractical to form root ball, fungal fruiting bodies, wound
G028	*Vernicia fordii*	油桐	4	300	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Lion tail, sparse foliage, dead branches, broken stem, impractical to form root ball, wound
G029	*Vernicia fordii*	油桐	5	300	2.5	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Lion tail, sparse foliage, dead branches, broken stem, impractical to form root ball, wound
G030	*Vernicia fordii*	油桐	5	300	2.5	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Sparse foliage, dead branches, broken stem, impractical to form root ball
G031	*Vernicia fordii*	油桐	5	400	3	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Sparse foliage, dead branches, broken stem, impractical to form root ball, wound, co-dominant scaffolds
G032	*Dimocarpus longan*	龍眼	3	250	4	Low	Poor	Fair	Poor	Low	-	Fell	A, C, D, E	LandsD/ Tree Unit	Impractical to form root ball, wound, broken branches
G033	*Ficus microcarpa*	榕樹	6	500	7	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	imbalanced tree form, impractical to form root ball, dead branches, leaning trunk,
G034	*Ficus microcarpa*	榕樹	6	600	6	Low	Poor	Fair	Poor	Low	-	Fell	A, C, D, E	LandsD/ Tree Unit	Impractical to form root ball, imbalanced tree form, leaning trunk
G035	*Casuarina equisetifolia*	木麻黃	8	250	3	Low	Fair	Fair	Poor	Low	-	Fell	A, C, D, E	LandsD/ Tree Unit	Dead branches, co-dominant scaffolds
G036	*Ficus microcarpa*	榕樹	6	500	4	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Sparse foliage, dead branches, broken stem, impractical to form root ball, abrupts bend, wound
G037	*Ficus microcarpa*	榕樹	5	400	4	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Sparse foliage, dead branches, broken stem, impractical to form root ball, wound, covered with climber
G038	*Ficus microcarpa*	榕樹	5	350	3	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Sparse foliage, dead branches, broken stem, impractical to form root ball, wound, covered with climber
G039	*Dimocarpus longan*	龍眼	5	120	3	Low	Poor	Fair	Poor	Low	-	Fell	A, C, D, E	LandsD/ Tree Unit	Sparse foliage, dead branches, impractical to form root ball, imbalanced tree form
G040	*Dimocarpus longan*	龍眼	6	400	3	Low	Poor	Poor	Poor	Low	-	Fell	A, C, D, E	LandsD/ Tree Unit	Imbalanced tree form, Impractical to form root ball,dead branches, abrupts bend, sparse foliage
G041	*Dimocarpus longan*	龍眼	6	150	5	Low	Poor	Fair	Fair	Low	-	Fell	A, C, D, E	LandsD/ Tree Unit	Dead branches, impractical to form root ball
G042	*Ficus microcarpa*	榕樹	4	300	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Wounds, broken stem, broken branches, coverd with climber, sparse foliage
G043	*Ficus microcarpa*	榕樹	6	500	6	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Wounds, broken branches, coverd with climber, imbalanced tree form, impractical to form root ball
G044	*Ficus microcarpa*	榕樹	3	200	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Sparse foliage, dead branches, broken stem, impractical to form root ball, leaning tunk, abrupts bend
G045	*Ficus microcarpa*	榕樹	3	250	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Sparse foliage, dead branches, impractical to form root ball, leaning tunk, imbalanced tree form
G046	*Ficus microcarpa*	榕樹	7	500	5	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Sparse foliage, dead branches, impractical to form root ball, leaning tunk, imbalanced tree form
G047	*Ficus microcarpa*	榕樹	5	250	3	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Sparse foliage, dead branches, broken stem, impractical to form root ball, leaning tunk, fungal fruiting bodies
G048	*Dimocarpus longan*	龍眼	4	95	3	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Imbalanced tree form, Impractical to form root ball, leaning trunk, dead branches
G049	*Dimocarpus longan*	龍眼	4	250	3	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Sparse foliage, dead branches, impractical to form root ball, abrupts bend
G050	*Psidium guajava*	番石榴	4	100	3	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Dieback, sparse foliage, imbalanced tree form, impractical to form root ball, wound
G051	*Leucaena leucocephala*	銀合歡	4	95	3	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Invasive species
G052	*Leucaena leucocephala*	銀合歡	6	200	3	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Invasive species
G053	*Leucaena leucocephala*	銀合歡	5	200	5	Low	Poor	Poor	Poor	Low	-	Fell	A, B, C, D, E	LandsD/ Tree Unit	Invasive species
G054	*Dimocarpus longan*	龍眼	3	150	4	Low	Poor	Poor	Poor	Low	-	Fell	A, B, D, E	LandsD/ Tree Unit	Wound, dead branches, leaning trunk, imbalanced tree form
G055	*Dimocarpus longan*	龍眼	5	300	5	Low	Poor	Poor	Poor	Low	-	Fell	A, B, D, E	LandsD/ Tree Unit	Imbalanced tree form, dead branches, die back
G056	*Cinnamomum camphora*	樟樹	12	500	7	Low	Poor	Poor	Poor	Low	-	Fell	A, B, D, E	LandsD/ Tree Unit	Imbalanced tree form, leaning trunk, covered with climber, dead branches,sparse foliage
G057	*Dimocarpus longan*	龍眼	5	300	3	Low	Poor	Poor	Poor	Low	-	Fell	A, B, D, E	LandsD/ Tree Unit	Imbalanced tree form, leaning trunk, dead branches, abrupts bend, exposed roots, wilting leaves
G058	*Artocarpus heterophyllus*	波羅蜜	3	95	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, D, E	LandsD/ Tree Unit	Imbalanced tree form, leaning trunk, dead branches, abrupts bend, exposed roots, covered with climber
G059	*Dimocarpus longan*	龍眼	3	95	2	Low	Poor	Poor	Poor	Low	-	Fell	A, B, D, E	LandsD/ Tree Unit	Imbalanced tree form, leaning trunk, dead branches, wilting leaves
G060	*Celtis sinensis*	朴樹	7	600	6	Low	Poor	Poor	Poor	Low	-	Fell	A, B, D, E	LandsD/ Tree Unit	Wound on the trunk base, leaning trunk, imbalanced tree form, dead branches
G061	*Dimocarpus longan*	龍眼	3	100	3	Low	Poor	Poor	Poor	Low	-	Fell	A, B, D, E	LandsD/ Tree Unit	Co-dominant scaffolds, abrupts bend, imbalanced tree form, dead branches, wilting leaves
G062	*Artocarpus heterophyllus*	波羅蜜	2.5	95	3	Low	Poor	Poor	Poor	Low	-	Fell	A, B, D, E	LandsD/ Tree Unit	Leaning trunk, imbalanced tree form, dead branches, sparse foliage
G063	*Citrus maxima*	柚	4	300	6	Low	Poor	Poor	Poor	Low	-	Fell	A, B, D, E	LandsD/ Tree Unit	Leaning trunk, imbalanced tree form, dead branches, broken stem, exposed root
G064	*Artocarpus heterophyllus*	波羅蜜	3	150	4	Low	Poor	Poor	Poor	Low	-	Fell	A, B, D, E	LandsD/ Tree Unit	Leaning trunk, imbalanced tree form, broken stem, wound
G065	*Litchi chinensis*	荔枝	5	300	5	Low	Poor	Poor	Poor	Low	-	Fell	A, B, D, E	LandsD/ Tree Unit	Wilting leaves, imbalanced tree form, wound, dead branches, broken stem, leaning trunk
G066	*Machilus nanmu*	潤楠	7	400	7	Low	Poor	Poor	Poor	Low	-	Fell	A, B, D, E	LandsD/ Tree Unit	Impractical to form root ball, imbalanced tree form, dead branches,leaning trunk
G067	*Carica papaya*	木瓜	3	200	1	Low	Poor	Poor	Poor	Low	-	Fell	A, B, D, E	LandsD/ Tree Unit	Co-dominant scaffolds, broken stem

SUMMARY:

Total number of trees surveyed =	67	nos.
Total number of invasive tree species =	4	nos.
Total number of dead trees =	3	nos.
Nos. trees to be retained =	0	nos.
Nos. trees to be transplanted =	0	nos.
Nos. trees to be felled =	67	nos.

Note:

[1] Justification:
A- in conflict with proposed development/ site formation
B- tree in poor health condition
C- growing on slope or difficult to form a proper root ball for transplanting
D- tree with a low survival rate after transplanting
E- Common non-local species and/ or not cost effective to transplant

Tree Assessment Schedule (Tree Group Survey)

Prepared by Ian Law
Field Study was conducted in Aug 2023

Tree Group ID	Estimated Number of Trees	Dominant Tree Species			Estimated Range of Trunk Diameter at DBH	Estimated Range of Tree Height	Estimated Range of Tree Crown Spread	General Health Condition (Good/ Fair/ Poor)	Recommendation			
		Scientific name	Common name	Appx. Quantity in the Tree Group	(mm)	(m)	(m)		Retain (%)	Fell (%)	Approximate Trees to be Retained	Approximate Trees to be Felled
TG1	10	*Ficus microcarpa*	榕樹	1	95 - 700	6 - 10	2 - 10	Fair - Poor	0%	100%	0	10
		Dimocarpus longan	龍眼	5								
		Livistona chinensis	蒲葵	4								
TG2	6	*Dimocarpus longan*	龍眼	5	200 - 500	4 - 10	6 - 10	Fair - Poor	0%	100%	0	6
		Mangifera indica	芒果	1								
TG3	15	*Dimocarpus longan*	龍眼	2	150 - 450	4 - 5	4 - 5	Fair - Poor	0%	100%	0	15
		Cinnamomum camphora	樟樹	13								
TG4	5	*Dimocarpus longan*	龍眼	5	100 - 200	4 - 5	4 - 5	Fair - Poor	0%	100%	0	5
TG5	12	*Dimocarpus longan*	龍眼	5	100 - 400	2 - 6	4 - 8	Fair - Poor	0%	100%	0	12
		Citrus maxima	柚	1								
		Celtis sinensis	朴樹	1								
		Litchi chinensis	荔枝	5								
TG6	15	*Dimocarpus longan*	龍眼	14	100 - 400	2 - 6	2 - 7	Fair - Poor	0%	100%	0	15
		Cinnamomum camphora	樟樹	1								

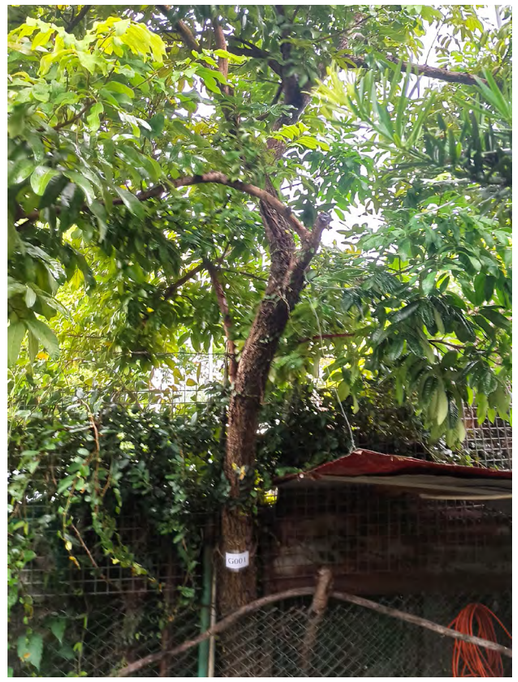
SUMMARY: Total number of trees surveyed = 63 nos.

Nos. trees to be retained = 0 nos.
Nos. trees to be felled = 63 nos.

Appendix B

Tree Survey Photo Record

G001 - *Dimocarpus longan* 龍眼
(Fell)



Whole View



Crown



Trunk



Trunk Base

G002 - *Podocarpus macrophyllus* 羅漢松
(Fell)



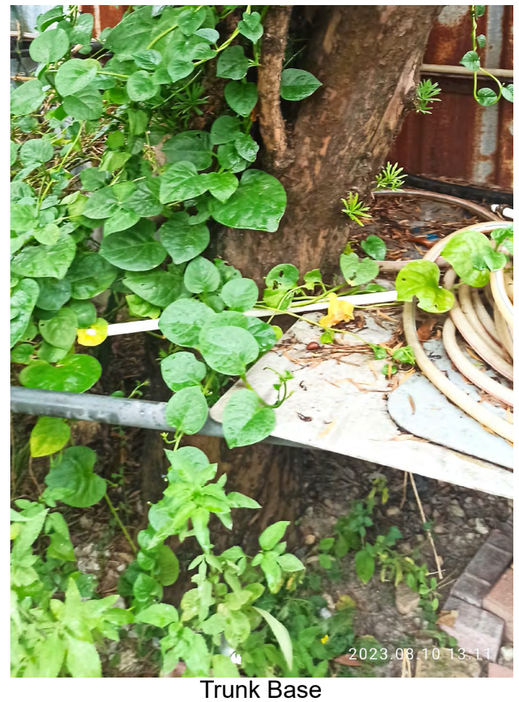
Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE
Tree Survey Photo Record

DATE
AUG 2023

FIGURE NO.

SCALE AND ORIENTATION

DRAWN
IL

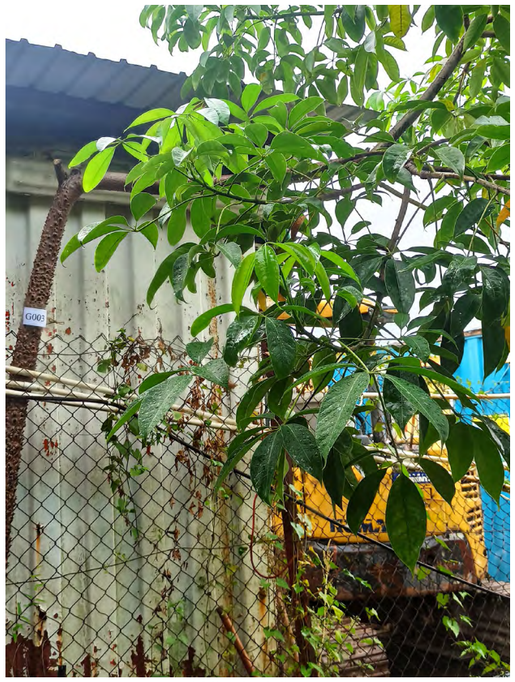
CHECKED
CY

APPROVED
CY

JOB TITLE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

ARUP

G003 - *Bombax ceiba* 木棉
(Fell)



Whole View



Crown



Trunk



Trunk Base

G004 - *Dimocarpus longan* 龍眼
(Fell)



Whole View



Crown



Trunk



Trunk Base

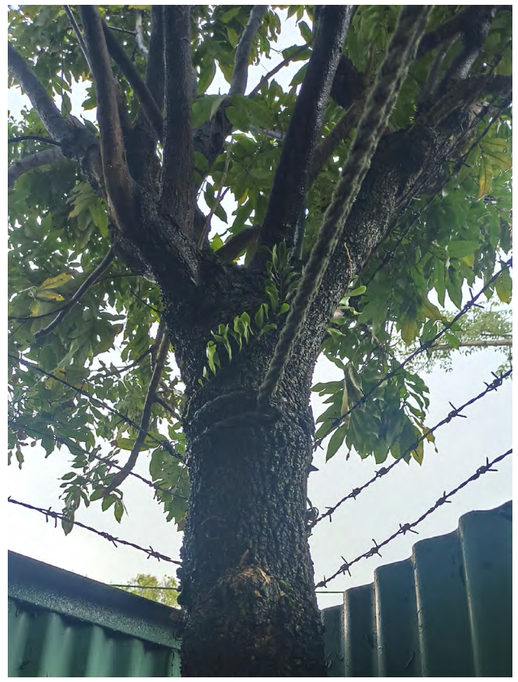
LEGEND

DRAWING TITLE	Tree Survey Photo Record
DATE	AUG 2023
FIGURE NO.	
SCALE AND ORIENTATION	
DRAWN	IL
JOB TITLE	Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories
CHECKED	CY
APPROVED	CY

ARUP

G005 - *Ficus microcarpa* 榕樹
(Fell)


Whole View


Crown

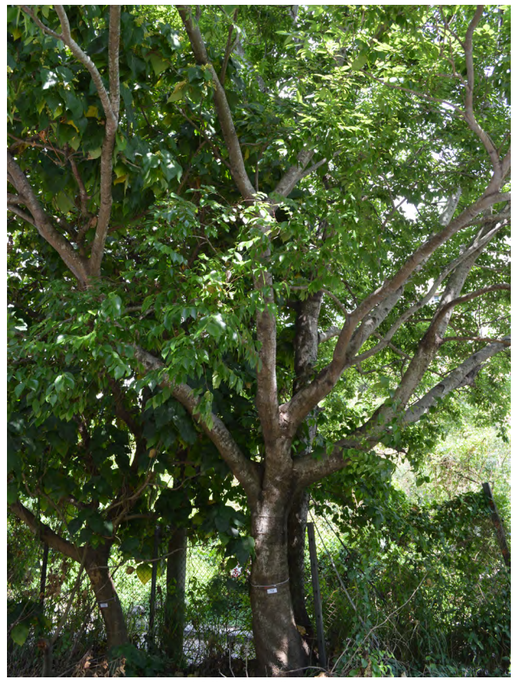


Trunk



Trunk Base

G006 - *Dimocarpus longan* 龍眼
(Fell)


Whole View


Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE
Tree Survey Photo Record

DATE
AUG 2023

FIGURE NO.

SCALE AND ORIENTATION

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CY

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CY

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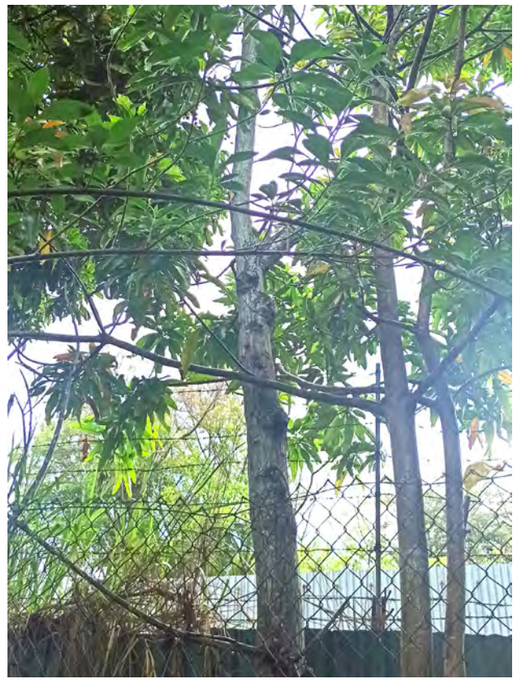
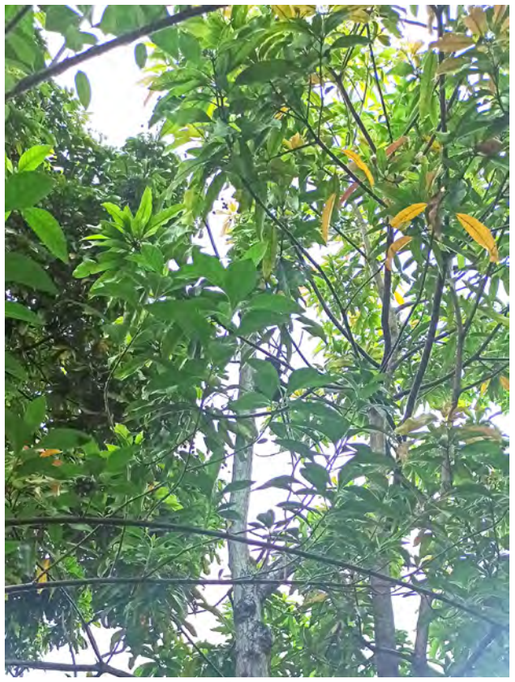
ARUP

G007 - *Dimocarpus longan* 龍眼
(Fell)



Whole View



Crown



Trunk

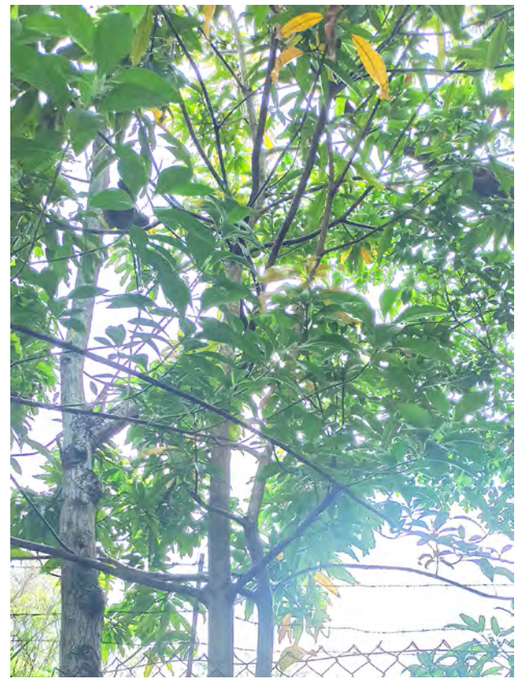


Trunk Base

G008 - *Dimocarpus longan* 龍眼
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION	
	DRAWN: IL	JOB TITLE: Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories		ARUP
	CHECKED: CY			
	APPROVED: CY			

G009 - *Ficus microcarpa* 榕樹
(Fell)



Whole View



Crown

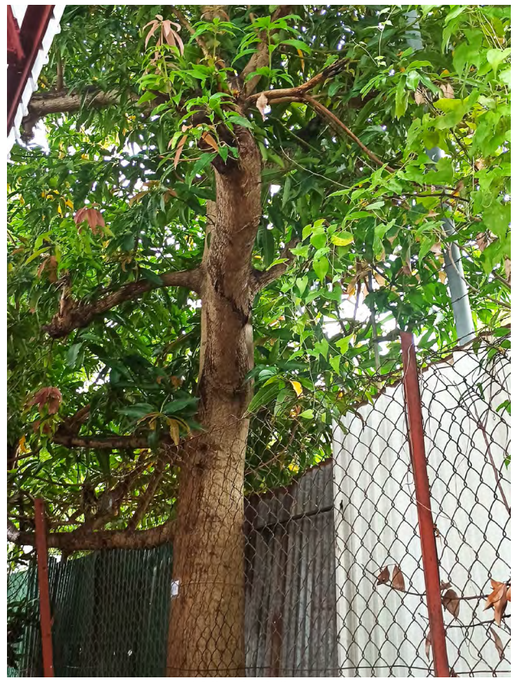


Trunk



Trunk Base

G010 - *Mangifera indica* 芒果
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE
Tree Survey Photo Record

DATE
AUG 2023

FIGURE NO.

SCALE AND ORIENTATION

DRAWN
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CY

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CY

JOB TITLE
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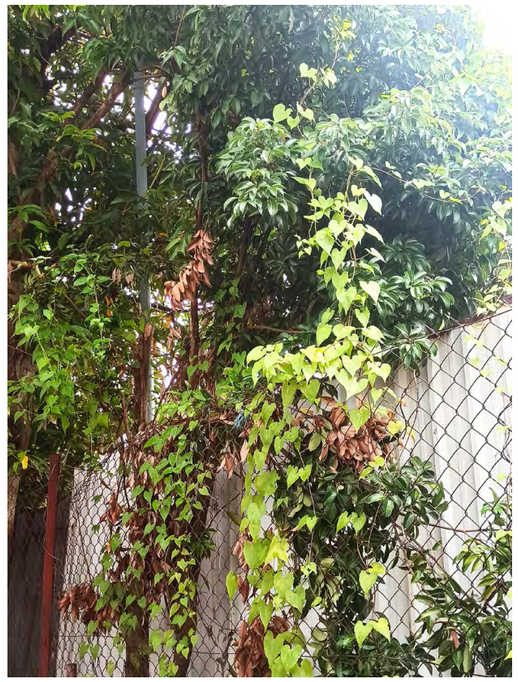
ARUP

G011 - *Ficus microcarpa* 榕樹
(Fell)



Whole View



Crown



Trunk

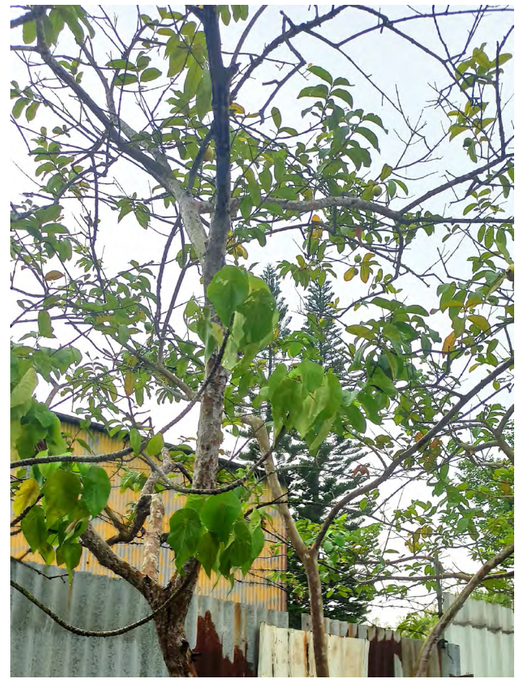


Trunk Base

G012 - *Macaranga G0anarius* 血桐
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE	Tree Survey Photo Record
DATE	AUG 2023
FIGURE NO.	
SCALE AND ORIENTATION	
DRAWN	IL
CHECKED	CY
APPROVED	CY
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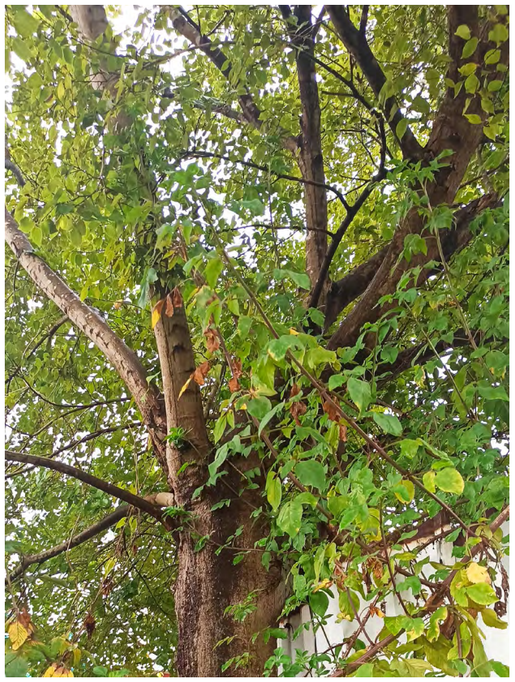
ARUP

G013 - *Celtis sinensis* 朴樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

G014 - *Vernicia fordii* 油桐
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE
Tree Survey Photo Record

DATE
AUG 2023

FIGURE NO.

SCALE AND ORIENTATION

DRAWN
IL

CHECKED
CY

APPROVED
CY

JOB TITLE
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ARUP

G015 - *Dead Tree* 死樹
(Fell)



Whole View



Crown

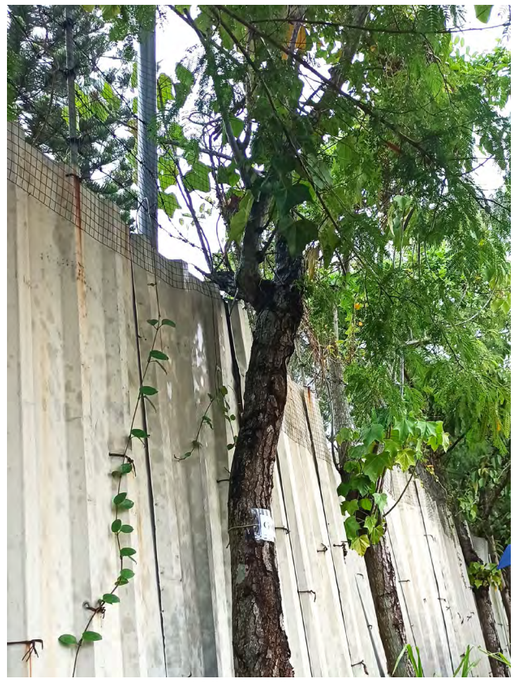


Trunk



Trunk Base

G016 - *Celtis sinensis* 朴樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE
Tree Survey Photo Record

DATE
AUG 2023

FIGURE NO.

SCALE AND ORIENTATION

DRAWN
IL

CHECKED
CY

APPROVED
CY

JOB TITLE
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ARUP

G017 - *Vernicia fordii* 油桐
(Fell)



Whole View



Crown



Trunk

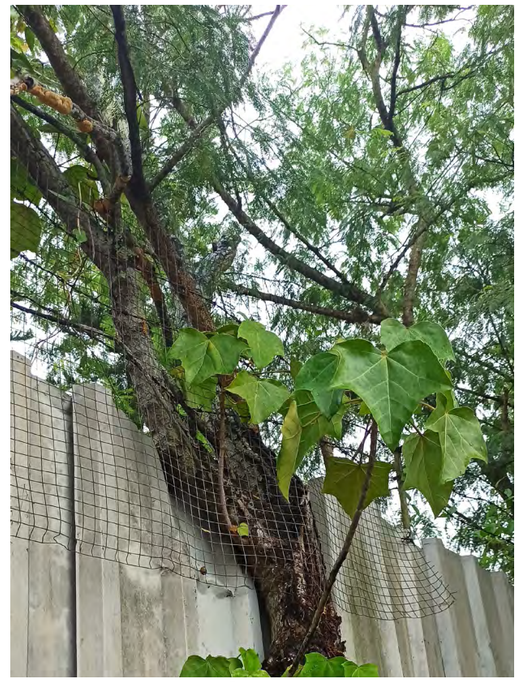


Trunk Base

G018 - *Vernicia fordii* 油桐
(Fell)



Whole View



Crown



Trunk



Trunk Base

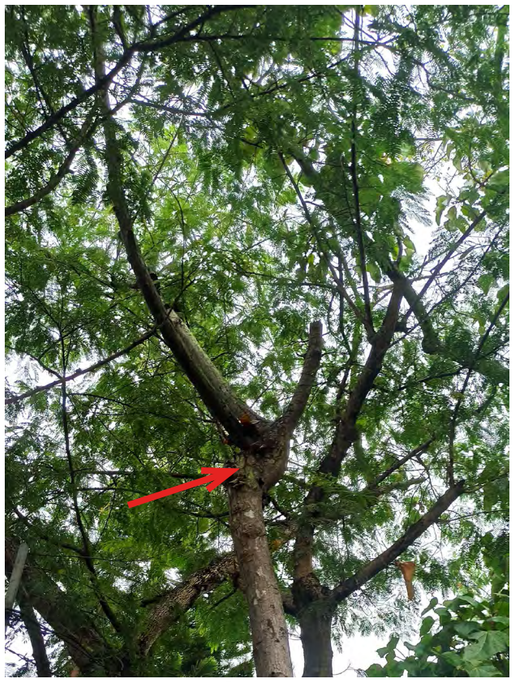
LEGEND

DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION	
	DRAWN: IL	JOB TITLE: Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories		
	CHECKED: CY			
	APPROVED: CY			ARUP

G019 - *Dead Tree* 死樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

G020 - *Vernicia fordii* 油桐
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE
Tree Survey Photo Record

DATE
AUG 2023

FIGURE NO.

SCALE AND ORIENTATION

DRAWN
IL

CHECKED
CY

APPROVED
CY

JOB TITLE
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ARUP

G021 - *Leucaena leucocephala* 銀合歡
(Fell)



Whole View



Crown



Trunk

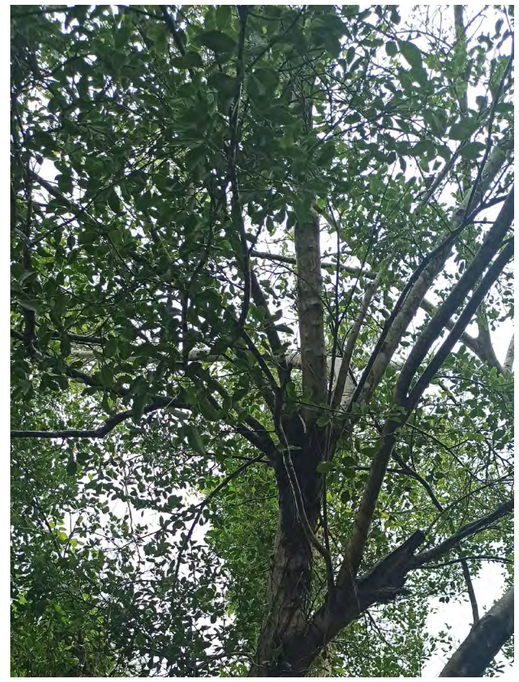


Trunk Base

G022 - *Ficus microcarpa* 榕樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION
	DRAWN: IL	JOB TITLE: Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	
	CHECKED: CY		
	APPROVED: CY		

ARUP

G023 - *Vernicia fordii* 油桐
(Fell)



Whole View


Crown

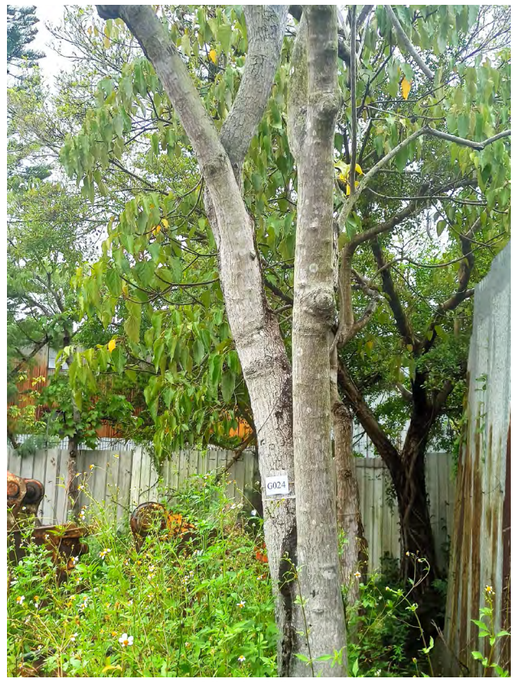


Trunk



Trunk Base

G024 - *Vernicia fordii* 油桐
(Fell)



Whole View


Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE	Tree Survey Photo Record
DATE	AUG 2023
FIGURE NO.	
SCALE AND ORIENTATION	
DRAWN	IL
JOB TITLE	Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories
CHECKED	CY
APPROVED	CY

ARUP

G025 - *Vernicia fordii* 油桐
(Fell)



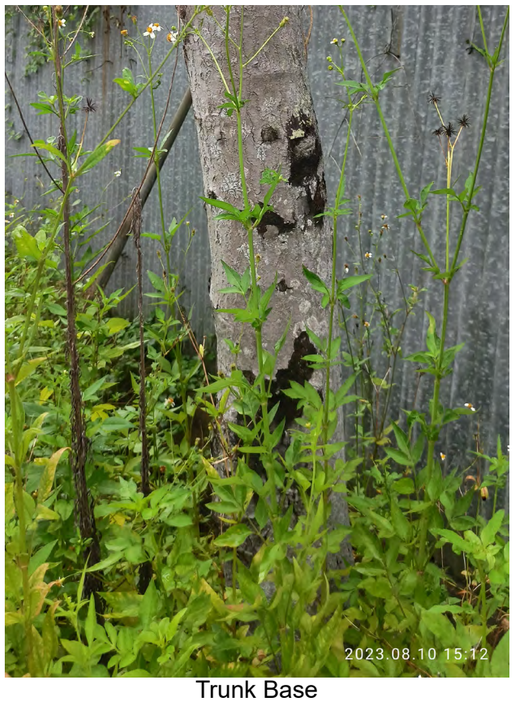
Whole View



Crown



Trunk



Trunk Base

G026 - *Dead Tree* 死樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION	
	DRAWN: IL	JOB TITLE: Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories		
	CHECKED: CY			
	APPROVED: CY			ARUP

G027 - *Vernicia fordii* 油桐
(Fell)



Whole View



Crown



Trunk



Trunk Base

G028 - *Vernicia fordii* 油桐
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE
Tree Survey Photo Record

DATE
AUG 2023

FIGURE NO.

SCALE AND ORIENTATION

DRAWN
IL

CHECKED
CY

APPROVED
CY

JOB TITLE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

ARUP

G029 - *Vernicia fordii* 油桐
(Fell)



Whole View



Crown



Trunk



Trunk Base

G030 - *Vernicia fordii* 油桐
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION
	DRAWN: IL	JOB TITLE: Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	
	CHECKED: CY		
	APPROVED: CY		

ARUP

G031 - *Vernicia fordii* 油桐
(Fell)



Whole View



Crown



Trunk

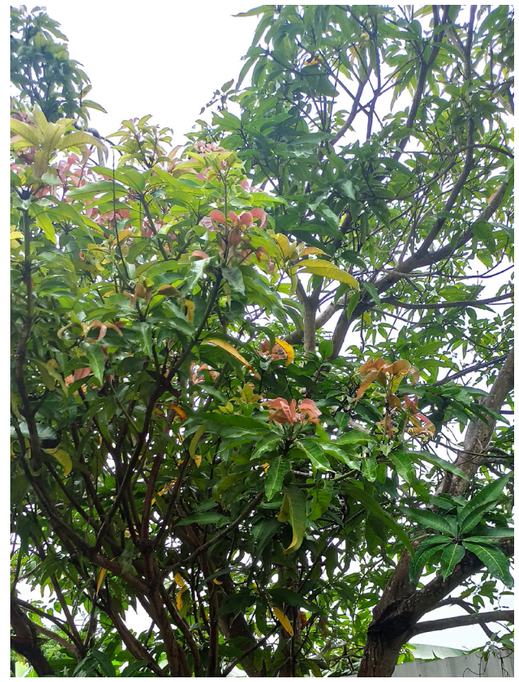


Trunk Base

G032 - *Dimocarpus longan* 龍眼
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE
Tree Survey Photo Record

DATE
AUG 2023

FIGURE NO.

SCALE AND ORIENTATION

DRAWN
IL

CHECKED
CY

APPROVED
CY

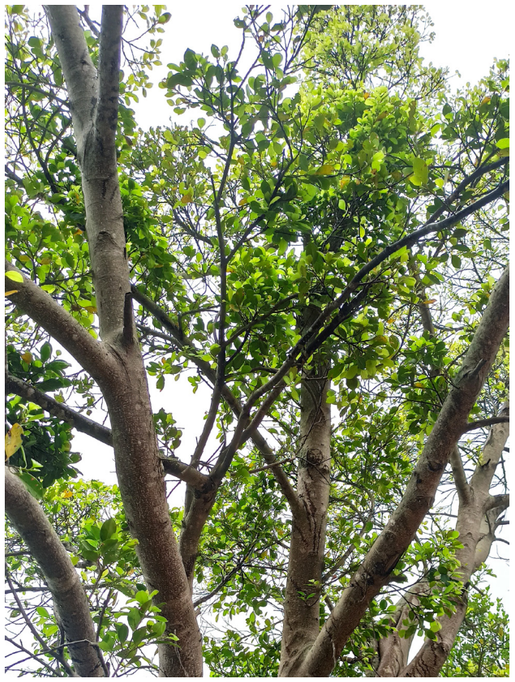
JOB TITLE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

ARUP

G033 - *Ficus microcarpa* 榕樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

G034 - *Ficus microcarpa* 榕樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION	
	DRAWN: IL	JOB TITLE: Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories		
	CHECKED: CY			
	APPROVED: CY			ARUP

G035 - *Casuarina equisetifolia* 木麻黃
(Fell)



Whole View



Crown



Trunk



Trunk Base

G036 - *Ficus microcarpa* 榕樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION	
	DRAWN: IL	JOB TITLE: Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories		
	CHECKED: CY			
	APPROVED: CY			ARUP

G037 - *Ficus microcarpa* 榕樹
(Fell)



Whole View



Crown

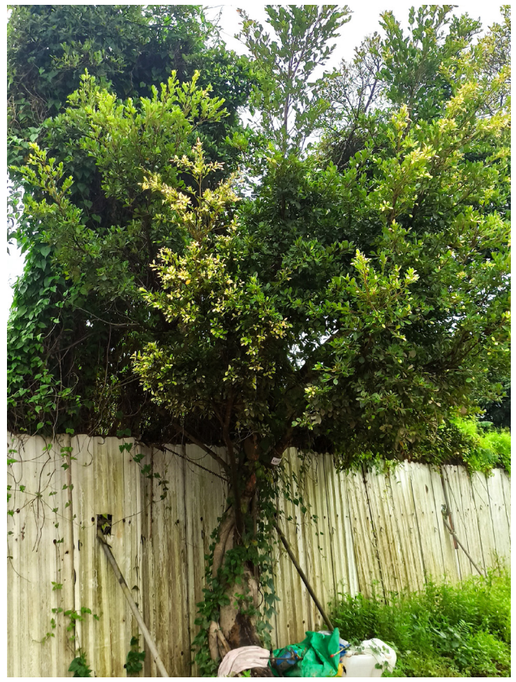


Trunk



Trunk Base

G038 - *Ficus microcarpa* 榕樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION	
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	CHECKED: CY			
	APPROVED: CY			ARUP

G039 - *Dimocarpus longan* 龍眼
(Fell)



Whole View



Crown



Trunk



Trunk Base

G040 - *Dimocarpus longan* 龍眼
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE	Tree Survey Photo Record
DATE	AUG 2023
FIGURE NO.	
SCALE AND ORIENTATION	
DRAWN	IL
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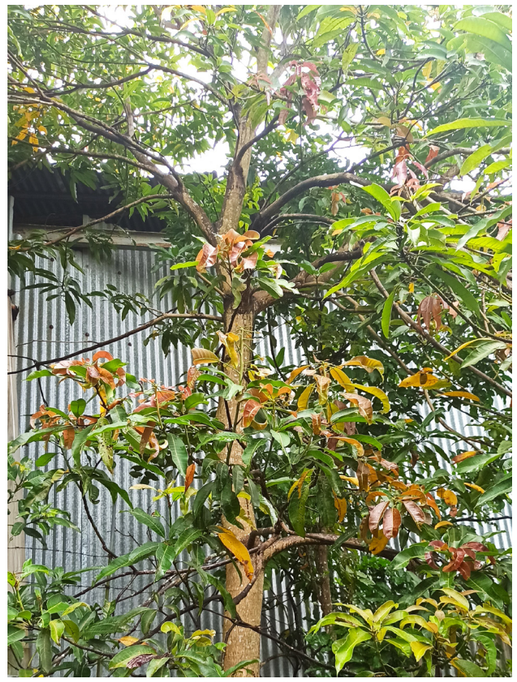
APPROVED	CY
JOB TITLE	Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

ARUP

G041 - *Dimocarpus longan* 龍眼
(Fell)



Whole View



Crown



Trunk



Trunk Base

G042 - *Ficus microcarpa* 榕樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE
Tree Survey Photo Record

DATE
AUG 2023

FIGURE NO.

SCALE AND ORIENTATION

DRAWN
IL

CHECKED
CY

APPROVED
CY

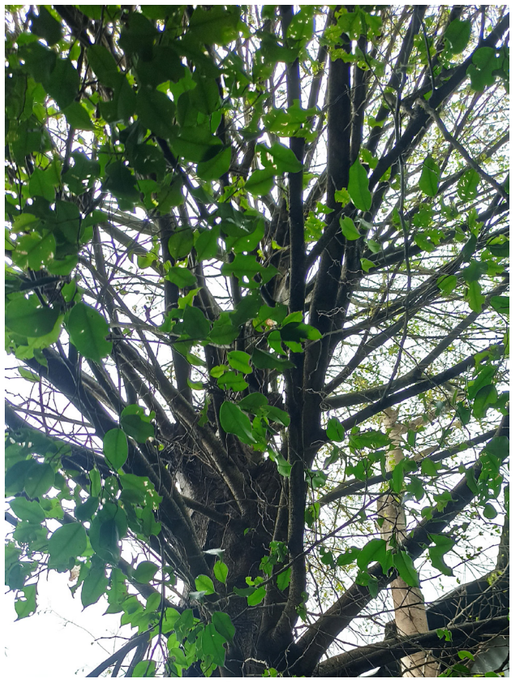
JOB TITLE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

ARUP

G043 - *Ficus microcarpa* 榕樹
(Fell)



Whole View



Crown

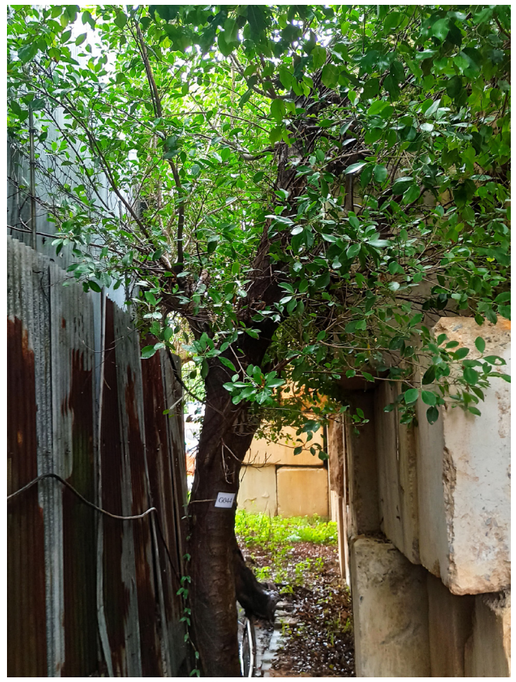


Trunk

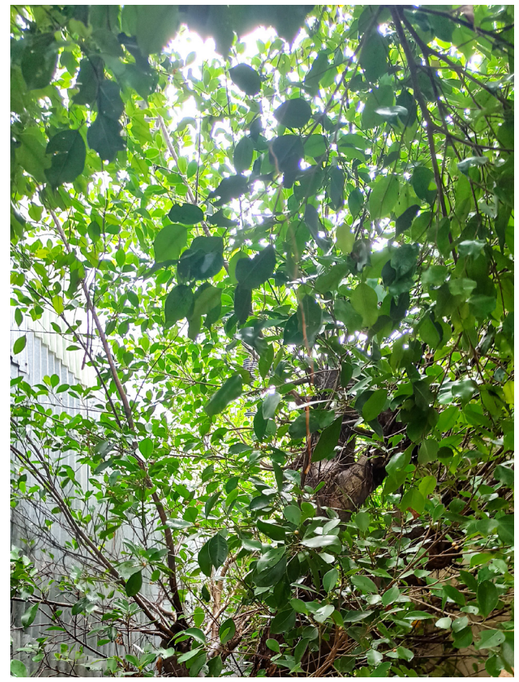


Trunk Base

G044 - *Ficus microcarpa* 榕樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE
Tree Survey Photo Record

DATE
AUG 2023

FIGURE NO.

SCALE AND ORIENTATION

DRAWN
IL

CHECKED
CY

APPROVED
CY

JOB TITLE
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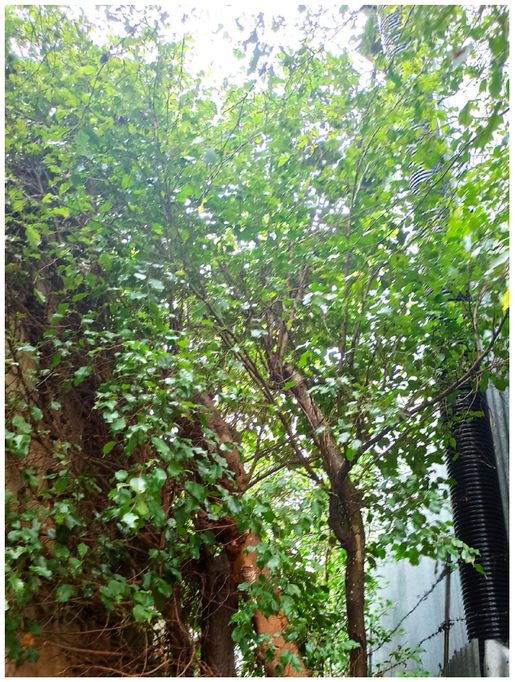
ARUP

G045 - *Ficus microcarpa* 榕樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

G046 - *Ficus microcarpa* 榕樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE	Tree Survey Photo Record
DATE	AUG 2023
FIGURE NO.	
SCALE AND ORIENTATION	
DRAWN	IL
CHECKED	CY
APPROVED	CY
JOB TITLE	Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

ARUP

G047 - *Ficus microcarpa* 榕樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

G048 - *Dimocarpus longan* 龍眼
(Fell)



Whole View



Crown



Trunk



Trunk Base

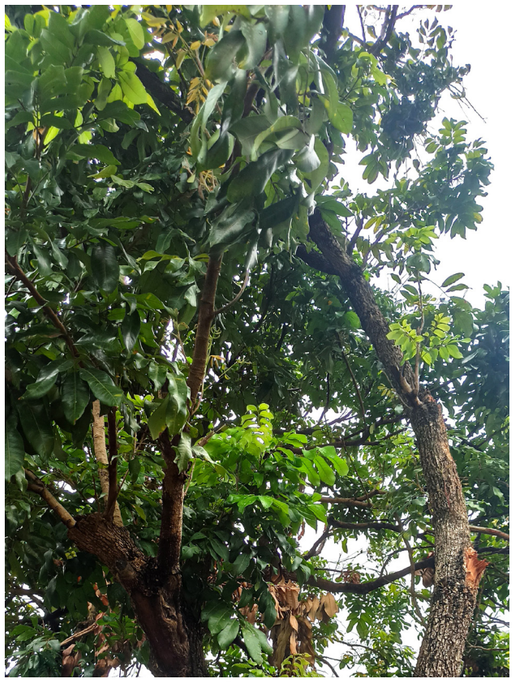
LEGEND

DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION	
	DRAWN: IL	JOB TITLE: Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories		
	CHECKED: CY			
	APPROVED: CY			ARUP

G049 - *Dimocarpus longan* 龍眼
(Fell)



Whole View



Crown



Trunk



Trunk Base

G050 - *Psidium guajava* 番石榴
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE
Tree Survey Photo Record

DATE
AUG 2023

FIGURE NO.

SCALE AND ORIENTATION

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CY

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CY

JOB TITLE
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ARUP

G051 - *Leucaena leucocephala* 銀合歡
(Fell)



Whole View



Crown



Trunk



Trunk Base

G052 - *Leucaena leucocephala* 銀合歡
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE
Tree Survey Photo Record

DATE
AUG 2023

FIGURE NO.

SCALE AND ORIENTATION

DRAWN
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APPROVED
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JOB TITLE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

ARUP

G053 - *Leucaena leucocephala* 銀合歡
(Fell)



Whole View



Crown



Trunk



Trunk Base

G054 - *Dimocarpus longan* 龍眼
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION	
	DRAWN: IL	JOB TITLE: Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories		
	CHECKED: CY			
	APPROVED: CY			ARUP

G055 - *Dimocarpus longan* 龍眼
(Fell)



Whole View



Crown



Trunk



Trunk Base

G056 - *Cinnamomum camphora* 樟樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION	
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	CHECKED: CY			
	APPROVED: CY			ARUP

G057 - *Dimocarpus longan* 龍眼
(Fell)



Whole View



Crown



Trunk



Trunk Base

G058 - *Artocarpus heterophyllus* 波羅蜜
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION
	DRAWN: IL	JOB TITLE: Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	
	CHECKED: CY		
	APPROVED: CY		

ARUP

G059 - *Dimocarpus longan* 龍眼
(Fell)



Whole View



Crown



Trunk

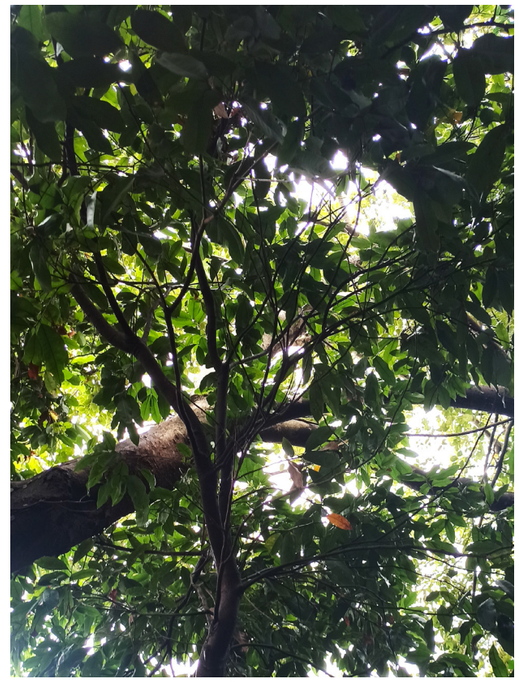


Trunk Base

G060 - *Celtis sinensis* 朴樹
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION
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	CHECKED: CY		
	APPROVED: CY		ARUP

G061 - *Dimocarpus longan* 龍眼
(Fell)



Whole View



Crown



Trunk



Trunk Base

G062 - *Artocarpus heterophyllus* 波羅蜜
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION
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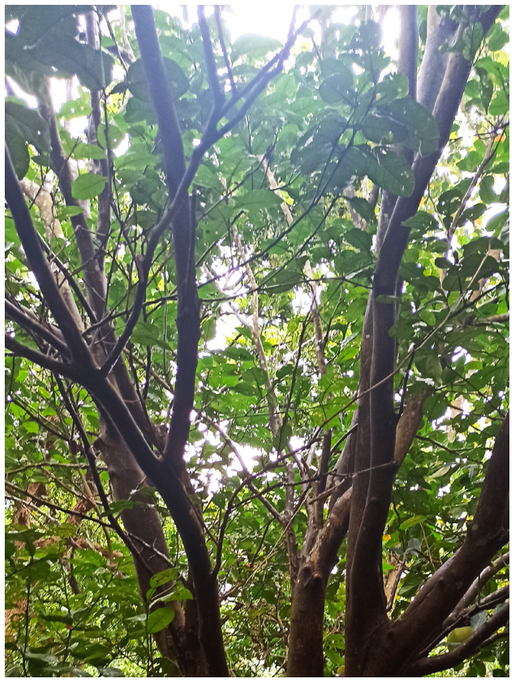
	CHECKED: CY		
	APPROVED: CY		

ARUP

G063 - *Citrus maxima* 柚
(Fell)



Whole View



Crown



Trunk

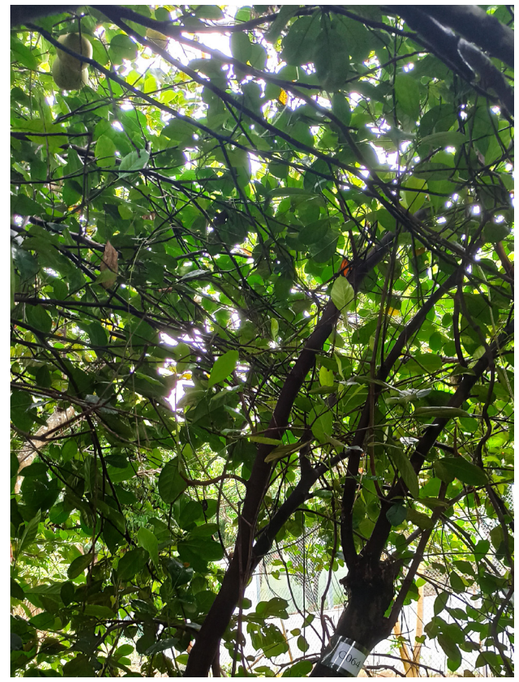


Trunk Base

G064 - *Artocarpus heterophyllus* 波羅蜜
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION	
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	CHECKED: CY			
	APPROVED: CY			ARUP

G065 - *Litchi chinensis* 荔枝
(Fell)



Whole View



Crown



Trunk

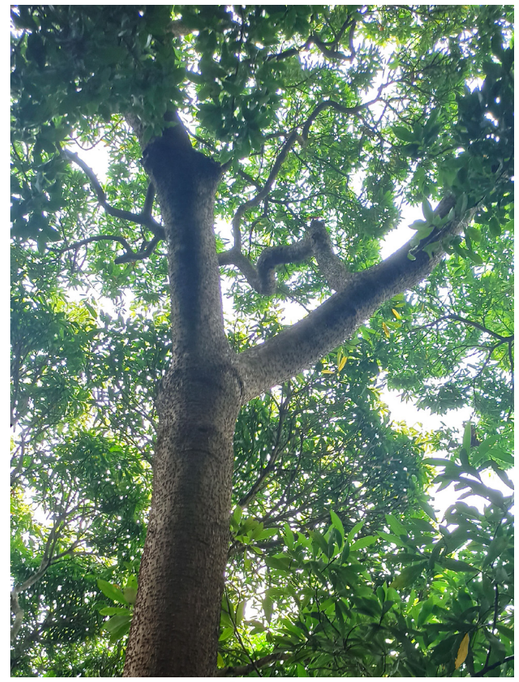


Trunk Base

G066 - *Machilus nanmu* 潤楠
(Fell)



Whole View



Crown



Trunk



Trunk Base

LEGEND

DRAWING TITLE
Tree Survey Photo Record

DATE
AUG 2023

FIGURE NO.

SCALE AND ORIENTATION

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JOB TITLE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

ARUP

G067 - *Carica papaya* 木瓜
(Fell)



Whole View


Crown



Trunk



Trunk Base

LEGEND

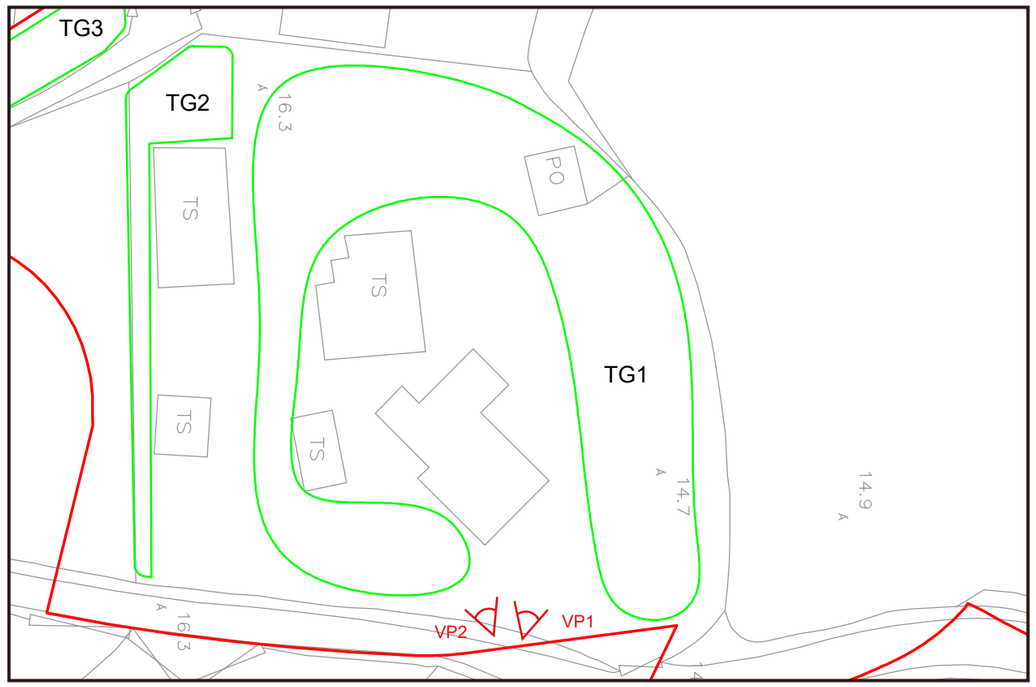
DRAWING TITLE: Tree Survey Photo Record	DATE: AUG 2023	FIGURE NO.	SCALE AND ORIENTATION	ARUP
	DRAWN: IL	JOB TITLE: Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories		
	CHECKED: CY			
	APPROVED: CY			



Tree Group 1 - VP1



Tree Group 1 - VP2



Key Plan

LEGEND

DRAWING TITLE: Tree Group Survey Photo Record	DATE: SEPT 2023	FIGURE NO.	SCALE AND ORIENTATION	
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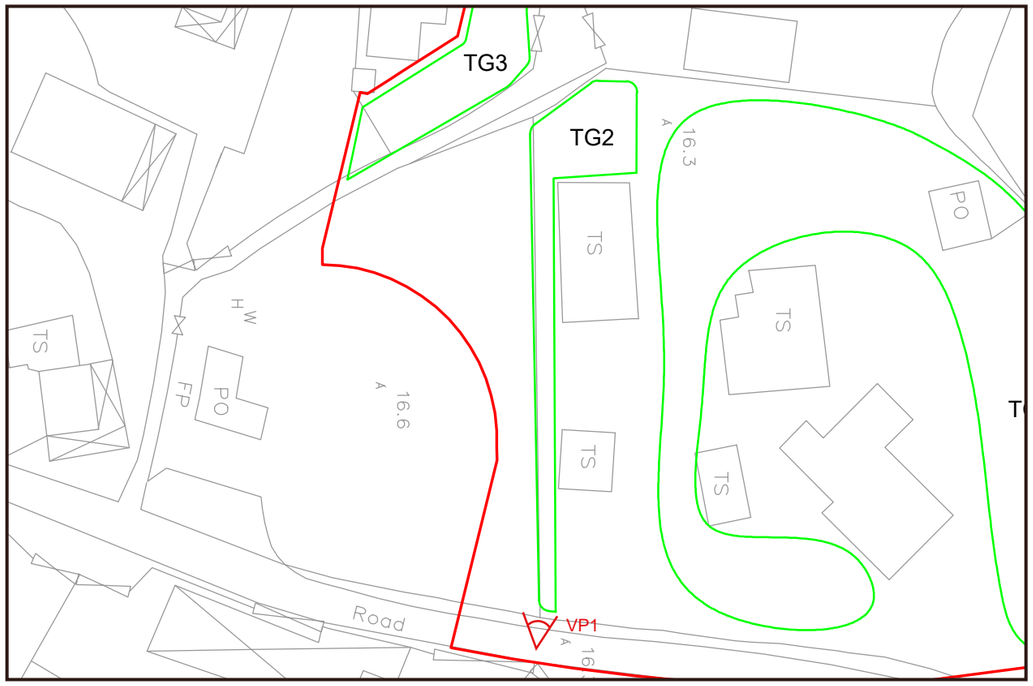
	CHECKED: CY			
	APPROVED: CY			ARUP



Tree Group 2 - VP1



Key Plan

LEGEND	DRAWING TITLE: Tree Group Survey Photo Record	DATE: SEPT 2023	FIGURE NO. / SCALE AND ORIENTATION	
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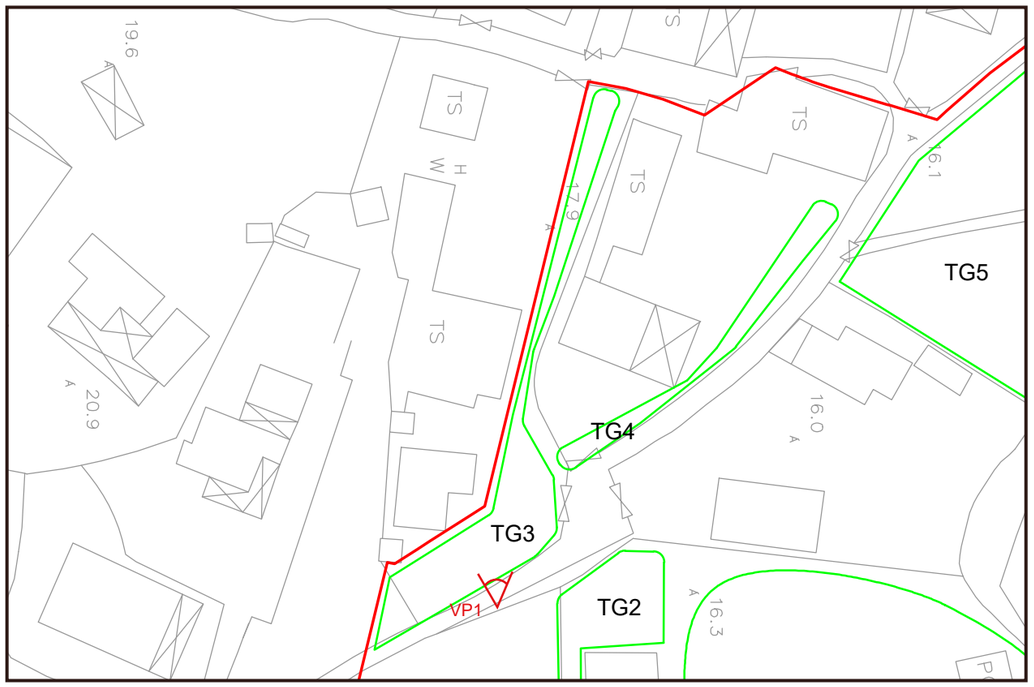
		CHECKED: CY		
		APPROVED: CY		ARUP



Tree Group 3 - VP1



Key Plan

LEGEND	DRAWING TITLE: Tree Group Survey Photo Record	DATE: SEPT 2023	FIGURE NO. / SCALE AND ORIENTATION	ARUP
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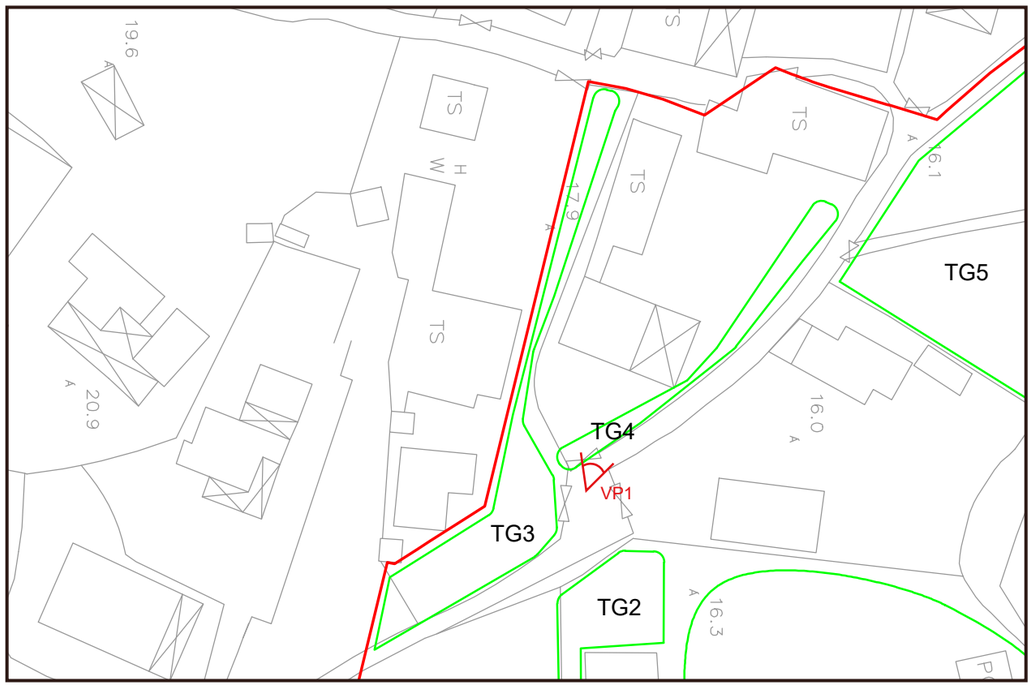
		CHECKED: CY		
		APPROVED: CY		



Tree Group 4 - VP1



Key Plan

LEGEND	DRAWING TITLE: Tree Group Survey Photo Record	DATE: SEPT 2023	FIGURE NO. / SCALE AND ORIENTATION	ARUP
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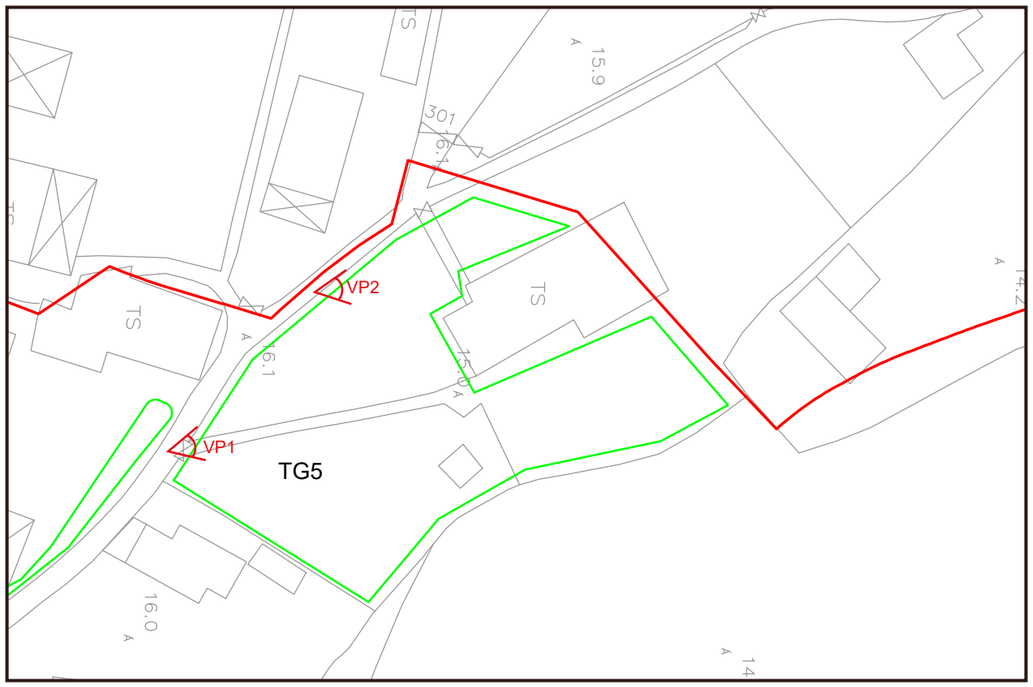
		CHECKED: CY		
		APPROVED: CY		



Tree Group 5 - VP1



Tree Group 5 - VP2



Key Plan

LEGEND	DRAWING TITLE: Tree Group Survey Photo Record	DATE: SEPT 2023	FIGURE NO.	SCALE AND ORIENTATION
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		CHECKED: CY		ARUP
		APPROVED: CY		



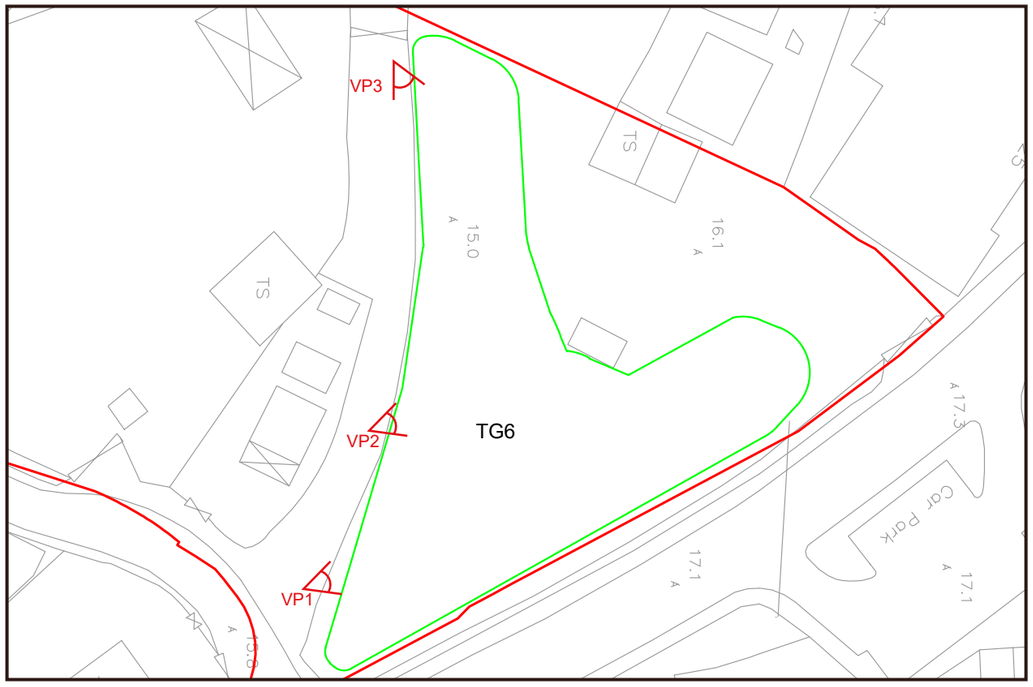
Tree Group 6 - VP1



Tree Group 6 - VP2



Tree Group 6 - VP3



Key Plan

LEGEND

DRAWING TITLE: Tree Group Survey Photo Record	DATE: SEPT 2023	FIGURE NO.	SCALE AND ORIENTATION
	DRAWN: IL	JOB TITLE: Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	
	CHECKED: CY		
	APPROVED: CY		ARUP

Appendix C Visual Impact Assessment

ARUP

Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Proposed Mixed Use Development at Lots 796 and 1008 RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Visual Impact Assessment

Draft | Sep 2024

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

293595

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Kowloon Tong,
Kowloon
Hong Kong
arup.com

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1 INTRODUCTION

1.1.1 This Visual Impact Assessment ("VIA") is prepared in support of the Planning Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP at D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories.

1.1.2 The Application Site falls within the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14 (the "OZP"). With a site area of about 17,821.2m^2, majority part of the Application Site (about 56.2%) falls within the "OS" zone. A minor portion of the land within the Application Site are zoned as "AGR" (about 5,421m^2, about 30.4%). The remaining area is shown as 'Road' (about 2,387m^2, about 13.4%) on the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14.

1.1.3 To the **north** of the Application Site is an island street block surrounded by Ng Chow South Road, Ng Chow Road and Ping Che Road, which mainly comprises of "Industrial (Group D)" ("I(D)"), "Government, Institution or Community" ("G/IC") and "Green Belt" ("GB") zone. Open storages and temporary structures are mainly identified within the "I(D)" zone. The "G/IC" zone is currently occupied by the Ta Kwu Ling Rural Centre Government Offices, Ping Che Nursing Home Limited and car parks. Ping Che New Village and its sitting out area are found to be located at the "GB". To the **east** of the Application Site to the east of Ping Che Road is zoned as "OS", currently occupied by temporary structures and rural workshops. There is a "G/IC" zone surrounded by this "OS" zone. It is currently the Baptist Convention of Hong Kong Baptist Assembly. To the **south** of the Application Site to the east of an unnamed local road comprises of a mix of land uses including "AGR", "GB" and "OS" zone. To the **west** of the Application Site is mainly zoned as "AGR". To the further west, there are two "V" zones, currently Ha Shan Kai Wat and Sheung Shan kai Wat, identified along with adjacent "GB" zones. Taking into account the Application Site is situated along the existing Ping Che Road and in close proximity to the planned Ping Che Station under proposed Northern Link Eastward Extension, an immense amount of development potential is identified in the Application Site. An Indicative Scheme comprises 4 residential towers and 1 commercial tower has been prepared under this Planning Application.

1.1.4 Point (g) of paragraph 2.3 of the Town Planning Board Guidelines No. 41 ("TPB PG-No. 41") states that a VIA is required when "*the proposal may affect existing visually sensitive areas, visual amenities and visual resources on-site or off-site enjoyed by the public due to its nature, scale, location, visual prominence, design, relationship to the site context, etc.*" Accordingly, this VIA is prepared to evaluate the visual compatibility and degree of anticipated visual impacts of the Indicative Scheme on the Visually Sensitive Receivers ("VSRs") relevant to the Application Site according to the requirements listed under TPB PG-No. 41. Based on the evaluation, the VIA mainly comments on the visual acceptability of the **Indicative Scheme** against the **OZP Compliant Scheme**.

1.1.5 The outline for the VIA is set out below:

- **Section 2** outlines the visual context of the Application Site and its Surrounding Area;
- **Section 3** describes the main design principles for the OZP Compliant Scheme with Indicative Scheme;

- **Section 4** identifies the Assessment Area and provides an analysis of the viewing points ("VPs");
- **Section 5** assesses the visual impacts; and
- **Section 6** concludes the VIA.

2 VISUAL CONTEXT OF THE APPLICATION SITE AND ITS SURROUNDING AREA

2.1 Site Context and Existing Land Use

2.1.1 The Application Site is about 17,821.2m^2, of which about 7,883m^2 (about 44.2% of the Application Site) is under private ownership (i.e Lots 796 and 1008 RP) under sole ownership by the Applicant. The remaining area is occupied by Government land.

2.1.2 The core area of the Application Site is currently used as open storage of construction materials. The northern portion of the Application Site along Ping Che Road is currently comprising a strip of trees and vegetation. Several temporary structures are found in the southern portion of the Application Site.

2.1.3 There is an existing vehicular and pedestrian access to the northern-east of the Application Site connecting to Ping Che Road.

2.2 Surrounding Context

2.2.1 The Application Site is predominantly surrounded a number of brownfield uses such as open storage, workshops, plants and factories. A number of existing village type developments are also located near to the Application Site (**Figure 1** refers):

- To the **immediate north** of the Application Site is an island street block bounded by Ng Chow South Road, Ng Chow Road and Ping Che Road, mainly comprises of "Industrial (Group D)" ("I(D)"), "Government, Institution or Community" ("G/IC") and "Green Belt" ("GB") zone. Open storages and temporary structures are mainly identified within the "I(D)" zone. The "G/IC" zone is currently occupied by the Ta Kwu Ling Rural Centre Government Offices, Ping Che Nursing Home Limited, a number of local shops and restaurants and open air car parks. Ping Che New Village and it's sitting out area can be found on the "GB" zone. To the **further north**, Sun Uk Tsai Village and Ping Che Tsuen can be found on "Village Type Development" ("V") zone to the north of Ng Chow South Road. An "Open Space" ("O"), currently occupied by Ping Che Mini-Soccer Pitch can also be found serve the existing surrounding population in the village. Consideration amount of open storage and rural workshop uses in temporary structures can be found in areas zoned as "AGR" and "I(D)" intermixing with the rural villages.

- The **immediate east** of the Application Site is largely zoned as "OS" along both side of the Ping Che Road, currently occupied by container storage and rural workshops. A "G/IC" zone can be found in Pak Hok Shan, currently occupied by the Baptist Convention of Hong Kong Baptist Assembly.

- The **immediate south** of the Application Site of a mix of land uses comprising mainly of "OS" and "AGR" zones. Only limited agricultural activities but majority open storage and rural workshop uses are found within the "AGR" zone. To the **further south** is the larger "GB" zone which surrounds the ridgeline of Tsung Shan with the highest point at about 105mPD.

- To the **west** of the Application Site is largely zoned as "AGR" on the OZP. It is observed that majority of "AGR" zone to the **immediate west** of the Application Site are largely

occupied by open storage and rural workshops, while more agricultural activities can only be found on the "AGR" zone to the **further west** near Ping Che Yuen Ha.

2.2.2 Please refer to **Figure 1** for the surrounding context of the application site.

3 The Indicative Scheme

3.1 Introduction

3.1.1 The Indicative Scheme has been carefully design having due regard to various technical considerations such as air ventilation, existing trees, environmental and transport arrangement. The Indicative Scheme comprises of 5 residential towers with BH ranging from 47 storeys (+171.83mPD) to 48 storeys (+175mDP), one 35-storey commercial tower (+169.7mPD) for hotel, office, retail, childcare centre and day care centre for the elderly and one 1-storey block for club house. Overall speaking, the Indicative Scheme will have a maximum domestic PR of 5.9 plus a non-domestic PR of not more than 1.1, with a maximum BH of +175mPD.

3.1.2 The general planning and design principless of the indicative development scheme shall refer to **Section 4** in the supporting planning statement.

3.2 Proposed Key Development Parameters

3.2.1 The proposed key development parameters of the Indicative Scheme are summarised in **Table 3.1** below. Please also refer to **Appendix A** of the Supporting Planning Statement for the architectural plan of the OZP Compliant Scheme with Indicative Scheme.

Table 3.1 Proposed Key Development Parameters of the Indicative Scheme

<table>
<tr><th>Key Development Parameters</th><th colspan="4">Indicative Scheme</th></tr>
<tr><td>Site Area</td><td colspan="4">About 17,821.2m²</td></tr>
<tr><td rowspan="6">GFA and PR</td><td></td><td colspan="2">GFA</td><td>PR</td></tr>
<tr><td>Domestic</td><td colspan="2">About 105,145m²</td><td>Not More than 5.9</td></tr>
<tr><td rowspan="4">Non-domestic</td><td colspan="2">About 19,603m² [1]</td><td rowspan="4">Not More than 1.1</td></tr>
<tr><td>Retail:</td><td>2,400m²</td></tr>
<tr><td>Office:</td><td>About 11,500m²</td></tr>
<tr><td>Hotel:</td><td>About 5,703m²</td></tr>
<tr><td>Social Welfare Facilities [2]</td><td colspan="3">About 1,953m² including:
• About 787.6m² for a 60-place Day Care Centre for the Elderly; and
• About 1,166m² for a 100-place Child Care Centre</td></tr>
<tr><td>No. of Blocks</td><td>Domestic</td><td colspan="3">5</td></tr>
<tr><td></td><td>Non-domestic</td><td colspan="3">1</td></tr>
<tr><td rowspan="2">Building Height (Main Roof) &</td><td rowspan="2">Domestic Blocks</td><td colspan="3">Not more than 175 mPD</td></tr>
<tr><td colspan="3">47 – 48 storeys (excluding basement)</td></tr>
</table>

No. of Storeys	Non-domestic Block	Not more than 170 mPD 35 storeys (excluding basement)	
Site Coverage	Domestic	Below 15m	Not more than 75%
		Above 15m	Not more than 37.5%
	Non-domestic	Below 15m	Not more than 100%
		Over 24m but not exceeding 27m	Not more than 90%
		Above 27m	Not more than 62.5%
No. of Flats	About 2,205 units		
Average Flat Size (m^2 GFA)	About 47m^2		
Anticipated Population (About) [3]	About 6,174		
No. of Hotel Rooms	About 70 rooms		
Local Open Space	Not less than 6,174m^2		
Greenery Provision	Not less than 3,564m^2 (20%)		
No. of Parking Spaces and Loading / Unloading Spaces	Private Car Parking Spaces:	725 (including 6 no. of parking space for disabled users)	
	Motorcycle parking spaces:	33	
	Goods vehicle loading / unloading bays:	18	
	Lay-bys for taxi and private car:	2	
	Lay-by for single deck tour bus:	1	
Anticipated Completion Year	**2032**		

Notes:

[1] Excluding gross floor area for Clubhouse which could be exempted. According to Building (Planning) Regulations 23(3)(a) and PNAP APP-104, for total domestic GFA of up to about 3,468.3m2, maximum 5% of the total domestic GFA could be exempted from GFA calculation.

[2] The GFA for the 60-place Day Care Centre for the Elderly (DCC for the Elderly) and the 100-place Child Care Centre (CCC) are calculated based on 2.2 times the respective Net Operational Floor Area (NOFA) requirement of 358m2 for DCC for the Elderly and 530m2 for the CCC as stipulated in HKPSG Chapter 3. Please note that the GFA for the proposed DCC for the Elderly and CCC will be subject to review based on operational requirements and liaison with Government departments in detailed design stage. The GFA of the said social welfare facilities is also disregarded in the calculation of PR/GFA.

[3] A person per flat (PPF) ratio of 2.8 is adopted with reference to the PPF of TPU (620, 622, 641 642, and 651, 653) as reported in the 2021 Population Census by the Census and Statistics Department.

4 ASSESSMENT AREA AND SELECTION OF VIEWING POINTS

4.1 Assessment Area

4.1.1 According to the TPB PG-No. 41, the Assessment Area is defined by approximately three times of overall maximum BH of the subject development (175mPD – 16mPD site formation level), i.e. 159m. Thus, a radius of 477m (i.e. 159m × 3) from the boundary of the Application Site defines the boundary of the Assessment Area, within which key public viewing points ("VPs") are selected for assessment accordingly (**Figure 2** refers).

4.2 Selection of Viewing Points

4.2.1 When assessing the potential visual impacts of the OZP Compliant Scheme with Indicative Scheme, the classification of VPs is categorised as follows:

Table 4.1 Classification of VPs

Receivers	Main Activities	Sensitivity
Recreational	Those viewers who would view the Application Site while engaging in recreational activities	High
Travellers	Those viewers who would view the Application Site from vehicles or on foot	Medium
Occupational	Those viewers who would view the Application Site from their workplaces	Low

4.2.2 A total of 5 VPs are considered to be mostly impacted by the OZP Compliant Scheme with Indicative Scheme at the Application Site (**Figure 2** refers). The evaluated short-range, medium-range and long-range VPs include:

4.2.3 **VP1: Ping Che Mini-Soccer Pitch –** This VP is located at about 230m to the south of the Application Site, it is a public playground with 1 football court and 1 children playground. This VP allows for the assessment of medium-range visual impact on the users who engage in sport activities and enjoy leisure activities. Since users are likely to be engaging in active recreational uses at the location with less attention on the view, the visual sensitivity of this VP is considered **Medium**.

4.2.4 **VP2: Hong Kong Baptist Assembly** – This VP is located at the entrance of Hong Kong Baptist Assembly. It is a camp site and expected to attract youngsters and visitor for outdoor activities. This VP is located at about 320m to the southeast of the Application Site. It is identified mainly for assessing medium-range street-level visual impact on recreational users in the camp site. Since users are likely to be engaging in active recreational uses at the location with less attention on the view, the visual sensitivity of this VP is considered **Medium**.

4.2.5 **VP3: Bus Stop at Ta Kwu Ling Rural Centre Government Offices –** This VP is located at about 142m to the north of the Application Site near Ta Kwu Ling Rural Centre Government Offices. It allows the visual impact on pedestrians and road users to be assessed at the short-range street level. The nature of this VP is transient and the visual sensitivity of this VP is considered **Medium**.

4.2.6 **VP4: Tsung Shan –** This long-range VP is located at viewing pavilion on Tsung Shan at about 790m to the southwest of the Application Site. It is a long-range VP representing views of hiker and recreational users to enjoy an elevated and panoramic view of Ping Che. Given the low usage at daily operation, the visual sensitivity of this VP is considered **Medium**.

4.2.7 **VP5: Wo Keng Shan –** This VP is located at Robin's Nest Jeep Track in Wo Keng Shan. It is a hiking trail where hikers and visitor can enjoy an elevated and panoramic view of Ping Che and the natural environment. This VP, located at about 3.2km to the northeast of the Application Site, is selected to assess far-range visual impact on hikers and sightseers engaging in hiking activities. Given the low usage at daily operation and far viewing distance, the visual sensitivity of this VP is considered **Medium**.

5 ASSESSMENT OF VISUAL IMPACT

5.1.1 This Section examines the visual impact of the OZP Compliant Scheme with Indicative Scheme by comparing it with the Planned Condition. Reference is made to TPB PG No. 41 and the following Table (**Table 5.1**) summarises the relevant appraisal aspects. The visual appraisal for the Indicative Scheme is carried out on the basis of 'visual composition', 'visual obstruction', 'effect on public viewers' and 'effect on visual resources'.

Table 5.1 Appraisal Aspects

Appraisal Aspects	**Major Considerations**
Visual Composition	Visual composition is the total visual effect of all the visual elements due to their variation in locations, massing, heights, dispositions, scales, forms, proportions and character vis-à-vis the overall visual backdrop. Visual composition may result in visual balance, compatibility, harmony, unity or contrast. The appraisal should have due regard to the overall visual context and character within the wider and local contexts.
Visual Obstruction	A development may cause views in its foreground or background to be intercepted or blocked. The appraisal should assess the degree of visual obstruction and loss of views or visual openness due to the proposed development from all key public viewing points within the assessment area.
Effect on Public Viewers	The effects of visual changes from key public viewing points with direct sightlines to the proposed development should be assessed and demonstrated in the VIA. The changes in views to the existing and future public viewers should be compared before and after the proposed development. The effects of the visual changes can be graded qualitatively in terms of magnitude as substantial, moderate, slight or negligible.
Effect on Visual Resources	The condition, quality and character of the assessment area may change positively or negatively as a result of a development. The applicant should appraise if the proposed development may improve or degrade the condition, quality and character of the assessment area and any on-site and off-site visual impact such as that on the visual resources, visual amenities, area of special character, natural and built heritage, sky view, streetscape, townscape and public realm related to the development.

5.1.2 TPB PG No. 41 sets out the classifications of visual impact and its associated description. The classifications are tabulated below to appraise the Overall Visual Resultant Impact of the Proposed development on the Visual Sensitive Receivers (Para. 4.11 of the HKPSG refers). This Section evaluates the visual impact of the Proposed development as compared with the Planned Condition with the existing and planned developments in the surroundings.

Table 5.2 Classification of Overall Resultant Visual Impact

Classification of Overall Resultant Visual Impact	Description
Enhanced	If the proposed development in overall term will improve the visual quality and complement the visual character of its setting from most of the identified key public viewing points.
Partly Enhanced/Partly Adverse	If the proposed development will exhibit enhanced visual effects to some of the identified key public viewing points and at the same time, with or without mitigation measures, exhibit adverse visual effects to some other key public viewing points.
Negligible	If the proposed development will, with or without mitigation measures, in overall terms have insignificant visual effects to most of the identified key public viewing points, or the visual effects would be screened or filtered by other distracting visual elements in the assessment area.
Slightly Adverse	If the proposed development will, with or without mitigation measures, result in overall terms in some negative visual effects to most of the identified key public viewing points.
Moderately Adverse	If the proposed development will, with or without mitigation measures, result in overall terms in negative visual effects to most of the key identified key public viewing points.
Significantly Adverse	If the proposed development will in overall terms cause serious and detrimental visual effects to most of the identified key public viewing points even with mitigation measures.

Relevant Development Information of New Territories North New Town and Man Kam To (NTN Development) (ESB-341/2021)

5.1.3 Noted that the Application Site is located within the proposed tentative boundary of New Territories North New Town which the EIA study for such is under preparation during the course of the study for this application. The latest available information on the development of New Territories North New Town Development and Man Kam To (NTN development) has been obtained on the public domain and relevant government departments have been consulted for development details and programme. Yet, the exact programme and development details for its implementation is yet to be confirmed.

5.1.4 Based on the EIA Project Profile and Study brief for Development of New Territories North New Town and Man Kam To (NTN Development) (ESB-341/2021), the NTN remaining phase development is proposed for housing, economic and employment-generating developments. It contains area about 1,100 ha, including Ping Che and Ta Kwu Ling which the Application Site is located at. The works for the development include site formation works and the associated infrastructure works. The said infrastructure works would include the necessary slope works, roadworks, sewerage works, sewage pumping station, sewage treatment works, drainage works, waterworks, utility works, fresh water and flushing water service reservoirs, rock caverns, cycle tracks, etc. within or outside the proposed boundaries of the Project for serving the proposed development. As refer to the Project Profile, the broad land use concepts identified for the NTN development would be further review, such as commercial, residential, industrial estate, science park, logistic industries, etc..

5.1.5 As refer to the Project Profile, the Planning and Engineering (P&E) study including the EIA study for NTN Development is targeted to commence in latter half of 2021 for completion within a study period of about 36 months. Subject to the recommendations of the P&E study, detailed design and associated statutory procedures of the NTN Project will follow. Outline implementation programme for the development will be formulated under the NTN Project.

5.1.6 Since the implementation details of NTN Development is yet to be confirmed, this study covers the scenario without NTN development in place for completeness and aims to demonstrate that there is feasible solution to meet relevant environmental standards.

5.1.7 Please refer to Figure 3 to 7 for the additional demonstration of NTN development under the OZP compliant Scheme and the indicative scheme.

Mitigation Measures

5.1.8 The building bulk of the towers is sensitively designed with appropriate building separation to allow visual permeability, while complying with the building separation requirements as stipulated in PNAP APP-152 SBDG. Further, design details, such as articulated façades and landscaping, are proposed to enhance visual interest, to reduce collective visual mass, and to harmonize with surroundings.

VP1: Ping Che Mini-Soccer Pitch (**Figure 3** refers)

5.1.9 This medium-range VP located at Ng Chow Road near San Uk Tsai Village and represent the kinetic view of active recreational users who have a direct view towards the Application Site from the south. As the application site situates behind the existing cluster of trees and low-rise workshops, only the upper part of the proposed development will be visible under the Indicative Scheme.

5.1.10 **Effects on Visual Composition** – The visual composition from this VP under the existing condition comprises roadside trees and low-rise workshop in the foreground and the open sky in the background. Under the OZP Compliant Scheme with Indicative Scheme, the lower part of the proposed residential development will be screened by the existing roadside trees, while the upper part of the new development will block part of the sky view in the background. Hence, the effects of the OZP Compliant Scheme with Indicative Scheme on visual composition are considered **slightly adverse**.

5.1.11 **Effects on Visual Obstruction and Visual Permeability** – Visual permeability to the open sky view at the backdrop will be partly impeded by the proposed development. However, due to the stepped building height profile, there will still be some visibility of the sky above the proposed development, the effects of the OZP Compliant Scheme with Indicative Scheme on visual obstruction are considered **moderately adverse**.

5.1.12 **Effects on Public Viewers** – The Mini-Soccer Pitch is mainly for users engaging in active recreational uses at the soccer pitch who are less attentive to distant views towards the Application Site. Hence, the effects on public views are considered as **slightly adverse**.

5.1.13 **Effects on Visual Elements/Resources** – The major visual resources of this VP comprise dense tree plantings and low-rise workshop in the foreground and open sky view in the background. The proposed building will reduce the openness of the sky by screening part of the sky view in the background. With the stepped building height profile which has

preserved some sky view in the background, the presence of the proposed development will bring **slightly adverse** effects on the visual resources. With appropriate design mitigation measures such as lighter colour tone façade design and architectural articulation, impacts on visual resources are anticipated to be mitigated.

5.1.14 Based on the above, the OZP Compliant Scheme with Indicative Scheme will bring **moderately adverse** visual impact to the recreational users in Ping Che Mini Soccer. Design mitigation measures to be adopted in detailed design stage, such as lighter colour façade design and architectural articulation, will also enhance the compatibility of the Indicative Scheme thus mitigate the impacts on visual resources. Under the planning of the TKL NDA under NTN Study, Ping Che area is expected to undergo significant transformation from the existing low-rise rural character with brownfield operation to a modern new town featuring high-density development density in the near future. As illustrated in Figure 3, the Indicative Scheme with maximum building height of +175mPD is considered compatible to the surrounding building heights of +180mPD. With TKL NDA planned as a high-density modern new town featuring higher building heights, the Indicative Scheme will be compatible with the surrounding NTN development in the long term.

VP2: Hong Kong Baptist Assembly (**Figure 4** refers)

5.1.15 This medium-range VP is located to the southeast of the Application Site at Ping Che Road. It represents views of recreational users at street level looking directly towards the Application Site. The southeastern part of proposed commercial and residential development at the Application Site will be visible in the background, partly screened by existing tree clusters along Ping Che Road.

5.1.16 **Effects on Visual Composition** – The visual composition of this VP includes Ping Che Road and low-rise workshops along the Pine Che Road in the foreground, roadside trees in the middle-ground, and open sky view in the background. As compared with OZP Compliant Scheme, the proposed development will obstruct part of the open sky view in the background. Therefore, the effects of the OZP Compliant Scheme with Indicative Scheme on visual composition are considered as **slightly adverse**.

5.1.17 **Effects on Visual Obstruction and Visual Permeability** – Visual permeability to the open sky will be partly impeded by the proposed development. With the inclusion of a building separation of 18 meters between each building will create a view corridor that allows for a glimpse of the sky in the backdrop. Hence, the effects of the OZP Compliant Scheme with Indicative Scheme on visual obstruction and visual permeability are considered **moderately adverse**.

5.1.18 **Effects on Public Viewers** – From this VP, recreational viewers will be able to see the OZP Compliant Scheme with Indicative Scheme directly. However, being a VP of transient in nature as the users will stay briefly, focusing on activities like camping, ball games, and gatherings, and thus they are relatively oblivious to the changes in the surrounding environment. Hence, the effects on recreational views are **slightly adverse**.

5.1.19 **Effects on Visual Elements/Resources** – The visual element in this VP is the open sky view on the background and the dense tree plantings in the foreground. The proposed development will partly block the open sky view at the backdrop. However, with the inclusion of a building separation of 18 meters between each building to mitigate the visual impact, the effects on visual resources are therefore considered **as moderately adverse**.

5.1.20 With reference to the above, the Indicative Scheme will bring **moderately adverse** visual impact to the recreational users in Hong Kong Baptist Assembly. With proposed design mitigation measures, such as building separation and architectural articulation, the visual bulkiness of the Indicative Scheme would be minimised. The disposition of towers is also carefully designed to ensure views can be maintained, thereby mitigating the visual impacts. Nonetheless, in the long term where NTN development commences, the towers of the Indicative Scheme will be further integrated into the surrounding developments in future as planned under the NTN Study. As shown in Figure 4, towers of the Indicative Scheme will be further blocked by the future development at the foreground featuring +180mPD building height. The Indicative Scheme is considered compatible with the future development in its vicinity.

VP3: Bus Stop at Ta Kwu Ling Rural Centre Government Offices (**Figure 5 refers**)

5.1.21 This transient short-range VP is located to the north of the Application Site at Ping Che Road. It represents views of pedestrians and road users at street level looking directly towards the Application Site. As the application site situates behind the existing cluster of trees clusters along Ping Che Road and low-rise workshop, only the upper part of the proposed development will be visible under the OZP Compliant Scheme with Indicative Scheme.

5.1.22 **Effects on Visual Composition** – The visual composition from this VP comprises Ping Che Road in the foreground, roadside trees along Ping Che Road and low-rise workshop in the middle ground and open sky in the background. The upper part of proposed development will partly obstruct the open sky view due to the erection of the building mass, while the lower part of the proposed development will be screen off by the existing roadside plantation and warehouses. Therefore, the effects of the Indicative Scheme on visual composition will be **slightly adverse**.

5.1.23 **Effects on Visual Obstruction and Visual Permeability** – Given the visual permeability to the open sky will be significantly impeded by the proposed development. However, However, the inclusion of a 30-meter-wide building separation offers a sense of visual relief, mitigating the impacts to some extent, the effects on visual obstruction and visual permeability are considered as **moderately adverse**.

5.1.24 **Effects on Public Viewers** – From this VP, public viewers will be able to see the developments at the Application Site and open sky view will be partly screened off by proposed development. Given the transient nature of this VP and the public viewers' relative obliviousness to changes in the background, the proposed development will result in **slightly adverse** visual impacts on the public at this VP.

5.1.25 **Effects on Visual Elements/Resources** – The major visual resources of this VP, i.e., roadside plantation in the middle-ground, will not be altered by OZP Compliant Scheme with Indicative Scheme in the background. The inclusion of 30-meter separations between each building plays a crucial role in providing visual relief and corridors, and thus the effects on visual resources are therefore considered as **moderately adverse**.

5.1.26 Based on the above, the visual impacts of the OZP Compliant Scheme with Indicative Scheme to the pedestrians and road users at bus stop near Ta Kwu Ling Rural Centre Government Offices are considered **moderately adverse**. In addition, as noted from the future TKL NDA under NTN Study, developments of 180mPD and 45mPD building height would be proposed in the foreground of the VP. The Indicative Scheme will be subsumed

into the future development and is anticipated to be compatible and harmonious with the planned condition in TKL NDA.

VP 4: Tsung Shan (**Figure 6** refers)

5.1.27 This long-range VP locates at the viewing pavilion of Tsung Shan and represents the view to hikers and sightseers with a direct view towards the Application Site. Under both OZP Compliant Scheme and the OZP Compliant Scheme with Indicative Scheme, the lower part of the proposed development is partly blocked by the hillside plantation, while the upper part of the proposed development is marginally visible to the public viewers.

5.1.28 **Effects on Visual Composition** – The visual composition from this VP under the existing condition comprises hillside shrublands and tree groups in the foreground, low-rise buildings and roadside plantation in the middle ground, and mountains including Wo Keng Shan, Robin's Nest and Cheung Shan and open sky view in the background. The proposed development will bring some changes to the maintain view in the background. Hence, the effects of the OZP Compliant Scheme with Indicative Scheme on visual composition are considered **moderately adverse**.

5.1.29 **Effects on Visual Obstruction and Visual Permeability** – Visual permeability to the mountain view at the backdrop will be partly impeded by the proposed development under OZP Compliant Scheme with Indicative Scheme. Hence, the effects of the Indicative Scheme on visual obstruction are considered **moderately adverse**.

5.1.30 **Effects on Public Viewers** – This viewpoint represents hikers and sightseers from the Country Park who will mainly encounter views of the proposed development from this elevated position. Considering the low usage and transient nature of this viewpoint, public viewers will only spend a short period of time here. Therefore, the effects of the OZP Compliant with Indicative Scheme on hikers and sightseers are considered as **slightly adverse**.

5.1.31 **Effects on Visual Elements/Resources** – The proposed development will not alter the visual element in foreground including hillside shrubland, while the mountain view in the background will be partly impeded by the upper part of the proposed development. The proposed development is noticeable in the view, and it will impact the quality and character of these visual resources to some extent. Therefore, the effects of the Indicative Scheme on visual resources are **moderately adverse**.

5.1.32 Based on the above, the Indicative Scheme will bring **moderately adverse** visual impact to this VP. With appropriate design mitigation measures, such as lighter colour tone façade design and architectural articulation, impacts on visual composition are anticipated to be mitigated to allow a more harmonious fit between the Indicative Scheme and the vicinity. Nevertheless, the NTN development is anticipated to bring significant change to existing character with brownfield operations in Ping Che area. In the near future, the Indicative Scheme is anticipated to be further integrated into wider Ping Che and Ta Kwu Ling area, which are intended to undergo high-density development which would be developed with building height up to +210mPD (Figure 6 refers). Upon the commencement of NTN development, the Indicative Scheme fit in appropriately with the future building profile, thus forming part of the city skyline in TKL NDA.

VP 5: Wo Keng Shan (**Figure 7** refers)

5.1.33 This far-range VP is located to the northeast of the Application Site at hiking trial of Wo Keng Shan. It represents views of hikers and sightseers at an elevate level looking directly towards the Application Site. The southern part of proposed commercial and residential development at the Application Site will be visible in the middle ground.

5.1.34 **Effects on Visual Composition** – The visual composition from this VP under the existing condition includes hillside plantation in the foreground, low-rise buildings and roadside plantation in the middle ground, and high-rise developments in Fanling with mountains and open sky as backdrop. The proposed development in the background will have a slight impact on the view towards Ma Tau Leng, but since the height and extent of the proposed development are similar to the existing developments in Fanling. Therefore, the effects of the OZP Compliant Scheme with Indicative Scheme on visual composition are considered **slightly adverse**.

5.1.35 **Effects on Visual Obstruction and Visual Permeability** – Under the OZP Compliant Scheme with Indicative Scheme, the new development will partially obstruct the visual permeability to the mountain backdrop without blocking the ridgeline. The effects of the OZP Compliant Scheme with Indicative Scheme on visual obstruction are therefore considered as **slightly adverse**.

5.1.36 **Effects on Public Viewers** – Public viewers are expected to experience limited visual changes brought by the new development from this VP, since the proposed development represents a relatively small obstruction within the overall view. The effects of the Indicative Scheme on public viewers are **slightly adverse**.

5.1.37 **Effects on Visual Elements/Resources** – The major visual resources of this VP comprise hillside plantation in the foreground and mountain view and open sky in the background. The quality and character of these visual resources will remain unchanged as the proposed development takes a small proportion in the overall view and does not dominate the existing natural and rural visual character. Therefore, the effects of the Indicative Scheme on visual resources are **negligible**.

5.1.38 Based on the above, the Indicative Scheme will bring **slightly adverse** visual impact to this VP. In addition, the NTN development is anticipated to bring significant change to the existing character with brownfield operations in Ping Che area. In the near future, the Indicative Scheme is anticipated to be further integrated into wider Ping Che and Ta Kwu Ling area, which are intended to undergo high-density development. With the NTN development, the VP would observe high-rise developments up to building height of +230mPD, bringing drastic changes to the planning circumstances (Figure 7 refers). The Indicative Scheme would be blocked by certain buildings of the NTN development, thus blending into the high-rise city skyline in TKL NDA easily.

5.1.39 A summarised assessment of the visual impacts of the Indicative Scheme is given in **Table 5.3**.

Table 5.3 Visual Impact Assessment Summary

VP	Visual Sensitivity	Appraisal Components				Conclusion
		Visual Composition	Visual Obstruction	Effect on Public Viewers	Effect on Visual Resources	
VP 1: Ping Che Mini Soccer	Medium	Slightly adverse	Moderately adverse	Slightly adverse	Slightly adverse	Moderately adverse (Mitigated by design measures)
VP 2: Hong Kong Baptist Assembly	Medium	Slightly adverse	Moderately adverse	Slightly adverse	Moderately adverse	Moderately adverse (Mitigated by design measures)
VP 3: Bus Stop at Ta Kwu Ling Rural Centre Government Offices	Medium	Slightly adverse	Moderately adverse	Slightly adverse	Moderately adverse	Moderately adverse (Mitigated by design measures)
VP 4: Tsung Shan	Medium	Moderately adverse	Moderately adverse	Slightly adverse	Moderately adverse	Moderately adverse (Mitigated by design measures)
VP 5: Wo Keng Shan	Medium	Slightly adverse	Slightly adverse	Slightly adverse	Negligible	Slightly adverse (Mitigated by design measures)

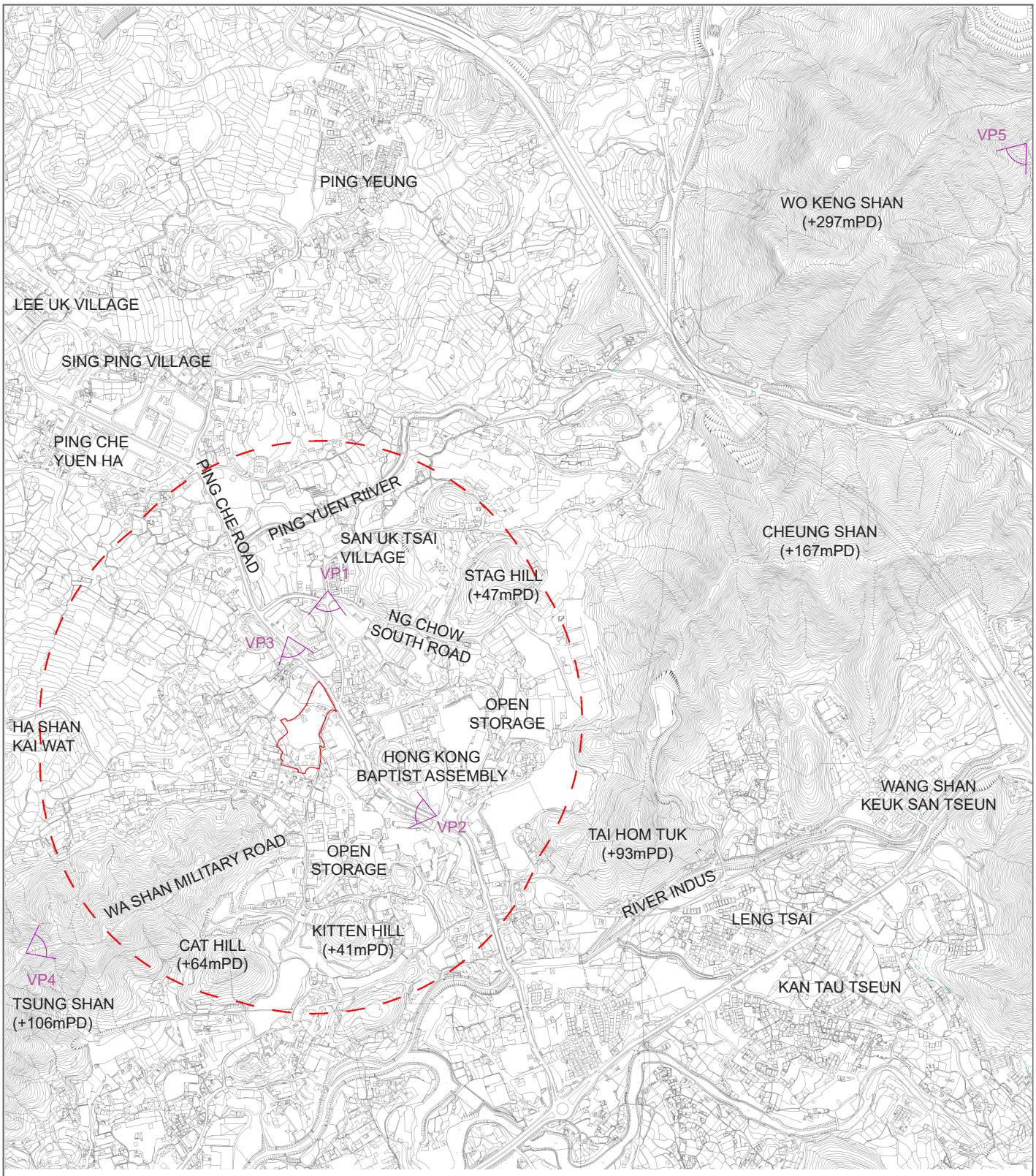
6 CONCLUSION

6.1.1 This VIA is prepared in support of the Planning Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) for Mixed Use Development (Residential and Commercial) at Lot 796 and 1008 RP at D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories, to facilitate the implementation of a quality commercial and residential development at the Application Site. A total of 1,755 private residential units will be delivered together with retail, club house, children care centre and day care center to serve the neighbourhood.

6.1.2 In this Visual Impact Assessment, a total of 5 VPs (including short, medium and long-range) have been assessed, which are of medium visual sensitivity. In short, 4 VPs are identified with moderately visual impact and 1 VP is identified with slightly visual impact under the Indicative Scheme as compared with the OZP Compliant Scheme.

6.1.3 In addition, design features incorporated into the Indicative Scheme, including the carefully designed building disposition/ layout to maximise the visual permeability, integrated landscape design to enhance the visual amenity of the area as well as the compatible scale and building density with the surrounding residential development, the Indicative Scheme contributes to enhance the visual quality of the area by replacing the underutilized Application Site by a well-managed and high quality residential development.

6.1.4 Based on the above, the Proposed Amendment demonstrated by the Indicative Scheme is considered to be fully acceptable from visual perspective.



LEGEND

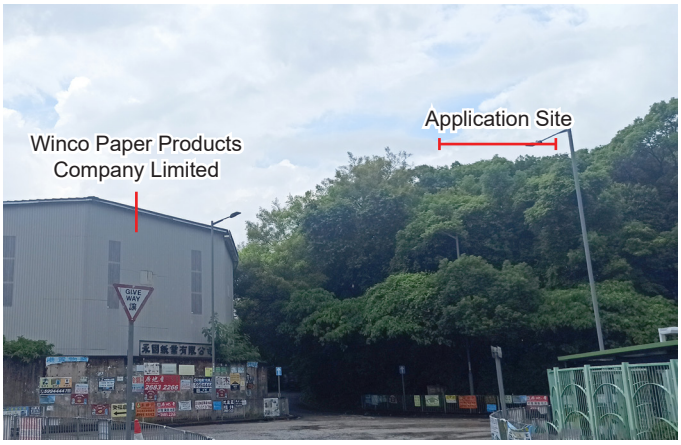
- Application Site
- Initial Assessment Area Boundary
  - 3H: BH (159m*3) = about 477m
- Proposed Viewpoints

PROPOSED VIEWPOINT (VP)

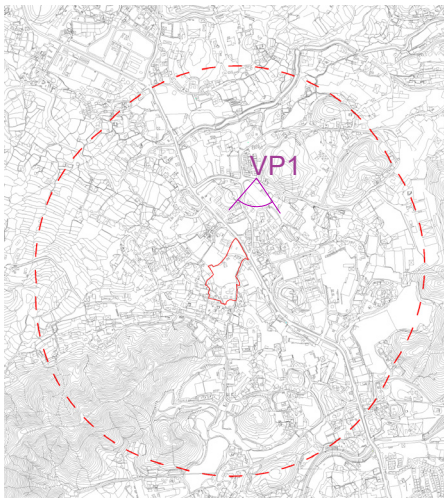
VP1	Ping Che Mini Soccer
VP2	Hong Kong Baptist Assembly
VP3	Bus Stop at Ta Kwu Ling Rural Centre Government Offices
VP4	Tsung Shan
VP5	Wo Keng Shan

Figure No.	*Scale*	*Figure Title*
Fig. 2	1:15,000	Assessment Area and Location of Viewing Points
ARUP	*Date* July 2024	*Source* -

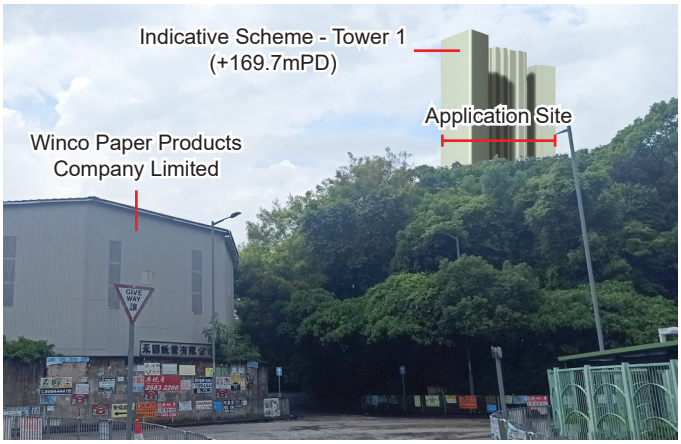
OZP Compliant Scheme



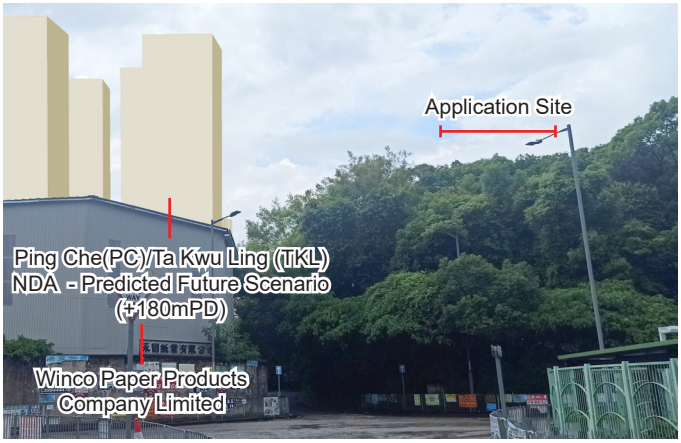
Key Plan



OZP Compliant Scheme + Indicative Scheme



OZP Compliant Scheme + NTN Development



OZP Compliant Scheme + NTN Development + Indicative Scheme

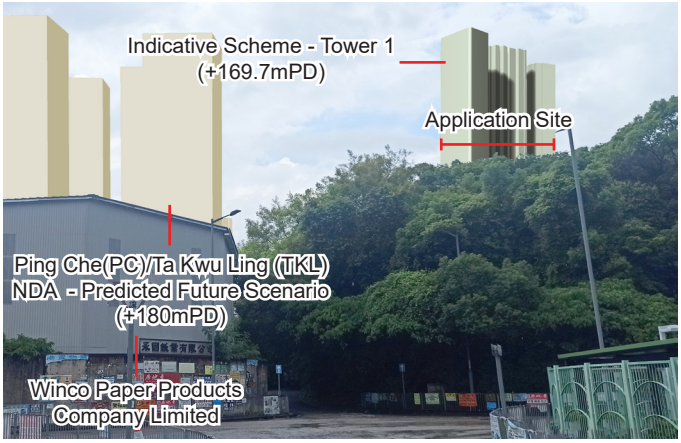
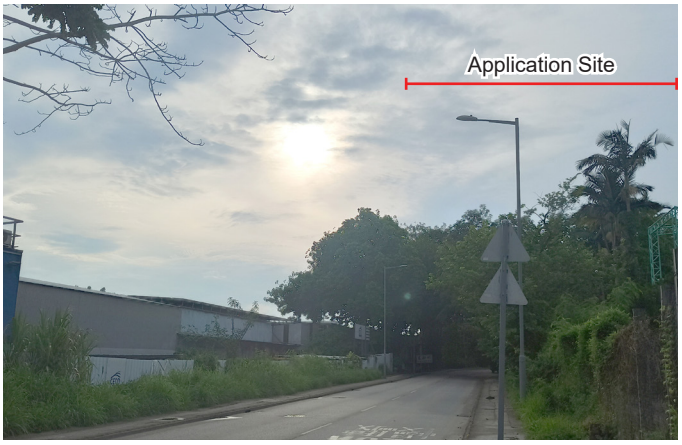
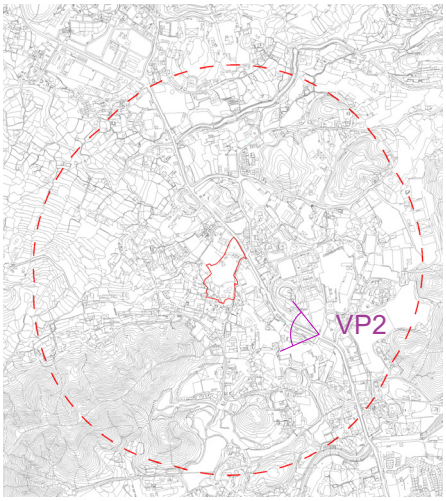


Figure No.	*Scale*	*Figure Title*
Fig. 3	N/A	Viewing Point 1 : Ping Che Mini Soccer
ARUP	*Date*	*Source*
	July 2024	-

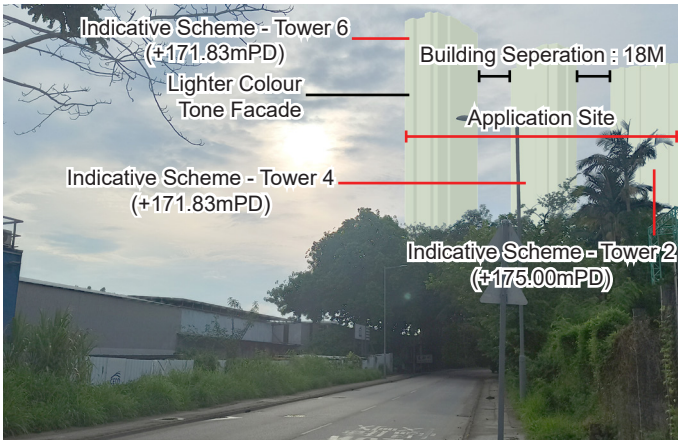
OZP Compliant Scheme



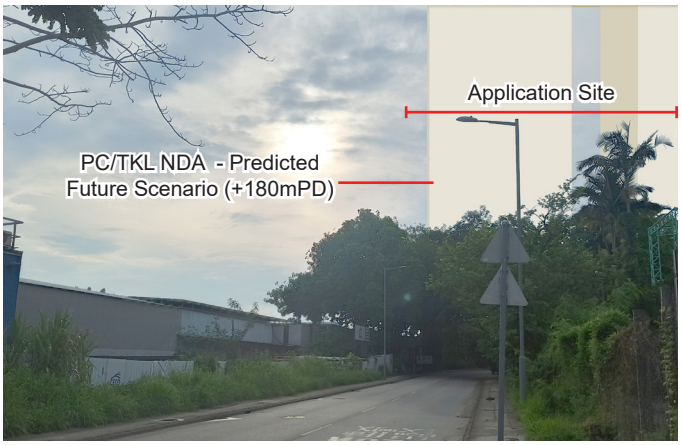
Key Plan



OZP Compliant Scheme + Indicative Scheme



OZP Compliant Scheme + NTN Development



OZP Compliant Scheme + NTN Development + Indicative Scheme

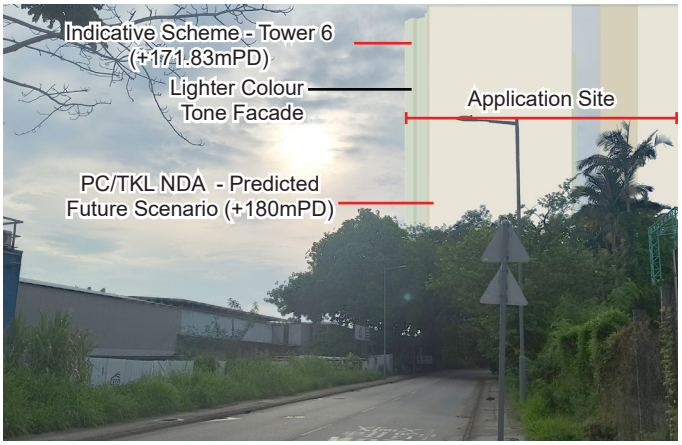
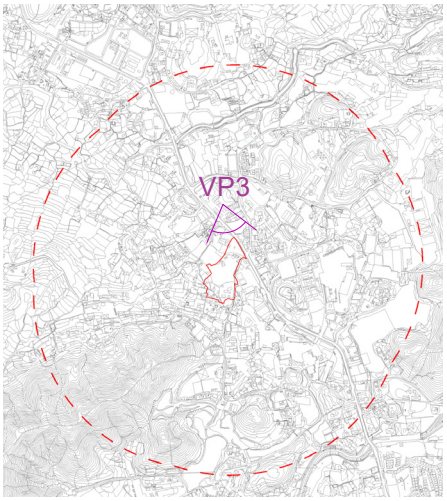


Figure No.	Scale	Figure Title
Fig. 4	N/A	Viewing Point 2 : Hong Kong Baptist Assembly
ARUP	Date	Source
	July 2024	-

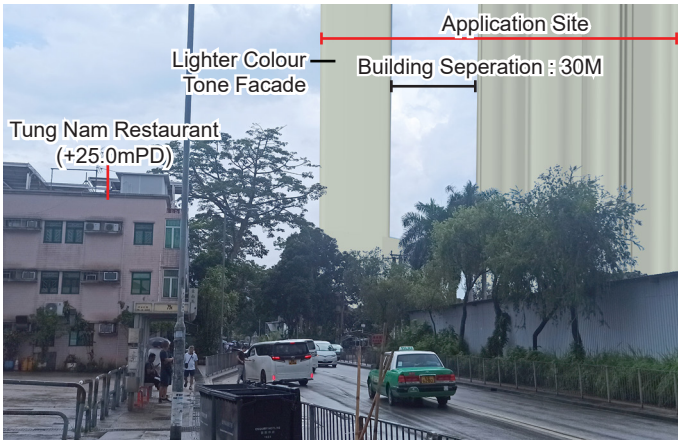
OZP Compliant Scheme



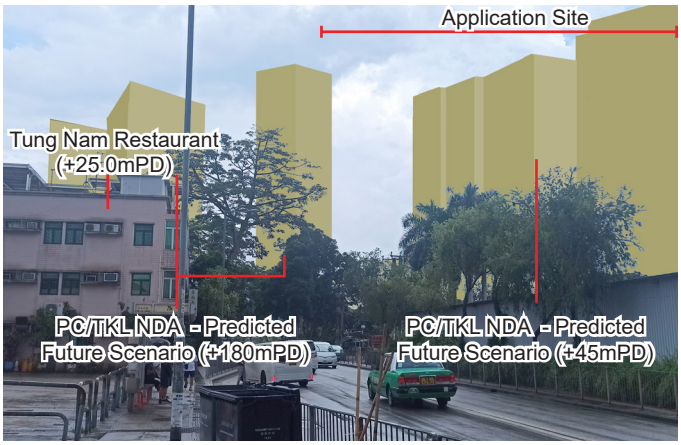
Key Plan



OZP Compliant Scheme + Indicative Scheme



OZP Compliant Scheme + NTN Development



OZP Compliant Scheme + NTN Development + Indicative Scheme

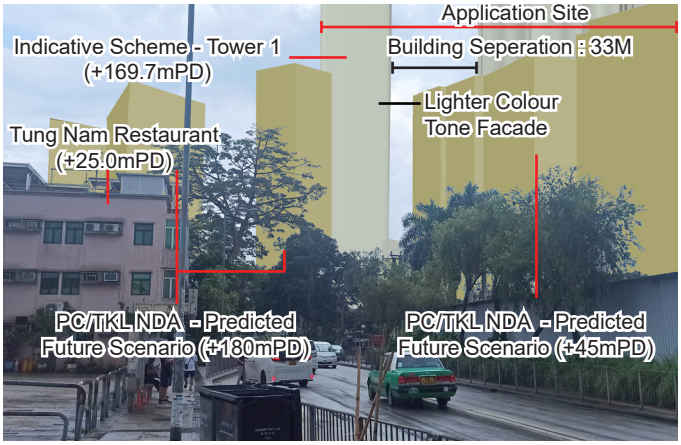


Figure No.	*Scale*	*Figure Title*	Viewing Point 3 : Bus Stop at Ta Kwu Ling Rural Centre Government Offices
Fig. 5	N/A		
ARUP	*Date*	*Source*	
	July 2024	-	

OZP Compliant Scheme



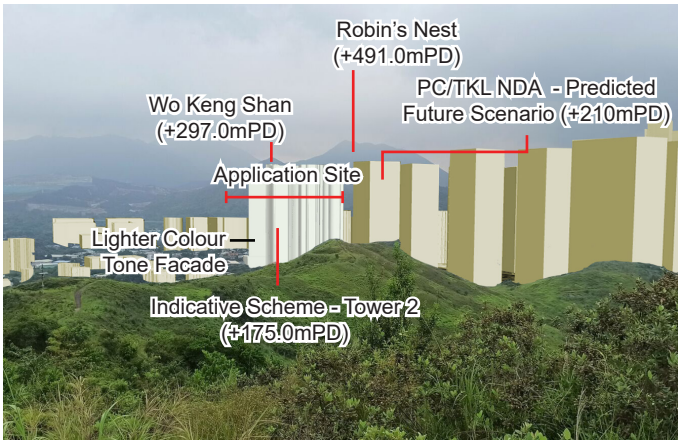
OZP Compliant Scheme + Indicative Scheme



OZP Compliant Scheme + NTN Development



OZP Compliant Scheme + NTN Development + Indicative Scheme



Key Plan

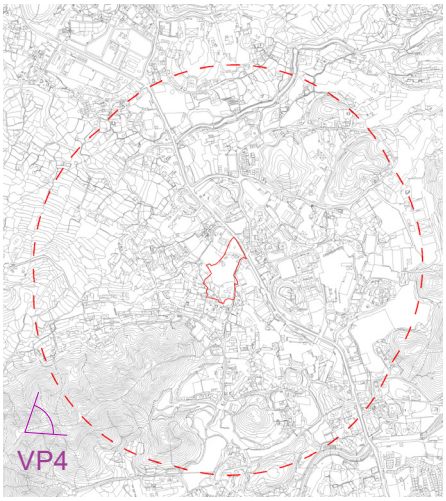
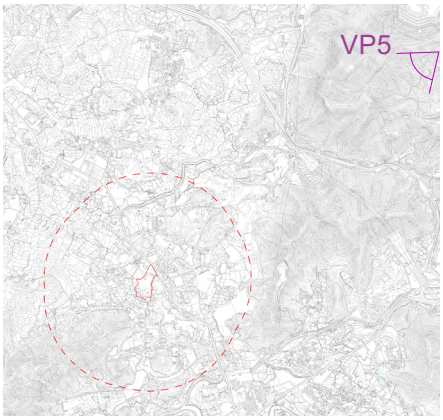


Figure No.	Scale	Figure Title
Fig. 6	N/A	Viewing Point 4 : Tsung Shan
ARUP	Date	Source
	July 2024	-

OZP Compliant Scheme



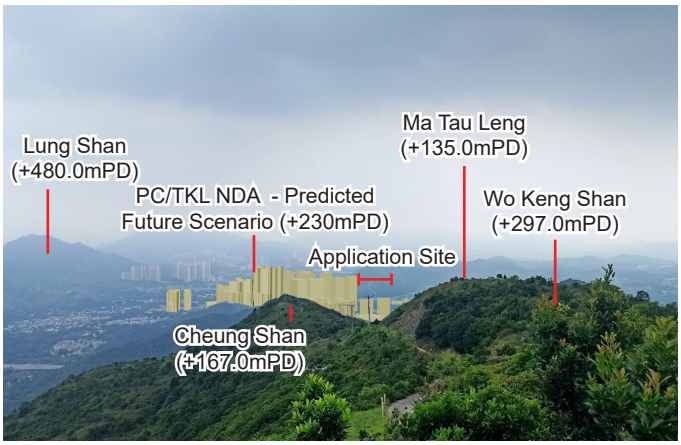
Key Plan



OZP Compliant Scheme + Indicative Scheme



OZP Compliant Scheme + NTN Development



OZP Compliant Scheme + NTN Development + Indicative Scheme

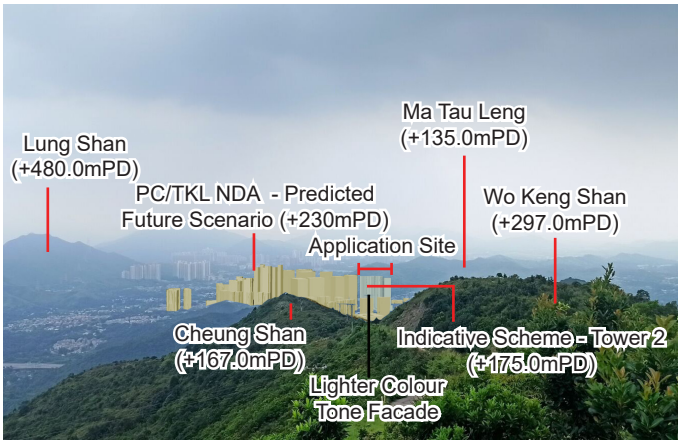


Figure No.	*Scale*	*Figure Title*
Fig. 7	N/A	Viewing Point 5 : Wo Keng Shan
ARUP	*Date* July 2024	*Source* -

Appendix D Traffic Impact Assessment

Document Status Control Record

Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Traffic Impact Assessment Report

Originating Organisation: LLA Consultancy Limited Unit 610, 6/F Island Place Tower 510 King's Road North Point, Hong Kong	Prepared by: SKL	SKL	Date: 1 August 2024
	Approved by: SLN		Date: 1 August 2024
	Revision No.: -		Date of Issue: 1 August 2024

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1 INTRODUCTION

1.1 Background

1.1.1 The subject site (hereinafter referred to "the Application Site") is located at Lot 796 & 1008RP at D.D.77 and adjoining government land in Ping Che. The location of the Application Site is shown in **Figure 1.1**.

1.1.2 The applicant proposed to develop the Application Site into a mixed use development for residential and commercial uses. LLA Consultancy Limited was commissioned to undertake a traffic impact assessment study for the proposal. This report presents the findings of the study.

1.2 Objectives

1.2.1 The objectives of the study are as follows:

- to review the existing traffic conditions in the vicinity of the Application Site;
- to estimate the traffic generation and attraction of the proposed development;
- to project the future traffic situations in the surrounding road network;
- to appraise the potential traffic impact of the proposed development and to consider road improvement proposals, if required; and
- to recommend the internal transport facilities for the proposed development.

2 THE PROPOSED DEVELOPMENT

2.1 The Application Site

2.1.1 As shown in **Figure 1.1**, the Application Site is located in Ping Che with a total site area of about 17,822 m^2.

2.2 Development Schedule

2.2.1 **Table 2.1** summarises the development parameters of the proposed development.

Table 2.1 Proposed Development Schedule

Item		Parameters
Application Site Area		17,822 m^2
Proposed Plot Ratio		7.0
Domestic Plot Ratio		Not more than 5.9
Non-domestic Plot Ratio		Not more than 1.1
Domestic Use		
Gross Floor Area		About 105,145 m^2
No. of blocks		5
Total Number of Residential Unit		2,205
Average Flat Size		47.7 m^2
Anticipated Population		6,174
Non-domestic Use		
Gross Floor Area	Retail	2,400 m^2
	Office	About 11,500 m^2
	Hotel	About 5,703 m^2
No. of blocks		1
No. of hotel rooms		70 rooms
Day Care Centre for the Elderly (DE)		60 places
Child Care Centre (CCC)		100 places

3 EXISTING TRAFFIC SITUATION

3.1 Existing Road Network

3.1.1 At present, the Application Site is served by a local access road located along the eastern side of the Application Site, which also serves other village developments in the area.

3.1.2 Ping Che Road is a single two-lane rural road. Its northern end and southern end connect to Lin Ma Hang Road and Sha Tau Kok Road – Ma Mei Ha, respectively.

3.1.3 Sha Tau Kok Road – Ma Mei Ha is connecting between Lau Shui Heung Road and Wo Keng Shan Road. The section between Lau Shui Heung Road and Ping Che Road is a dual two carriageway while the section between Ping Che Road and Wo Keng Shan Road is a single two carriageway, except the local widening near the two junctions.

3.2 Traffic Count Surveys

3.2.1 In order to assess the existing traffic conditions, traffic count surveys were carried out on 15 June 2023 (Thursday) and 4 July 2024 (Thursday) during AM and PM peak periods at 07:30 to 09:30 and 17:00 to 19:00 at key junctions in the vicinity of the Application Site. The Area of Influence (AOI) is determined by considering the ingress and egress routings of the proposed development. For majority of the development traffic, they will travel to/from other districts by using the strategic roads such as Lung Shan Tunnel, while some of them may travel to the nearest railway station, say MTR Fanling Station and then take public transport services. Therefore, the key junctions and road links along the anticipated routings between the Application Site, strategic roads and railway stations are included in the AOI.

3.2.2 The anticipated ingress/egress routings and the locations of the surveyed junctions are presented in **Figure 3.1**.

- Sha Tau Kok Road / Heung Yuen Wai Highway
- Sha Tau Kok Road / Ping Che Road
- Sha Tau Kok Road / Lau Shui Heung Road
- Ping Che Road / Ng Chow Road
- Sha Tau Kok Road / Lung Ma Road
- Sha Tau Kok Road / Ma Sik Road
- Sha Tau Kok Road / Jockey Club Road
- Lok Yip Road / Jockey Club Road / San Wan Road
- Sha Tau Kok Road / San Wan Road / Fanling Station Road
- San Wan Road / Fanling Station Road

3.2.3 The morning and the evening peak hours identified are 08:00 – 09:00 (AM Peak) and 17:30 – 18:30 (PM Peak). The surveyed 2023 traffic flows are presented in **Figure 3.2**.

3.3 Existing Junction Capacity Assessment

3.3.1 Based on the observed traffic flows, the performance of the key junction is assessed. The results are summarized and presented in **Table 3.1**. The detailed calculation sheets are attached in **Appendix A**.

Table 3.1 Existing Junction Performance

No.	Junction Location	Type/ Capacity Index(1)	AM Peak	PM Peak
J1	Sha Tau Kok Road / Heung Yuen Wai Highway	Roundabout/DFC	0.44	0.39
J2	Sha Tau Kok Road / Ping Che Road	Roundabout/DFC	0.42	0.40
J3	Sha Tau Kok Road / Lau Shui Heung Road	Roundabout/DFC	0.54	0.58
J4	Ping Che Road / Ng Chow Road	Priority/DFC	0.19	0.11
J5	Sha Tau Kok Road / Lung Ma Road	Roundabout/DFC	0.46	0.43
J6	Sha Tau Kok Road / Ma Sik Road	Signalized/RC	73%	62%
J7	Sha Tau Kok Road / Jockey Club Road	Roundabout/DFC	0.54	0.48
J8	Lok Yip Road / Jockey Club Road / San Wan Road	Signalized/RC	37%	27%
J9	Sha Tau Kok Road / San Wan Road / Fanling Station Road	Roundabout/DFC	0.56	0.60
J10	San Wan Road / Fanling Station Road	Signalized/RC	35%	34%

Note: (1) DFC = Design Flow to Capacity ratio for priority junction.

3.3.2 From **Table 3.1**, it is noted that all junctions are operating satisfactorily during the existing AM and PM peak hours.

3.4 Existing Public Transport Facilities

3.4.1 1 franchised bus route and 1 green minibus route are operating along Ping Che Road outside the Application Site. **Table 3.2** shows the existing franchised bus/minibus route operating in the vicinity of the Application Site.

Table 3.2 Existing Road-Based Public Transport Services

Route No.	Terminal Points	Frequency
Franchised Bus		
79K	Ta Kwu Ling (Tsung Yuen Ha) – Sheung Shui	15 – 30
Green Minibus		
52K	Fanling – Ping Che	4 – 10

3.5 Existing Link Capacity Assessment

3.5.1 The Volume to Capacity (V/C) Ratios of Sha Tau Kok Road, Ping Che Road, Jockey Club Road and San Wan Road were assessed and the results are presented in **Table 3.3**.

Table 3.3 Link Capacity Assessments

Direction	Capacity (pcu/hr) (1)	Traffic Flow (pcu/hr)		V/C Ratio	
		AM	PM	AM	PM
Sha Tau Kok Road (between Ping Che Road and Heung Yuen Wai Highway)	2,250(2)	1,362	1,342	0.61	0.60
Sha Tau Kok Road (between Lau Shui Heung Road and Ping Che Road)	6,300(2)	1,704	1,744	0.27	0.28
Ping Che Road (between Sha Tau Kok Road and Hung Leng North Road)	1,910(2)	1,260	1,260	0.66	0.66
Sha Tau Kok Road (between Fan Leng Lau Road and Jockey Club Road)	6,720 (3)	2,634	2,561	0.39	0.38
Jockey Club Road (between Sha Tau Kok Road and San Wan Road)	6,240 (3)	1,108	1,125	0.18	0.18
San Wan Road (between Sha Tau Kok Road and Fanling Station Road	6,240 (3)	1,444	1,390	0.23	0.22

Note: (1) Capacity refers to TPDM Vol.2 Ch. 2.4. A factor of 1.25 is adopted to convert the capacity from veh/hr to pcu/hr.
(2) The capacity of each carriageway is reduced by 10% due to the high proportion of heavy vehicles.
(3) According to the surveyed flows, a factor of 1.2 is adopted to convert the capacity from veh/hr to pcu/hr.

3.5.2 As shown in **Table 3.3**, the concerned road sections are operating with spare capacity during both AM and PM peak hours.

4 FUTURE TRAFFIC SITUATION

4.1 Design Year

4.1.1 The proposed development will be completed in 2032. Therefore, the design year for the following traffic impact assessment will be 2035, i.e. 3 years after the completion.

4.2 Traffic Generation of the Proposed Development

4.2.1 In order to examine the traffic impact of the proposed development, traffic generated/ attracted by the proposed development should be estimated based on the development parameters as listed in **Table 2.1** and the trip rates documented in TPDM Volume 1 Chapter 3 – Transport Considerations of Town Plans.

4.2.2 As there is no established trip rates published in Transport Planning and Design Manual (TPDM) or other relevant guidelines for day care centre for the elderly and child care centre, trip generation surveys at existing day care centre for the elderly and child care centre, were arranged to collect trip rates of carpark. The trip generation survey was conducted on 15 June 2023 (Thursday) during the peak hour period from 07:30 to 09:30 and 17:00 to 19:00. The survey results and the derived trip rates are presented in **Table 4.1**.

Table 4.1 Survey Results at the Existing Buildings

Building Name (Location)	Unit / Content	AM Peak			PM Peak		
		Gen.	Att.	2-way	Gen.	Att.	2-way
Traffic Generation of Existing Day Care Centre for the Elderly (pcu/hr)							
Fung Kai Care & Attention Home for the Elderly-Day Care Centre for the Elderly (Fung Kai Social Service Complex, 22 Tin Ping Road, Sheung Shui, N.T.)	80 places	3	4	7	3	3	6
Traffic Generation of Existing Child Care Centre (pcu/hr)							
Hong Kong Society for the Protection of Children Esther Lee Day Creche (Hong Ming House, Wah Ming Estate, Fanling, N.T.)	51 places	2	2	4	2	2	4
Derived Trip Rates (pcu/hr/place)							
Day Care Centre for the Elderly		0.3750	0.5000	-	0.3750	0.3750	-
Child Care Centre		0.3922	0.3922	-	0.3922	0.3922	-

Note: Gen. – Generation; Att. – Attraction.

4.2.3 Based on the above, the traffic generation of the proposed development is estimated and presented in **Table 4.2**.

Table 4.2 Traffic Generations of the Proposed Development

Proposed Use	Unit / Content	AM Peak Hour			PM Peak Hour		
		Gen.	Att.	Total	Gen.	Att.	Total
Adopted Trip Rates(1)							
Residential – 60m^2	pcu/hr/flat	0.1021	0.0709	-	0.0415	0.0464	-
Retail	pcu/hr/100m^2 GFA	0.3307	0.3342	-	0.3839	0.4504	-
Office	pcu/hr/100m^2 GFA	0.2361	0.3257	-	0.1928	0.1510	-
Hotel	pcu/hr/guestroom	0.1814	0.2082	-	0.1697	0.2183	-
Day Care Centre for the Elderly	pcu/hr/place	0.3750	0.5000	-	0.3750	0.3750	-
Child Care Centre	pcu/hr/place	0.3922	0.3922	-	0.3922	0.3922	-
Traffic Generation/Attraction							
Residential	2,205 flats	226	157	383	92	103	195
Retail	2,400 m^2 GFA	8	9	17	10	11	21
Office	11,503 m^2 GFA	28	38	66	23	18	41
Hotel	70 guestrooms	13	15	28	12	16	28
Day Care Centre for the Elderly	60 places	10	11	21	10	11	21
Child Care Centre	100 places	3	3	6	3	3	6
	Total	**282**	**226**	**508**	**144**	**155**	**299**

Notes: (1) Upper limit trip rates from TPDM are adopted.

4.2.4 As shown in **Table 4.2**, the proposed development would generate a two-way traffic flow of 508 pcu/hr in the AM peak and 299 pcu/hr in the PM peak. The corresponding traffic distribution patterns are estimated and presented in **Figure 4.1**.

4.3 Traffic Generation of the Planned/Committed Developments

4.3.1 To estimate the future traffic flows, updated information has been obtained from available information regarding the planned and approved developments in the vicinity of the study area. Details of these developments are given in **Table 4.3**.

Table 4.3 Details of Planned and Approved Developments

Site	Location	Use	Content
S1	Lots 825, 834 and 836 in D.D. 77 and adjoining government land, Ping Che (Planning Application No. A/NE-TKL/608)	Industrial	1,871 m^2 GFA
S2	Queen's Hill Development – Site 1	Public Housing	8,840 flats
		Subsidized Sale Flat	3,260 flats
		Primary School	2 (30 classrooms)
		Kindergarten	3 (2 with 30 classrooms and 1 with 7 classrooms)
		Welfare Facilities	8,140 m^2 GFA
		Retail	12,500 m^2 GFA
	Queen's Hill Development – Site 2	Private Housing	2,670 flats
	Queen's Hill Development – Site 3	International School	1
	Queen's Hill Development – Others	Primary School	1
		Community Facilities	5,000 m^2 GFA
S3	Government Land in D.D. 82, Ping Che, Ta Kwu Ling, New Territories (Planning Application No. A/NE-TKL/692)	Transitional Housing	596 flats

4.3.2 Reference was also made to the latest set of traffic generation and attraction rates published by TD for the estimation of the traffic generated by these developments. The traffic generation/attractions by these nearby developments are taken into account in the following assessment.

4.4 Future Traffic Flows

4.4.1 Reference was made to the 2017 to 2021 Annual Traffic Census Reports published by the Transport Department. The traffic data recorded at counting stations in the vicinity of the Application Site are shown in **Table 4.4**.

Table 4.4 Annual Traffic Census Data

Stn. No.	Road Section			AADT(1)					Avg. Growth%
	Road	From	To	2017	2018	2019	2020	2021	
5660	Sha Tau Kok Rd	On Kui St	Ping Che Rd	33,050	33,870 (2.5%)	33,630 (-0.7%)	23,740 (-29.4%)	22,980 (-3.2%)	-8.7%
5860	Sha Tau Kok Rd	Ping Che Rd	Shun Lung St	6,460	6,620 (2.5%)	6,570 (-0.8%)	6,300 (-4.1%)	5,970 (-5.2%)	-2.0%
6653	Ping Che Rd	Sha Tau Kok Rd	Lin Ma Hang Rd	11,360	11,430 (0.6%)	11,820 (3.4%)	11,030 (-6.7%)	11,870 (7.6%)	1.1%
Total				**50,870**	**51,920 (2.1%)**	**52,020 (0.2%)**	**41,070 (-21%)**	**40,820 (-0.6%)**	**-5.4%**

Note: (1) Figures in bracket indicated the % increase/decrease between two years.

4.4.2 As shown in **Table 4.4**, the average annual growth rate with reference to the AADT is -5.4% between 2017 to 2021. For conservative assessment purpose, a nominal growth rate of +1.0% will be adopted in the following assessments.

4.5 2035 Reference and Design Traffic Flows

4.5.1 The 2035 Reference Flows, i.e. the traffic flows in the local road without the proposed development, were estimated based on the following equation.

2035 Reference Flows = 2023 Existing Flows x $(1+1.0\%)^{12}$ + Traffic Generated by Approved/Planned Development

4.5.2 The 2035 Design Flows, i.e. the traffic flows in the local road network with the proposed development, were estimated based on the following equation:

2035 Design Flows = 2035 Reference Flows + Additional Traffic Induced by the Proposed Development

4.5.3 The 2035 Reference and Design Flows are shown in **Figures 4.2 and 4.3**, respectively.

4.6 Junction Capacity Assessment

4.6.1 Junction capacity analysis is carried out for the assessment year 2035. For J4 – Ping Che Road / Ng Chow Road, the section of the local road to the south of Ping Che Road, which is along the Application Site boundary, will be upgraded to a 7.3m carriageway with local widening to 10.3m near it's junction with Ping Che Road. A short section of Ping Che Road will be widened to provide a right-turn pocket at this junction as well. The schematic junction layout is shown in **Figure 4.4**. The assessment results are shown in **Table 4.5** and the detailed calculation sheets are attached in **Appendix B**.

Table 4.5 Future Junction Performance

Ref.	Junction Location	Type/ Index[1]	2035 Reference		2035 Design	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Sha Tau Kok Road / Heung Yuen Wai Highway	Roundabout/DFC	0.61	0.53	0.72	0.60
J2	Sha Tau Kok Road / Ping Che Road	Roundabout/DFC	0.51	0.48	0.64	0.54
J3	Sha Tau Kok Road / Lau Shui Heung Road	Roundabout/DFC	0.64	0.68	0.65	0.68
J4	Ping Che Road / Ng Chow Road [2]	Priority/DFC	0.26	0.17	0.76	0.42
J5	Sha Tau Kok Road / Lung Ma Road	Roundabout/DFC	0.76	0.76	0.77	0.76
J6	Sha Tau Kok Road / Ma Sik Road	Signalized/RC	52%	40%	51%	39%
J7	Sha Tau Kok Road / Jockey Club Road	Roundabout/DFC	0.72	0.65	0.73	0.66
J8	Lok Yip Road / Jockey Club Road / San Wan Road	Signalized/RC	11%	16%	11%	16%
J9	Sha Tau Kok Road / San Wan Road / Fanling Station Road	Roundabout/DFC	0.71	0.74	0.73	0.75
J10	San Wan Road / Fanling Station Road	Signalized/RC	9%	8%	7%	7%

Notes: (1) DFC = Design Flow to Capacity ratio for priority junction and roundabout.
(2) The proposed junction improvement scheme (see **Figure 4.4**) has been incorporated.

4.6.2 As shown in **Table 4.5**, all concerned junctions will operate with capacities in future scenarios, except the J8 Lok Yip Road / Jockey Club Road / San Wan Road and J10 San Wan Road / Fanling Station Road. However, the above assessment has not considered Fanling Bypass for conservative assessment purposes, but upon the completion of Fanling Bypass, the traffic condition would be better since some traffic would be diverted to Fanling Bypass without entering Fanling's local road network.

4.6.3 Nevertheless, the junction capacity of these junctions remains almost the same in both reference and design scenarios, which implies that the additional traffic generated by the proposed development will not induce significant traffic impact to these junctions.

4.7 Link Capacity Assessment

4.7.1 The V/C Ratios of the concerned road links were assessed and the results are presented in **Table 4.6**.

Table 4.6 Year 2035 Link Capacity Assessments

Direction	Capacity (pcu/hr) (1)	Traffic Flow (pcu/hr)		V/C Ratio	
		AM	PM	AM	PM
2035 Reference Scenario					
Sha Tau Kok Road (between Ping Che Road and Heung Yuen Wai Highway)	2,250(2)	1,620	1,577	0.72	0.70
Sha Tau Kok Road (between Lau Shui Heung Road and Ping Che Road)	6,300(2)	2,001	2,026	0.32	0.32
Ping Che Road (between Sha Tau Kok Road and Hung Leng North Road)	1,910(2)	1,455	1,415	0.76	0.74
Sha Tau Kok Road (between Fan Leng Lau Road and Jockey Club Road)	6,720 (3)	3,306	3,196	0.49	0.48
Jockey Club Road (between Sha Tau Kok Road and San Wan Road)	6,240 (3)	1,267	1,270	0.20	0.20
San Wan Road (between Sha Tau Kok Road and Fanling Station Road	6,240 (3)	1,684	1,592	0.27	0.26
2035 Design Scenario					
Sha Tau Kok Road (between Ping Che Road and Heung Yuen Wai Highway)	2,250(2)	1,898	1,741	0.84	0.77
Sha Tau Kok Road (between Lau Shui Heung Road and Ping Che Road)	6,300(2)	2,052	2,056	0.33	0.33
Ping Che Road (between Sha Tau Kok Road and Hung Leng North Road)	1,910(2)	1,784	1,609	0.93	0.84
Sha Tau Kok Road (between Fan Leng Lau Road and Jockey Club Road)	6,720 (3)	3,357	3,226	0.50	0.48
Jockey Club Road (between Sha Tau Kok Road and San Wan Road)	6,240 (3)	1,267	1,270	0.20	0.20
San Wan Road (between Sha Tau Kok Road and Fanling Station Road	6,240 (3)	1,712	1,606	0.27	0.26

Notes: (1) Capacity refers to TPDM Vol.2 Ch. 2.4. A factor of 1.25 is adopted to convert the capacity from veh/hr to pcu/hr.
(2) The capacity of each carriageway is reduced by 10% due to the high proportion of heavy vehicles.
(3) According to the surveyed flows, a factor of 1.2 is adopted to convert the capacity from veh/hr to pcu/hr.

4.7.2 As shown in **Table 4.6**, the concerned road links will operate with capacity with V/Cs under 0.93 during both AM and PM peak hours in all scenarios.

4.8 Pedestrian Traffic Generation

4.8.1 In order to identify the sufficiency of public transport services, additional passenger generated by the proposed development should be estimated. As there are no pedestrian trip rates established in TPDM, pedestrian generation and attraction for residential component would be estimated based on design population and the pedestrian generation and attraction for the rest components would be estimated based on in-house pedestrian trip generation surveys conducted at buildings with similar uses. Since the proposed child care centre is targeted for the local community, it is anticipated that the children will be brought to the centre by the parents on foot, the pedestrian trips induced is therefore excluded from the public transport demand estimation.

4.8.2 The overall population of the development is about 6,174. Reference has been made to the published "Travel Characteristics Survey (TCS) 2011 Final Report". According to the Report, the daily mechanized trip rate per population is 1.83 trips (two-way) and the morning and evening peak hour accounted for about 12% of the daily trips for the two-way trips. It is assumed that 90% of the trips are in outbound direction in the AM peak hour. Based on the above, the estimated outbound and inbound trips in AM peak hour are about 1,221 persons/hr (i.e. 6,174 x 1.83 x 0.12 x 0.9) and 136 persons/hr (i.e. 6,174 x 1.83 x 0.12 x 0.1), respectively. The outbound and inbound trips are swapped for PM peak hour, which about 136 persons/hr (i.e. 6,174 x 1.83 x 0.12 x 0.1) would be generated and 1,221 persons/hr (i.e. 6,174 x 1.83 x 0.12 x 0.9) would be attracted by the proposed development.

4.8.3 The in-house pedestrian trip rates were retrieved for estimating the pedestrian generation and attraction for each type of development. The additional pedestrian generation and attraction of the proposed development are estimated and tabulated in **Table 4.7**.

Table 0.7 Estimated Pedestrian Generation and Attraction of the Proposed Development

Use	Unit/ Content	AM Peak Hour			PM Peak Hour		
		Gen.	Att.	Total	Gen.	Att.	Total
Derived Pedestrian Trip rates (1)							
Retail	persons/hr/100 m^2 GFA	3.82	3.98	–	5.76	6.01	–
Office	persons/hr/100 m^2 GFA	0.13	2.73	–	2.16	0.16	–
Hotel	persons/hr/guestroom	0.80	0.28	–	0.52	0.51	–
Day Care Centre for the Elderly	persons/hr/10-place	0.29	2.86	–	2.14	0.40	–
Estimated Pedestrian Generation and Attraction of the Proposed Development							
Residential (2)	2,205 flats	1,221	136	1,357	136	1,221	1,357
Retail	2,400 m^2 GFA	92	96	188	139	145	284
Office	11,503 m^2 GFA	15	315	330	249	19	268
Hotel	70 guestrooms	56	20	76	37	36	73
Day Care Centre	60 places	2	18	20	13	3	16

Use	Unit/ Content	AM Peak Hour			PM Peak Hour		
		Gen.	Att.	Total	Gen.	Att.	Total
for the Elderly							
Total		**1,386**	**585**	**1,971**	**574**	**1,424**	**1,998**

Notes: Gen. – Generation; Att. – Attraction.
(1) The pedestrian trip rates derived in **Table 4.7** are adopted.
(2) Please refer to **Section 4.8.2** for the pedestrian generation and attraction for the residential component.

4.8.4 The proposed development is estimated to generate 2-way pedestrian flows of 1,971 and 1,998 persons/hour during AM and PM hours respectively.

4.8.5 In order to establish the pedestrian flow pattern to the different public transport facilities, reference was made to the 2021 Population Census. The Application Site is located within Housing Market Area 164 (HMA164), Ta Ku Ling area in the census, the modal split is therefore formulated by referring to the main mode of transport to place of work of HMA164. The modal split is adjusted to suit the local condition. The modal split of the public transport for the proposed development was estimated as shown in **Table 4.8**.

Table 0.8 Estimated Modal Split for the Proposed Development

Mode		Percentage distribution of working population with fixed place of work in Hong Kong by main mode of transport to place of work (1)	Adjusted Modal Split for the Proposed Development
Road-based Public Transport	Bus	23.1%	60.5%
	Public Light Bus	19.7%	
Railway		28.0%	39.5%
On foot only		5.6%	N.A. (2)
Others		23.7%	N.A. (2)
Total		**100.10%**	**100%**

Notes: (1) Source: HMA164 (Ta Ku Ling) in 2021 Population Census
(2) For conservative approach, only public transport modes are considered for assessment.

4.8.6 Based on the above, the pedestrian induced by the proposed development to / from public transport facilities is estimated in **Table 4.9**.

Table 0.9 Estimated Pedestrian Generation to the Public Transport Facilities in the AM and PM Peak Hour

Public Transport Facilities	Modal Split (for the Proposed Development)	Estimated Peak Hour Pedestrian Flows (persons / hr)					
		AM Peak Hour			PM Peak Hour		
		Gen.	Att.	Total	Gen.	Att.	Total
Road-based Public Transport	60.5%	838	353	1,191	347	861	1,208
Railway	39.5%	548	232	780	227	563	790
Total	**100.00%**	**1,386**	**585**	**1,971**	**574**	**1,424**	**1,998**

Note: Gen. – Generation; Att. – Attraction.

4.9 Railway Patronage Capacity

4.9.1 In order to ensure sufficient railway capacity will be able to accommodate for the proposed development, an assessment was conducted to review the rail patronage capacity. Since railway services in AM are generally busier than that in PM, AM peak hour is considered more than critical in conducting railway capacity assessment, the AM scenario is used for analysis purpose.

4.9.2 As shown in **Table 4.9**, 780 persons/hour will be induced by the proposed development and all of them are anticipated to use railway services during AM peak hour, which 548 persons/hour will be generated from the Proposed Development and 232 persons/hour will be attracted to the proposed development.

4.9.3 According to the Legislative Council Paper FCRI(2022-23)18 published in April 2023, the existing morning peak hour loading factor of East Rail Line at critical section (Tai Wai to Kowloon Tong) in 2022 is 60%, which the passenger demand and capacity (based on 6 passengers per square meter) are 37,500 persons/hour and 62,500 persons /hour, respectively.

4.9.4 In 2035, the passenger demand is projected to be increased to approximately 42,700 persons /hour. The 2035 railway capacity performance is then evaluated by considering the 2035 passenger demand and the additional passengers to be induced by the proposed development. The results are tabulated in **Table 4.10**.

Table 0.10 2035 Railway Capacity Performance

Items	Capacity (persons /hour /direction)	Reference Scenario (1)	Design Scenarios (1)(2)(3)
2035 Projected Morning Peak Hour Passenger Demand (persons/hour)	-	42,700	43,248 [+548]
Loading factor - Existing Peak Hour Capacity	62,500	68%	69%

Notes: (1) 2035 Reference Scenario = 2022 morning peak hour passenger demand x $(1+1.0\%)^{13}$
(2) 2035 Design Scenario = 2035 Reference Scenario + Additional passenger demand induced by the Proposed Development.
(3) Figures in square brackets indicate the increase in passengers due to the proposed development.

4.9.5 From **Table 4.10**, after accommodating the additional passengers induced by the proposed development, the 2035 morning peak hour loading factor of East Rail Line at critical sections, based on existing peak hour capacity, will be 69% (6 passengers per square meter).

4.9.6 It should be noted that the increase in passenger during the morning peak hour at East Rail Line due to the proposed development, are only 548 persons. The increase in passengers only constitute 1.3% of the passenger demand of East Rail Line, which are considered insignificant.

4.10 Road-based Public Transport Provision

4.10.1 It is proposed to provide 1 bus route and 1 minibus route within the proposed public transport terminus to serve part of the road-based public transport demand induced by the proposed development. The bus route is anticipated to travel to/from other districts, while the minibus route is anticipated to travel to/from MTR Fanling Station.

4.10.2 For conservative assessment purpose, it is assumed all passengers will use the public transport facilities within the public transport terminus, without using the public transport facilities along Ping Che Road. As shown in **Table 4.9**, 838 persons/hr and 548 persons/hr would be generated by the proposed development during AM peak hour to use road-based public transport and railway services, respectively. It is assumed that passengers targeted for road-based public transport would use the proposed bus route and for those targeted for railway services would use the proposed minibus route.

4.10.3 The capacity of a typical bus is about 120 passengers, to cater for the road-based public transport demand, 7 bus trips (838 / 120 = 6.9, say 7 nos.) are required, which means the proposed bus route would have a headway of around 8.5 minutes. While the capacity of a typical minibus is about 19 passengers, 29 minibus trips are required which means the proposed minibus route would have a headway of around 2 minutes.

4.10.4 Passengers can also use the existing road-based public transport facilities along Ping Che Road to the station. As such, the number of road-based public transport trips within the public transport terminus could be reduced.

5 PROPOSED TRANSPORT FACILITIES PROVISIONS

5.1 Vehicular Access Arrangement and Public Transport Terminus

5.1.1 At present, the Application Site is served by a local access road located along the eastern side of the Application Site, which also serves other village developments in the area. Under the proposed development scheme, the local access road will be upgraded to a standard 7.3m single carriageway with footpaths on both sides.

5.1.2 Two vehicular accesses are provided at the local access road to serve the development. One access will be located to the southern side of the Application Site to serve the residential blocks while another access will be located at the mid-way along the access road to serve mainly the commercial building and as the secondary access for the residential blocks.

5.1.3 Taking into consideration the future planning at Ping Che area and the relatively large area of the Application Site, a public transport terminus (PTT) is proposed at the northern part of the Application Site along Ping Che Road. The PTT will comprise of a double width bus bay and a GMB bay. The ingress point is located at the upgraded access road and the egress point is located at Ping Che Road to provide better circulations within the PTT.

5.2 Internal Transport Facilities

5.2.1 The internal transport facilities for the proposed development uses will be provided in accordance with the Hong Kong Planning Standards and Guidelines (HKPSG). The required provisions for the proposed development are shown in **Table 5.1**.

Table 5.1 Parking Requirement for Proposed Development

Development Type		HKPSG Requirements					HKPSG Required Nos.	Proposed No.
Car parking	Residential	Parking Requirements = GPS x R1 x R2 x R3 where GPS = 1 space per 4 – 7 units						
		Flat Size (FS)	No. of Unit	R1	R2	R3		
		40 m^2 < FS <= 70 m^2	2,205	1.2	1.00	0.9	341 – 596	596
		<u>For Visitors:</u> 5 visitor spaces per block					25	25
	Retail (2,400 m^2)	1 car parking space per 150 – 300 m^2 GFA					8 – 16	16
	Office (11,503 m^2)	1 car parking space per 150 – 200 m^2 GFA					58 – 77	77
	Hotel (70 rooms)	1 car parking space per 100 rooms					1	1
	DE	No specific requirements under HKPSG					–	5
	CCC	No specific requirements under HKPSG					–	5
TOTAL CAR PARKING							**433 – 715**	**725**
Loading /unloading	Residential	Minimum of 1 loading / unloading bay for goods vehicles within the site for every 800 flats or part thereof, subject to a minimum of 1 bay for each housing block					5	5

Development Type		HKPSG Requirements	HKPSG Required Nos.	Proposed No.
	Retail	1 loading/unloading bay for goods vehicles for every 800 – 1,200m^2 or part thereof, GFA	2 – 3	3
	Office	1 loading/unloading bay for goods vehicles for every 2,000 – 3,000m^2 or part thereof, GFA	4 – 6	6
	Hotel	0.5 – 1 loading/unloading bay per 100 rooms	1	1
	DE	No specific requirements under HKPSG	–	2
	CCC	No specific requirements under HKPSG	–	1
TOTAL LOADING/UNLOADING			**12 – 15**	**18**
Motorcycle Parking	Residential	1 space per 100 – 150 flats	15 – 23	23
	Retail, Office and Hotel	10% of Total Provision of Private Car Spaces (94 spaces)	10	10
TOTAL MOTORCYCLE PARKING			**25 – 33**	**33**
Lay-by for Taxi and Private Car	Hotel	2 lay-bys for less than 300 rooms	2	2
TOTAL LAY-BY FOR TAXI AND PRIVATE CAR			**2**	**2**
Lay-by for Single-deck Tour Bus	Hotel	1 lay-by for less than 300 rooms	1	1
TOTAL LAY-BY FOR SINGLE-DECK TOUR BUS			1	1

5.2.2 As shown in **Table 5.1**, 725 private car parking spaces (including 6 no. of parking space for disabled users), 18 goods vehicle loading / unloading bays, 33 motorcycle parking spaces, 2 lay-bys for taxi and private car and 1 lay-by for single-deck tour bus will be provided to fulfil the HKPSG requirements. Preliminary layouts of car parking and loading/unloading facilities of the proposed development are enclosed in **Appendix C**.

5.3 Swept path Analysis

5.3.1 To ensure smooth manoeuvring of the parking area, swept path analysis was conducted to demonstrate that adequate space is provided for the vehicles for manoeuvring and presented in **Appendix C**.

6 SUMMARY AND CONCLUSION

6.1 Summary

6.1.1 The Application Site is located at Lot 796 & 1008RP at D.D.77 and adjoining government land in Ping Che and the Applicant proposed to develop the Application Site into a mixed use development for residential and commercial uses.

6.1.2 A traffic count survey was carried out on 15 June 2023 (Thursday) and 4 July 2024 (Thursday) during the peak hour period from 07:30 to 9:30 and 17:00 to 19:00 at the identified key junctions, and the AM and PM peak hours were found to be 08:00 – 09:00 and 17:30 – 18:30, respectively. The capacity of the key junctions and road links in the vicinity of the Application Site was analysed and they are operating satisfactorily.

6.1.3 The proposed development would generate two-way traffic flows of 508 pcu/hr in the AM peak hour and 299 pcu/hr in the PM peak hour. These two-way trips will be adopted for the subsequent assessments. By assigning the additional development traffic to the 2035 Reference Flows, the 2035 Design Flows were obtained.

6.1.4 Junction and link capacity assessments were carried out at the key junctions in the vicinity for the year 2035. The results have indicated that most of the junctions and all road links will operate satisfactorily for both reference and design scenarios. Upon the completion of Fanling Bypass, the traffic condition would be better since some traffic would be diverted to Fanling Bypass without entering Fanling's local road network. Therefore, it is anticipated that the proposed development will not induce significant traffic impact to the surrounding road network.

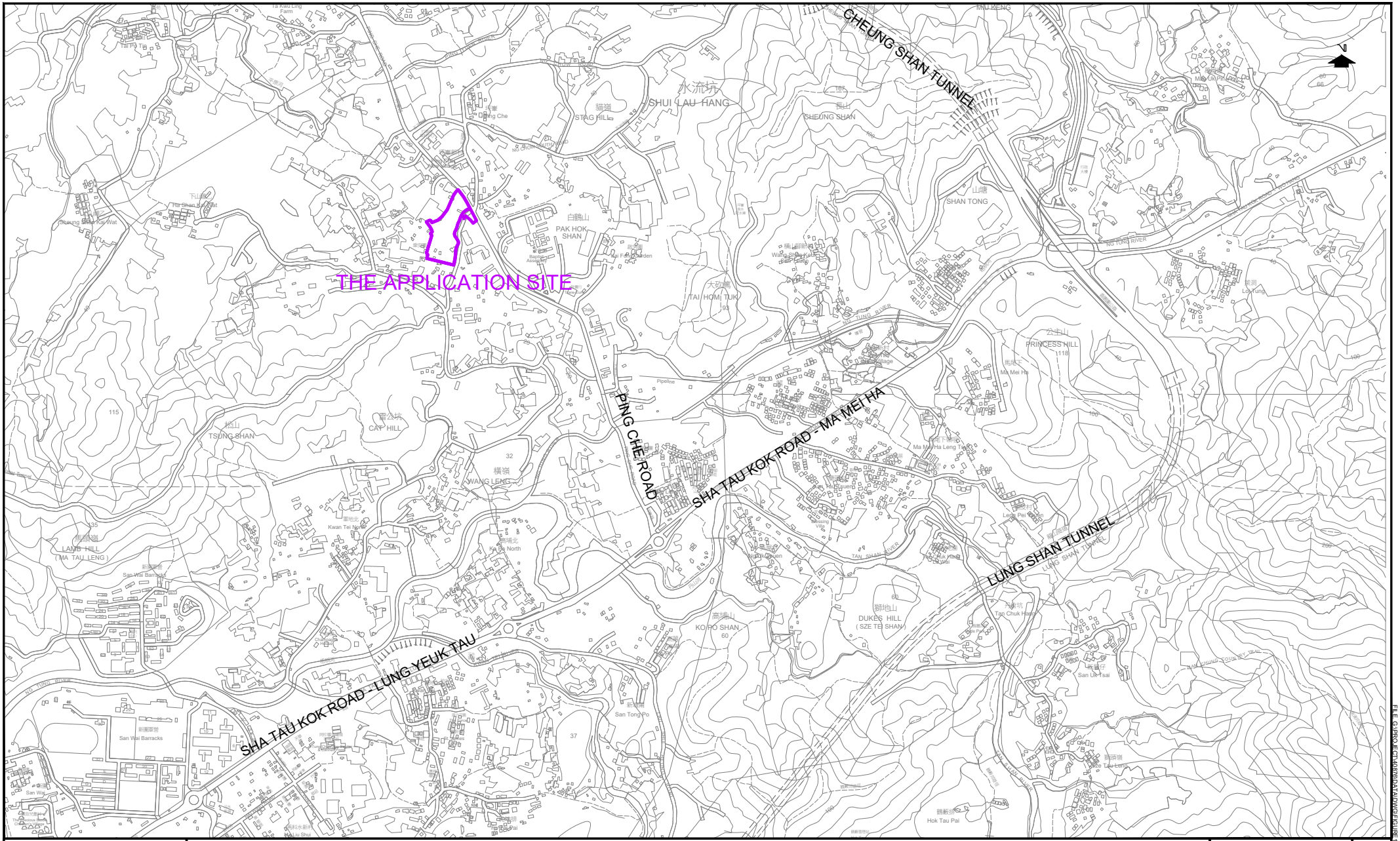
6.1.5 At present, the Application Site is served by a local access road located along the eastern side of the Application Site, which also serves other village developments in the area. Under the proposed development scheme, the local access road will be upgraded to a standard 7.3m single carriageway with footpaths on both sides. Two vehicular accesses are provided at the local access road to serve the development. One access will be located to the southern side of the Application Site to serve the residential blocks while another access will be located at the mid-way along the access road to serve mainly the commercial building and as the secondary access for the residential blocks.

6.1.6 Taking into consideration the future planning at Ping Che area and the relatively large area of the Application Site, a public transport terminus (PTT) is proposed at the northern part of the Application Site along Ping Che Road. The PTT will comprise of a double width bus bay and a GMB bay. The ingress point is located at the upgraded access road and the egress point is located at Ping Che Road to provide better circulations within the PTT.

6.1.7 The proposed development will provide 725 nos. of private car parking spaces (including 6 nos. of parking space for disabled users), 18 goods vehicle loading / unloading bays, 33 motorcycle parking spaces, 2 lay-bys for taxi and private car and 1 lay-by for single-deck tour bus to fulfil the HKPSG requirements.

6.2 Conclusion

6.2.1 Based on the assessment result, it can be concluded that the proposed development will not induce significant traffic impact on the surrounding road network. The development proposal is considered acceptable from traffic engineering point of view.



PROJECT NO. 40876	PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT (RESIDENTIAL AND COMMERCIAL) AT LOT 796 AND 1008 RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES	DRAWING NO. FIGURE 1.1	REV. ·
DESIGNED SLN / DATE SEP 2023	DRAWING TITLE		
DRAWN CLL / SCALE 1:15000 @ A4	**LOCATION PLAN**	LLA 顧問有限公司 Consultancy Limited	
CHECKED SLN			

FILE: G:\PROJECT\40876\DATA\DWG\FIGURE1.1.DWG PLOT SCALE : 1 = 1

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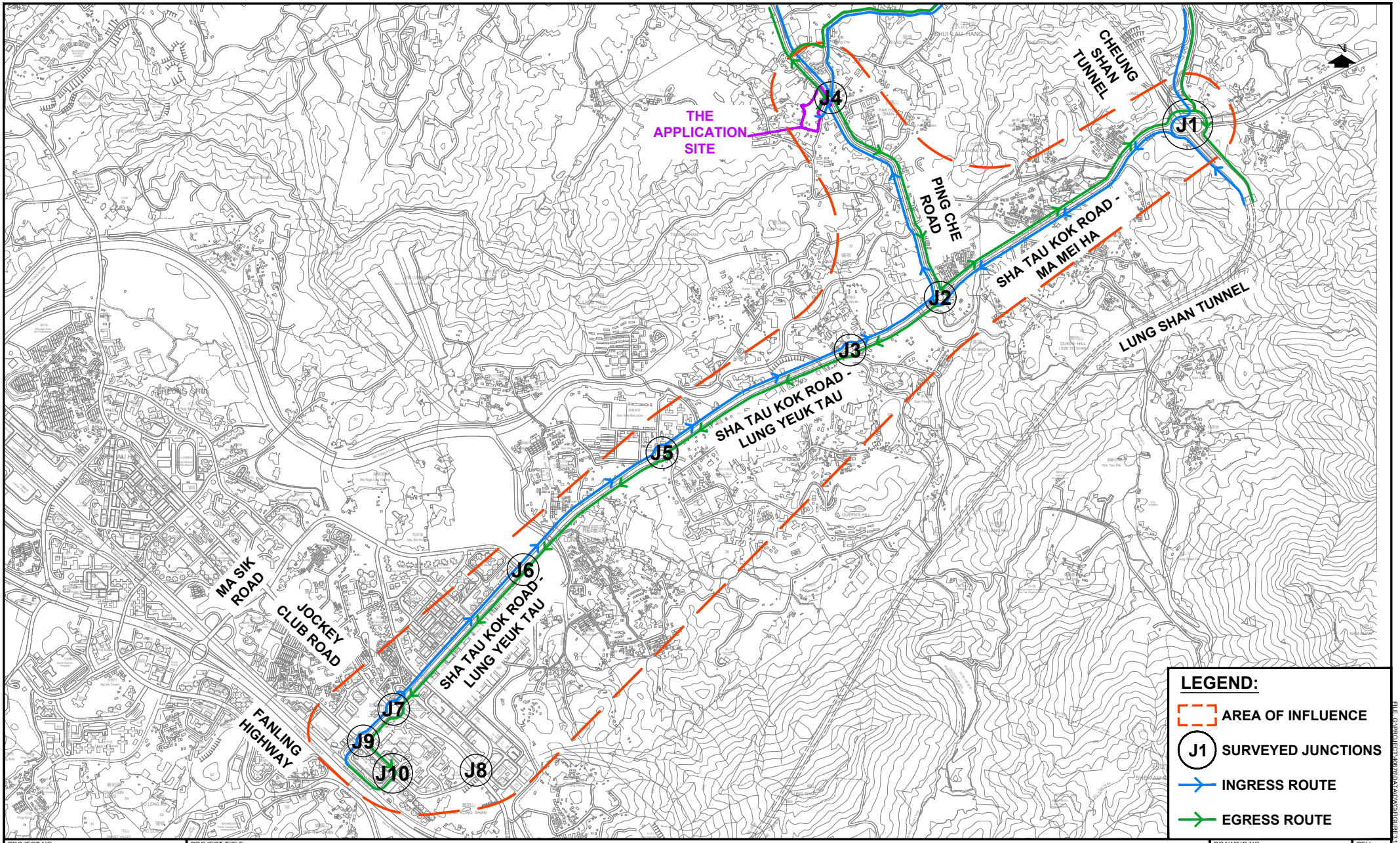

PROJECT NO. 40876	PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT (RESIDENTIAL AND COMMERCIAL) AT LOT 796 AND 1008 RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES	DRAWING NO. FIGURE 3.1	REV. B
DESIGNED SLN / DATE AUG 2024	DRAWING TITLE LOCATION OF SURVEYED JUNCTIONS AND AREA OF INFLUENCE	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE 1:25000 @ A4			
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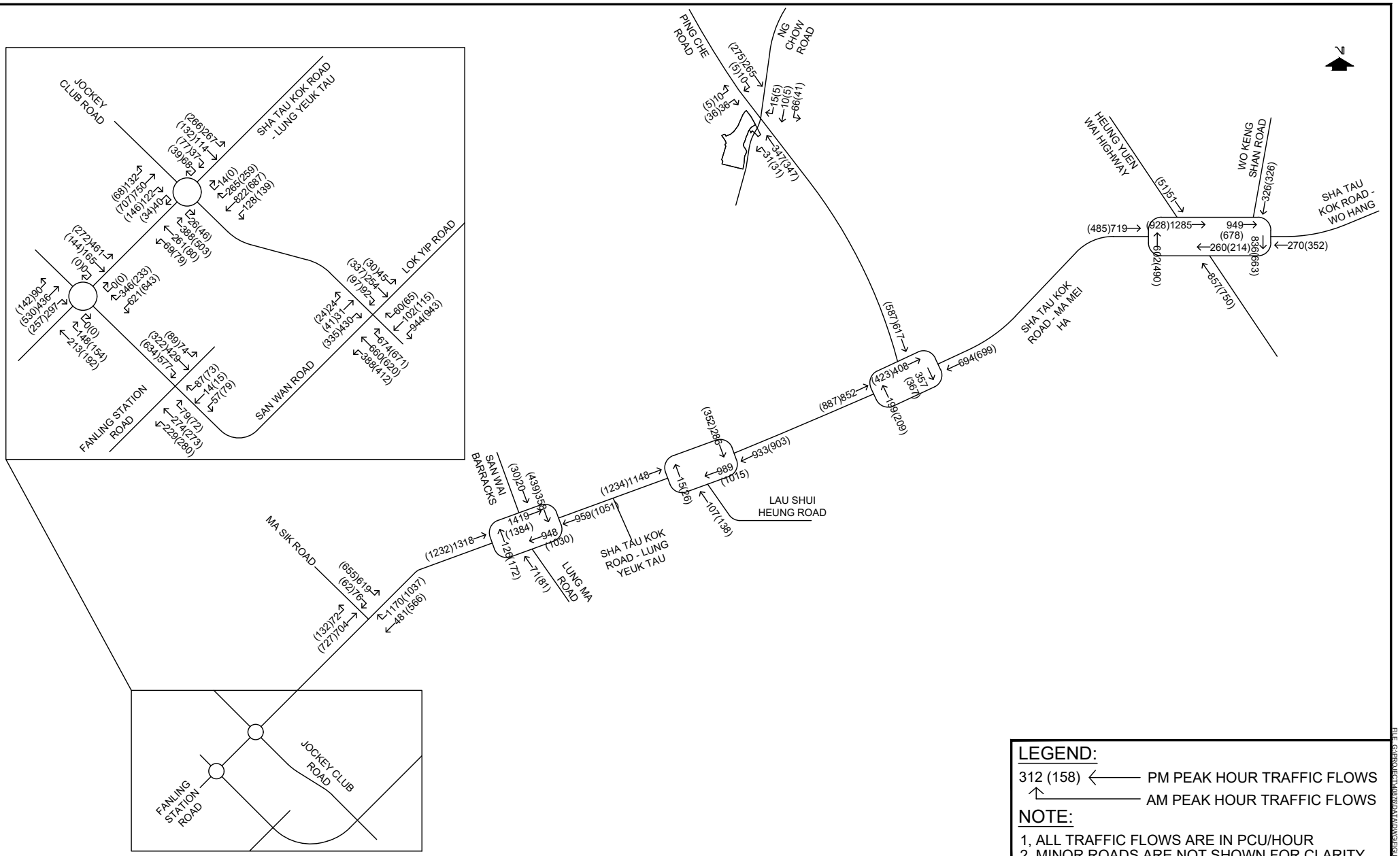
FILE: G:\PROJECT\40876\DATA\DWG\FIGURE3.1B.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40876	PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT (RESIDENTIAL AND COMMERCIAL) AT LOT 796 AND 1008 RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES	DRAWING NO. FIGURE 3.2	REV. B
DESIGNED SLN / DATE JUL 2024	DRAWING TITLE 2023 EXISTING TRAFFIC FLOWS	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE N.T.S.			
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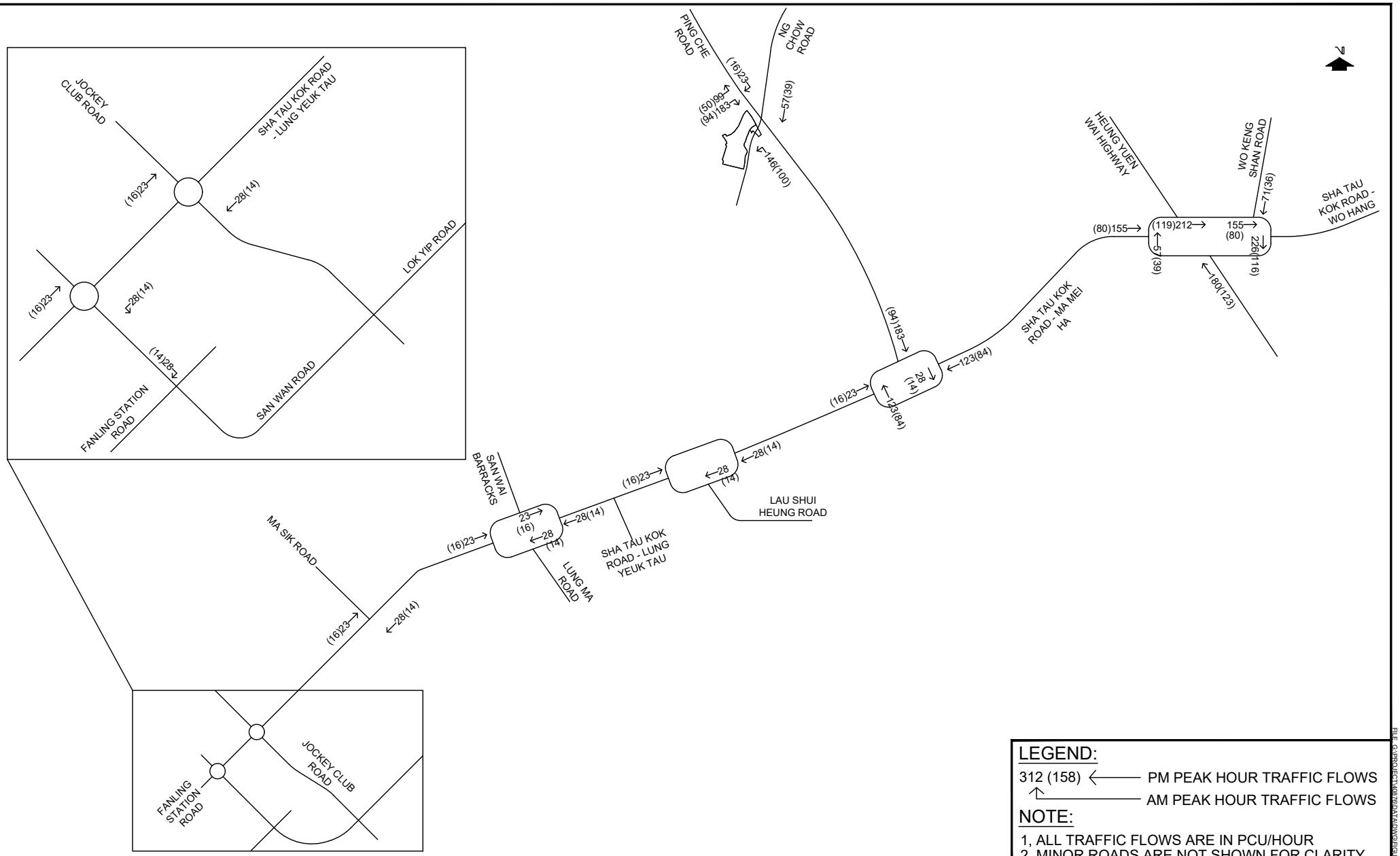

LEGEND:

312 (158) ← PM PEAK HOUR TRAFFIC FLOWS

↑ AM PEAK HOUR TRAFFIC FLOWS

NOTE:

1, ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY

PROJECT NO. 40876	PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT (RESIDENTIAL AND COMMERCIAL) AT LOT 796 AND 1008 RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES	DRAWING NO. FIGURE 4.1	REV. B
DESIGNED SLN / DATE AUG 2024	DRAWING TITLE DEVELOPMENT TRAFFIC FLOWS	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE N.T.S.			
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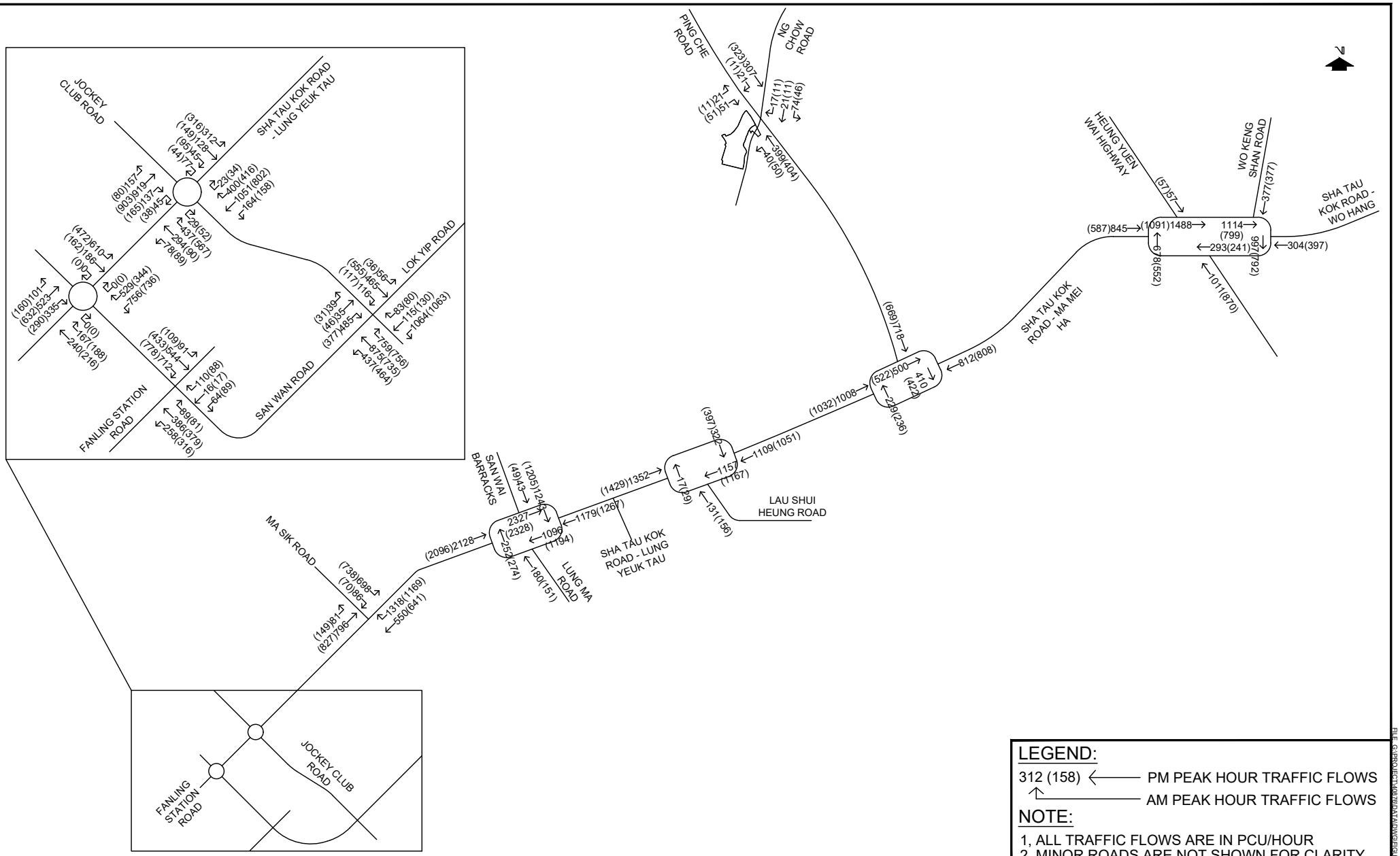
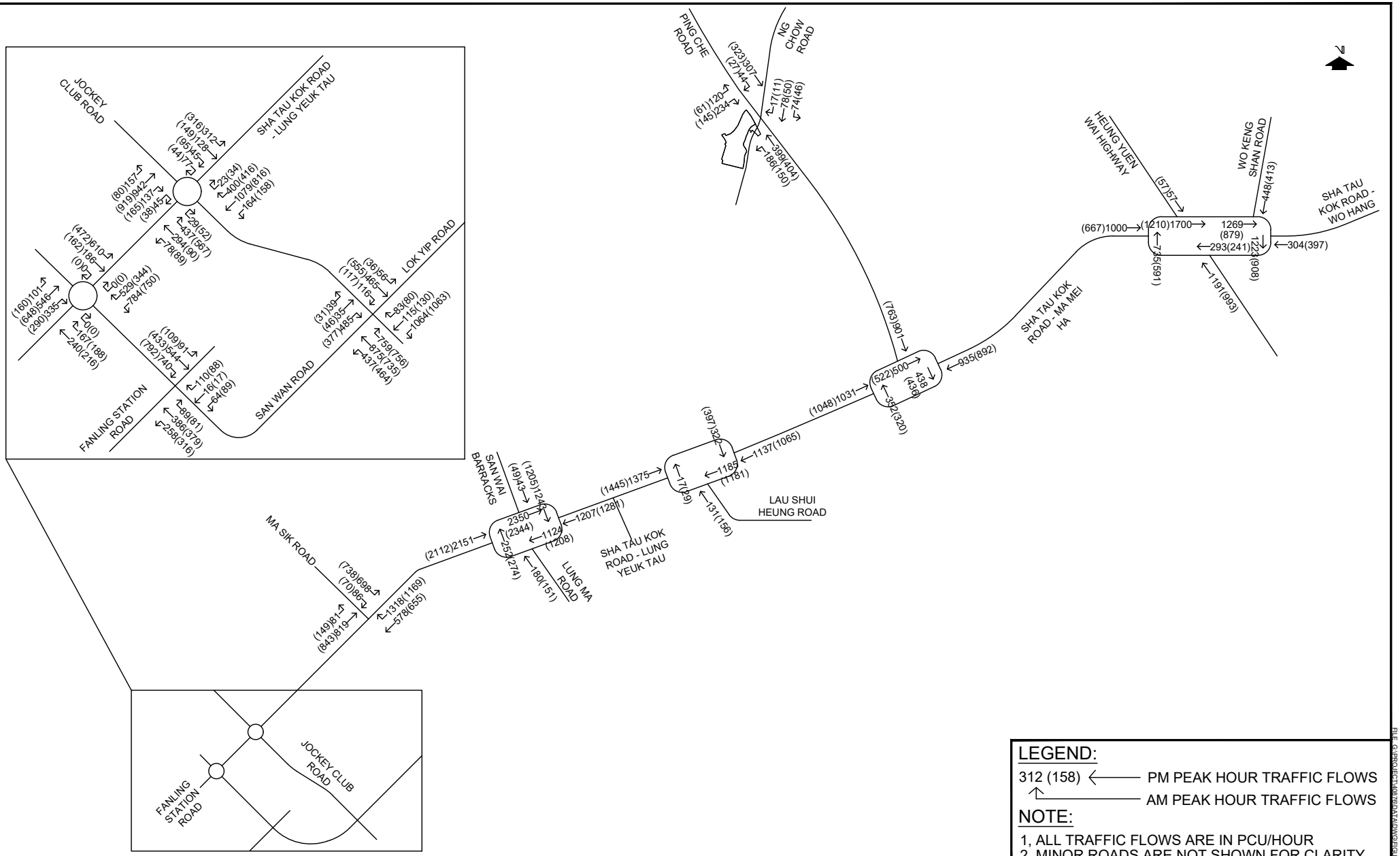
FILE: G:\PROJECT\40876\DATA\DWG\FIGURE4.1B.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40876	PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT (RESIDENTIAL AND COMMERCIAL) AT LOT 796 AND 1008 RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES	DRAWING NO. FIGURE 4.2	REV. B
DESIGNED SLN / DATE AUG 2024	DRAWING TITLE 2035 REFERENCE TRAFFIC FLOWS		
DRAWN CLL / SCALE N.T.S.		LLA 顧問有限公司 Consultancy Limited	
CHECKED SLN			

FILE: G:\PROJECT\40876\DATA\DWG\FIGURE4.2B.DWG PLOT SCALE : 1 = 1



LEGEND:

312 (158) ← PM PEAK HOUR TRAFFIC FLOWS

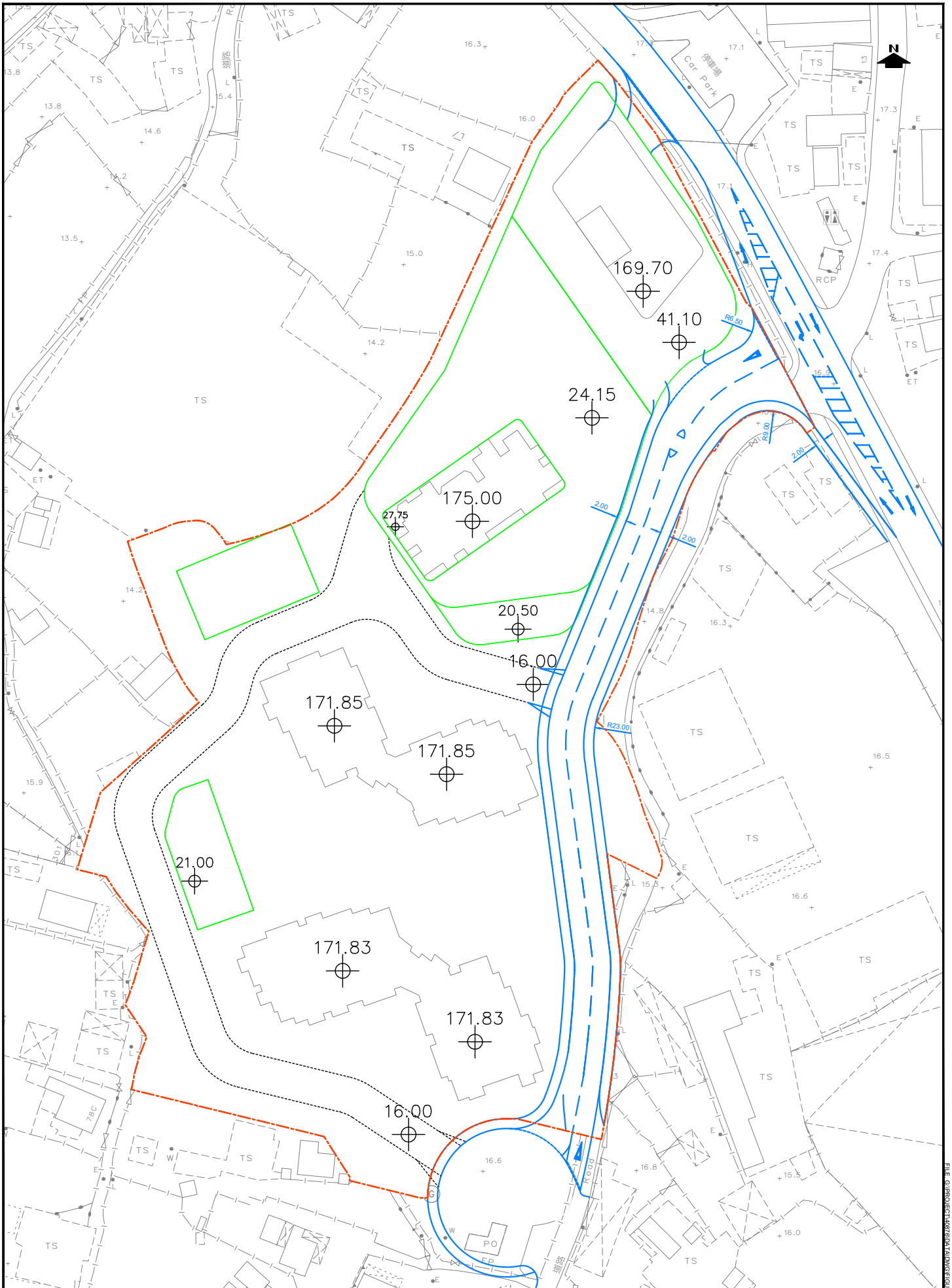
↑ AM PEAK HOUR TRAFFIC FLOWS

NOTE:

1, ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY

PROJECT NO. 40876	PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT (RESIDENTIAL AND COMMERCIAL) AT LOT 796 AND 1008 RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES	DRAWING NO. FIGURE 4.3	REV. B
DESIGNED SLN / DATE AUG 2024	DRAWING TITLE 2035 DESIGN TRAFFIC FLOWS	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE N.T.S.			
CHECKED SLN			

FILE: G:\PROJECT\40876\DATA\DWG\FIGURE4.3B.DWG PLOT SCALE : 1 = 1



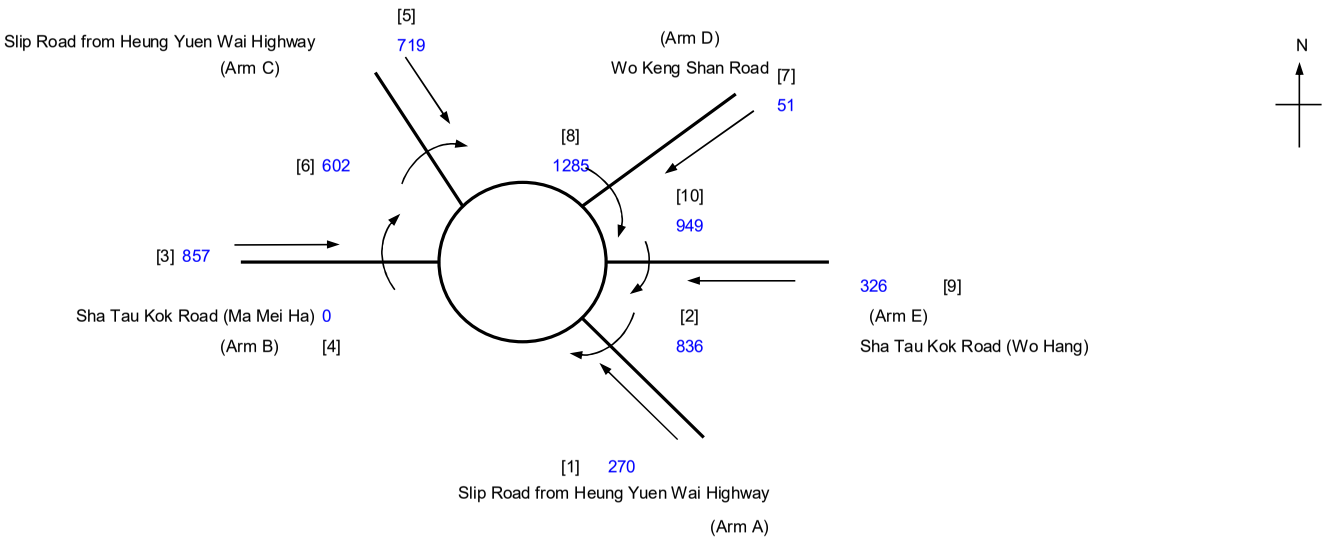
PROJECT NO. 40876	PROJECT TITLE: APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT (RESIDENTIAL AND COMMERCIAL) AT LOT 796 AND 1008 RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES	DRAWING NO. FIGURE 4.4	REV. .
DESIGNED SKL / DATE MAR 2024	DRAWING TITLE: SCHEMATIC JUNCTION LAYOUT		
DRAWN CLL / SCALE 1:1000			
CHECKED SLN		LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40876\DATA\DWG\FIGURE4.4.DWG PLOT SCALE : 1 = 1

Appendix A

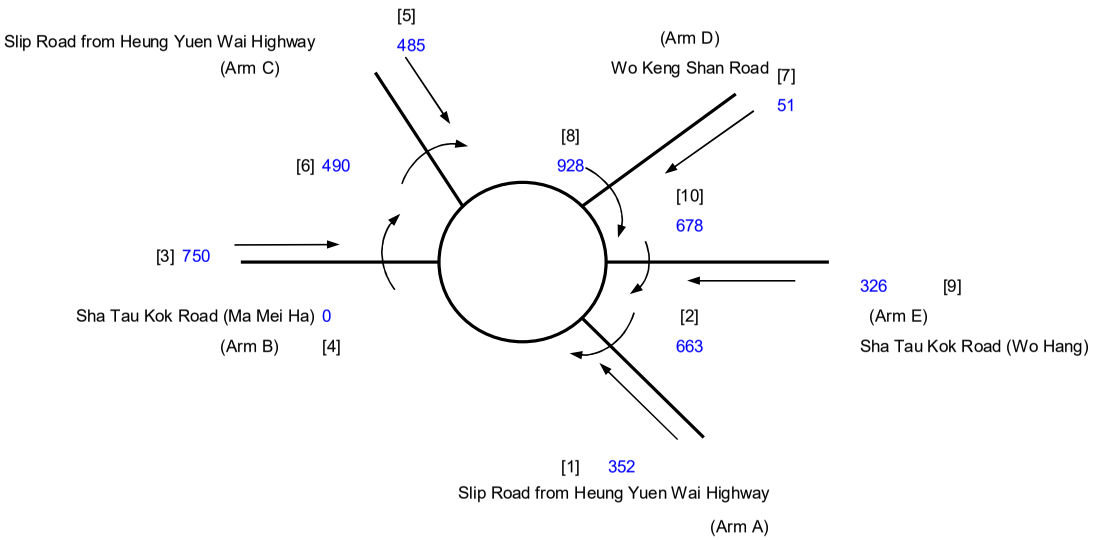
Junction Capacity Assessments
- Existing Scenario

LLA CONSULTANCY LIMITED		ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2023 Existing AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Oct-23
			FILENAME: J1_STKR_HYWH.xls	CHECKED BY:	SLN	Oct-23
J1	Sha Tau Kok Road / Heung Yuen Wai Highway		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-23



ARM			A	B	C	D	E			
INPUT PARAMETERS:										
V	=	Approach half width (m)	4.00	3.30	4.00	3.90	3.70			
E	=	Entry width (m)	9.90	7.60	9.80	7.70	7.70			
L	=	Effective length of flare (m)	24.00	33.00	28.00	27.00	35.00			
R	=	Entry radius (m)	60.00	40.00	40.00	44.00	27.00			
D	=	Inscribed circle diameter (m)	50.00	50.00	50.00	50.00	50.00			
A	=	Entry angle (degree)	35.00	35.00	35.00	35.00	10.00			
Q	=	Entry flow (pcu/h)	270	857	719	51	326			
Qc	=	Circulating flow across entry (pcu/h)	836	0	602	1285	949			
OUTPUT PARAMETERS:										
S	=	Sharpness of flare = 1.6(E-V)/L	0.39	0.21	0.33	0.23	0.18			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	1.01	1.01	1.01	1.08			
X2	=	V + ((E-V)/(1+2S))	7.30	6.33	7.49	6.52	6.63			
M	=	EXP((D-60)/10)	0	0	0	0	0			
F	=	303*X2	2213	1919	2269	1976	2009			
Td	=	1+(0.5/(1+M))	1.37	1.37	1.37	1.37	1.37			
Fc	=	0.21*Td(1+0.2*X2)	0.71	0.65	0.72	0.66	0.67			
Qe	=	K(F-Fc*Qc)	1647	1933	1851	1137	1489	Total In Sum =	2223	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.16	0.44	0.39	0.04	0.22	DFC of Critical Approach =	0.44	

LLA CONSULTANCY LIMITED		ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2023 Existing PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Oct-23
			FILENAME: J1_STKR_HYWH.xls	CHECKED BY:	SLN	Oct-23
J1	Sha Tau Kok Road / Heung Yuen Wai Highway		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-23

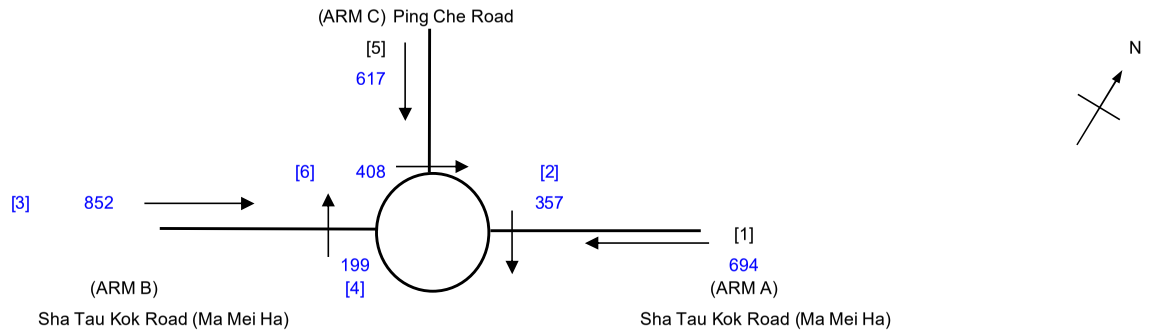


ARM			A	B	C	D	E
INPUT PARAMETERS:							
V	=	Approach half width (m)	4.00	3.30	4.00	3.90	3.70
E	=	Entry width (m)	9.90	7.60	9.80	7.70	7.70
L	=	Effective length of flare (m)	24.00	33.00	28.00	27.00	35.00
R	=	Entry radius (m)	60.00	40.00	40.00	44.00	27.00
D	=	Inscribed circle diameter (m)	50.00	50.00	50.00	50.00	50.00
A	=	Entry angle (degree)	35.00	35.00	35.00	35.00	10.00
Q	=	Entry flow (pcu/h)	352	750	485	51	326
Qc	=	Circulating flow across entry (pcu/h)	663	0	490	928	678
OUTPUT PARAMETERS:							
S	=	Sharpness of flare = 1.6(E-V)/L	0.39	0.21	0.33	0.23	0.18
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	1.01	1.01	1.01	1.08
X2	=	V + ((E-V)/(1+2S))	7.30	6.33	7.49	6.52	6.63
M	=	EXP((D-60)/10)	0	0	0	0	0
F	=	303*X2	2213	1919	2269	1976	2009
Td	=	1+(0.5/(1+M))	1.37	1.37	1.37	1.37	1.37
Fc	=	0.21*Td(1+0.2*X2)	0.71	0.65	0.72	0.66	0.67
Qe	=	K(F-Fc*Qc)	1771	1933	1932	1375	1684
DFC	=	Design flow/Capacity = Q/Qe	0.20	0.39	0.25	0.04	0.19

Total In Sum = 1964 PCU

DFC of Critical Approach = 0.39

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2023 Existing AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Oct-23
		FILENAME: J2_STKR_PCR.xlsx	CHECKED BY:	SLN	Oct-23
J2 Sha Tau Kok Road / Ping Che Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-23

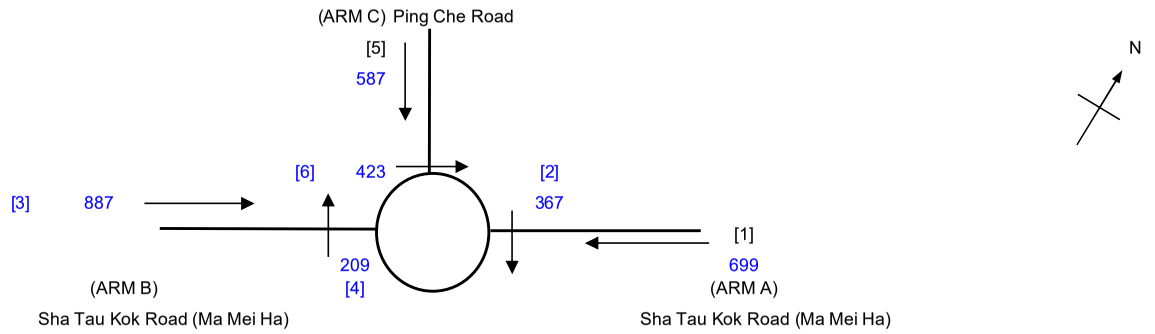


ARM			A	B	C
INPUT PARAMETERS:					
V	=	Approach half width (m)	7.40	7.30	4.10
E	=	Entry width (m)	8.20	7.90	8.10
L	=	Effective length of flare (m)	1.00	1.00	5.00
R	=	Entry radius (m)	75.00	60.00	40.00
D	=	Inscribed circle diameter (m)	53.00	53.00	53.00
A	=	Entry angle (degree)	10.00	15.00	10.00
Q	=	Entry flow (pcu/h)	694	852	617
Qc	=	Circulating flow across entry (pcu/h)	357	199	408
OUTPUT PARAMETERS:					
S	=	Sharpness of flare = 1.6(E-V)/L	1.28	0.96	1.28
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.11	1.08	1.09
X2	=	V + ((E-V)/(1+2S))	7.62	7.51	5.22
M	=	EXP((D-60)/10)	0.50	0.50	0.50
F	=	303*X2	2310	2274	1583
Td	=	1+(0.5/(1+M))	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)	0.71	0.70	0.57
Qe	=	K(F-Fc*Qc)	2274	2315	1476
DFC	=	Design flow/Capacity = Q/Qe	0.31	0.37	0.42

Total In Sum = 3127 PCU

DFC of Critical Approach = 0.42

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2023 Existing PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Oct-23
		FILENAME: J2_STKR_PCR.xlsx	CHECKED BY:	SLN	Oct-23
J2 Sha Tau Kok Road / Ping Che Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-23

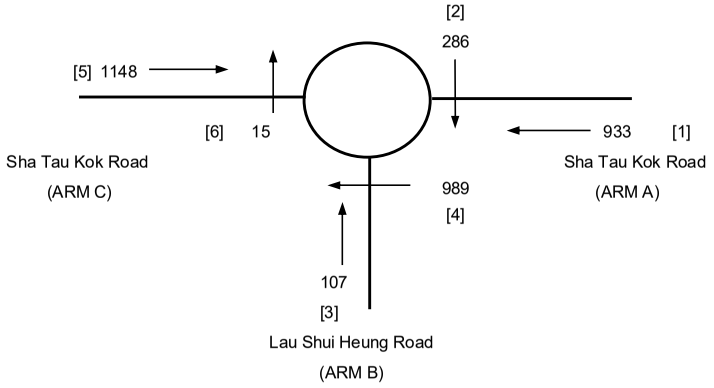


ARM			A	B	C
INPUT PARAMETERS:					
V	=	Approach half width (m)	7.40	7.30	4.10
E	=	Entry width (m)	8.20	7.90	8.10
L	=	Effective length of flare (m)	1.00	1.00	5.00
R	=	Entry radius (m)	75.00	60.00	40.00
D	=	Inscribed circle diameter (m)	53.00	53.00	53.00
A	=	Entry angle (degree)	10.00	15.00	10.00
Q	=	Entry flow (pcu/h)	699	887	587
Qc	=	Circulating flow across entry (pcu/h)	367	209	423
OUTPUT PARAMETERS:					
S	=	Sharpness of flare = 1.6(E-V)/L	1.28	0.96	1.28
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.11	1.08	1.09
X2	=	V + ((E-V)/(1+2S))	7.62	7.51	5.22
M	=	EXP((D-60)/10)	0.50	0.50	0.50
F	=	303*X2	2310	2274	1583
Td	=	1+(0.5/(1+M))	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)	0.71	0.70	0.57
Qe	=	K(F-Fc*Qc)	2267	2308	1466
DFC	=	Design flow/Capacity = Q/Qe	0.31	0.38	0.40

Total In Sum = 3172 PCU

DFC of Critical Approach = 0.40

LLA CONSULTANCY LIMITED		ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2023 Existing AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Oct-23
			FILENAME : J3_STKR_LSHR.x	CHECKED BY:	SLN	Oct-23
J3	Sha Tau Kok Road / Lau Shui Heung Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-23

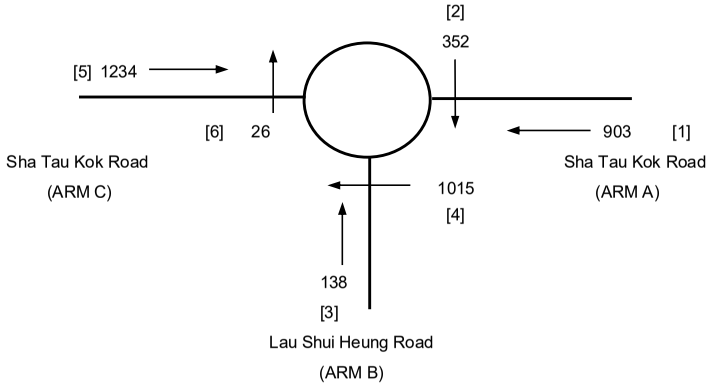


ARM			A	B	C
INPUT PARAMETERS:					
V	=	Approach half width (m)	6.30	3.60	6.60
E	=	Entry width (m)	6.90	5.60	7.00
L	=	Effective length of flare (m)	1.00	7.00	1.00
R	=	Entry radius (m)	80.00	110.00	16.00
D	=	Inscribed circle diameter (m)	53.00	53.00	53.00
A	=	Entry angle (degree)	15.00	15.00	15.00
Q	=	Entry flow (pcu/h)	933	107	1148
Qc	=	Circulating flow across entry (pcu/h)	286	989	15
OUTPUT PARAMETERS:					
S	=	Sharpness of flare = 1.6(E-V)/L	0.96	0.46	0.64
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.09	1.09	1.04
X2	=	V + ((E-V)/(1+2S))	6.51	4.64	6.78
M	=	EXP((D-60)/10)	0.50	0.50	0.50
F	=	303*X2	1971	1407	2053
Td	=	1+(0.5/(1+M))	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)	0.64	0.54	0.66
Qe	=	K(F-Fc*Qc)	1945	953	2124
DFC	=	Design flow/Capacity = Q/Qe	0.48	0.11	0.54

Total In Sum = 2188 PCU

DFC of Critical Approach = 0.54

LLA CONSULTANCY LIMITED		ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2023 Existing PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Oct-23
			FILENAME : J3_STKR_LSHR.x	CHECKED BY:	SLN	Oct-23
J3	Sha Tau Kok Road / Lau Shui Heung Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-23

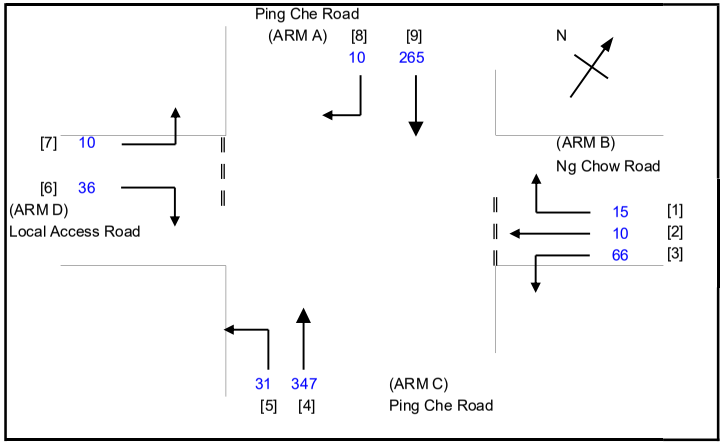


ARM			A	B	C
INPUT PARAMETERS:					
V	=	Approach half width (m)	6.30	3.60	6.60
E	=	Entry width (m)	6.90	5.60	7.00
L	=	Effective length of flare (m)	1.00	7.00	1.00
R	=	Entry radius (m)	80.00	110.00	16.00
D	=	Inscribed circle diameter (m)	53.00	53.00	53.00
A	=	Entry angle (degree)	15.00	15.00	15.00
Q	=	Entry flow (pcu/h)	903	138	1234
Qc	=	Circulating flow across entry (pcu/h)	352	1015	26
OUTPUT PARAMETERS:					
S	=	Sharpness of flare = 1.6(E-V)/L	0.96	0.46	0.64
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.09	1.09	1.04
X2	=	V + ((E-V)/(1+2S))	6.51	4.64	6.78
M	=	EXP((D-60)/10)	0.50	0.50	0.50
F	=	303*X2	1971	1407	2053
Td	=	1+(0.5/(1+M))	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)	0.64	0.54	0.66
Qe	=	K(F-Fc*Qc)	1899	938	2117
DFC	=	Design flow/Capacity = Q/Qe	0.48	0.15	0.58

Total In Sum = 2275 PCU

DFC of Critical Approach = 0.58

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2023 Existing AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Oct-23
		FILENAME : J4_PCR_NCR.xlsx	CHECKED BY:	SLN	Oct-23
J4 Ping Che Road / Ng Chow Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-23



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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	7.30	(metres)		
W cr	=	0	(metres)	Y =	0.748

MAJOR ROAD (ARM A)				MAJOR ROAD (ARM C)			
W a-d	=	3.65	(metres)	W c-b	=	0.00	(metres)
Vr a-d	=	100	(metres)	Vr c-b	=	0	(metres)
q a-b	=	0	(pcu/hr)	q c-a	=	347	(pcu/hr)
q a-c	=	265	(pcu/hr)	q c-b	=	0	(pcu/hr)
q a-d	=	10	(pcu/hr)	q c-d	=	31	(pcu/hr)

MINOR ROAD (ARM B)				MINOR ROAD (ARM D)			
W b-a	=	0.00	(metres)	W d-c	=	3.40	(metres)
W b-c	=	5.00	(metres)	W d-a	=	0.00	(metres)
Vl b-a	=	30	(metres)	Vl d-c	=	18	(metres)
Vr b-a	=	18	(metres)	Vr d-c	=	19	(metres)
Vr b-c	=	18	(metres)	Vr d-a	=	19	(metres)
q b-a	=	15	(pcu/hr)	q d-c	=	36	(pcu/hr)
q b-c	=	66	(pcu/hr)	q d-a	=	10	(pcu/hr)
q b-d	=	10	(pcu/hr)	q d-b	=	0	(pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.554	X a	=	0.982
X c	=	0.586	X d	=	0.817
Z b	=	1.023	Z d	=	0.597
M b	=	0.950	M d	=	0.550

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.0401	r d-c	=	0.096
ql b-d	=	5.2005 (pcu/hr)	ql d-b	=	0 (pcu/hr)
qr b-d	=	4.7995 (pcu/hr)	qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	269 (pcu/hr)	Q d-c	=	374 (pcu/hr)
Q b-c	=	682 (pcu/hr)	Q d-a	=	377 (pcu/hr)
Q c-b	=	392 (pcu/hr)	Q a-d	=	631 (pcu/hr)
Ql b-d	=	463 (pcu/hr)	Ql d-b	=	264 (pcu/hr)
Qr b-d	=	270 (pcu/hr)	Qr d-b	=	392 (pcu/hr)
Q b-acd	=	480 (pcu/hr)	Q d-abc	=	375 (pcu/hr)

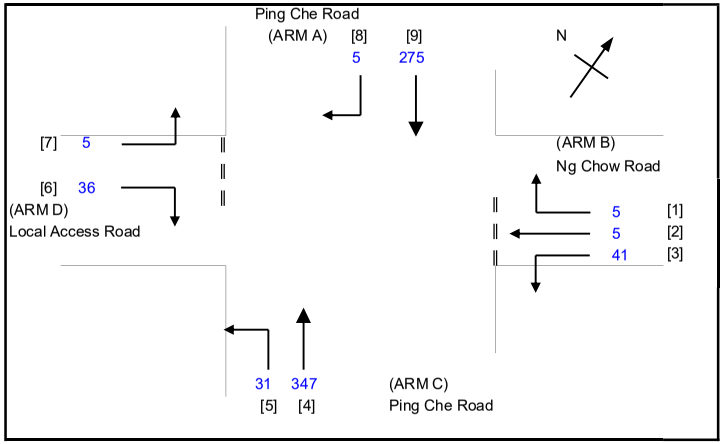
TOTAL FLOW = 790 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0558
DFC b-c	=	0.0968
DFC c-b	=	0.0000
DFCl b-d	=	0.0112
DFCr b-d	=	0.0178
DFC d-c	=	0.0963
DFC d-a	=	0.0265
DFC a-d	=	0.0158
DFCl d-b	=	0.0000
DFCr d-b	=	0.0000
DFC b-acd (shared lane)	=	0.1897
DFC d-abc (shared lane)	=	0.1228

CRITICAL DFC = 0.19

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2023 Existing PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Oct-23
		FILENAME : J4_PCR_NCR.xlsx	CHECKED BY:	SLN	Oct-23
J4 Ping Che Road / Ng Chow Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-23



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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	7.30	(metres)		
W cr	=	0	(metres)	Y =	0.748

MAJOR ROAD (ARM A)				MAJOR ROAD (ARM C)			
W a-d	=	3.65	(metres)	W c-b	=	0.00	(metres)
Vr a-d	=	100	(metres)	Vr c-b	=	0	(metres)
q a-b	=	0	(pcu/hr)	q c-a	=	347	(pcu/hr)
q a-c	=	275	(pcu/hr)	q c-b	=	0	(pcu/hr)
q a-d	=	5	(pcu/hr)	q c-d	=	31	(pcu/hr)

MINOR ROAD (ARM B)				MINOR ROAD (ARM D)			
W b-a	=	0.00	(metres)	W d-c	=	3.40	(metres)
W b-c	=	5.00	(metres)	W d-a	=	0.00	(metres)
Vl b-a	=	30	(metres)	Vl d-c	=	18	(metres)
Vr b-a	=	18	(metres)	Vr d-c	=	19	(metres)
Vr b-c	=	18	(metres)	Vr d-a	=	19	(metres)
q b-a	=	5	(pcu/hr)	q d-c	=	36	(pcu/hr)
q b-c	=	41	(pcu/hr)	q d-a	=	5	(pcu/hr)
q b-d	=	5	(pcu/hr)	q d-b	=	0	(pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.554	X a	=	0.982
X c	=	0.586	X d	=	0.817
Z b	=	1.023	Z d	=	0.597
M b	=	0.950	M d	=	0.550

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.0131		r d-c	=	0.094	
ql b-d	=	2.5327	(pcu/hr)	ql d-b	=	0	(pcu/hr)
qr b-d	=	2.4673	(pcu/hr)	qr d-b	=	0	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	269	(pcu/hr)	Q d-c	=	382	(pcu/hr)
Q b-c	=	684	(pcu/hr)	Q d-a	=	377	(pcu/hr)
Q c-b	=	392	(pcu/hr)	Q a-d	=	631	(pcu/hr)
Ql b-d	=	462	(pcu/hr)	Ql d-b	=	264	(pcu/hr)
Qr b-d	=	269	(pcu/hr)	Qr d-b	=	392	(pcu/hr)
Q b-acd	=	525	(pcu/hr)	Q d-abc	=	381	(pcu/hr)

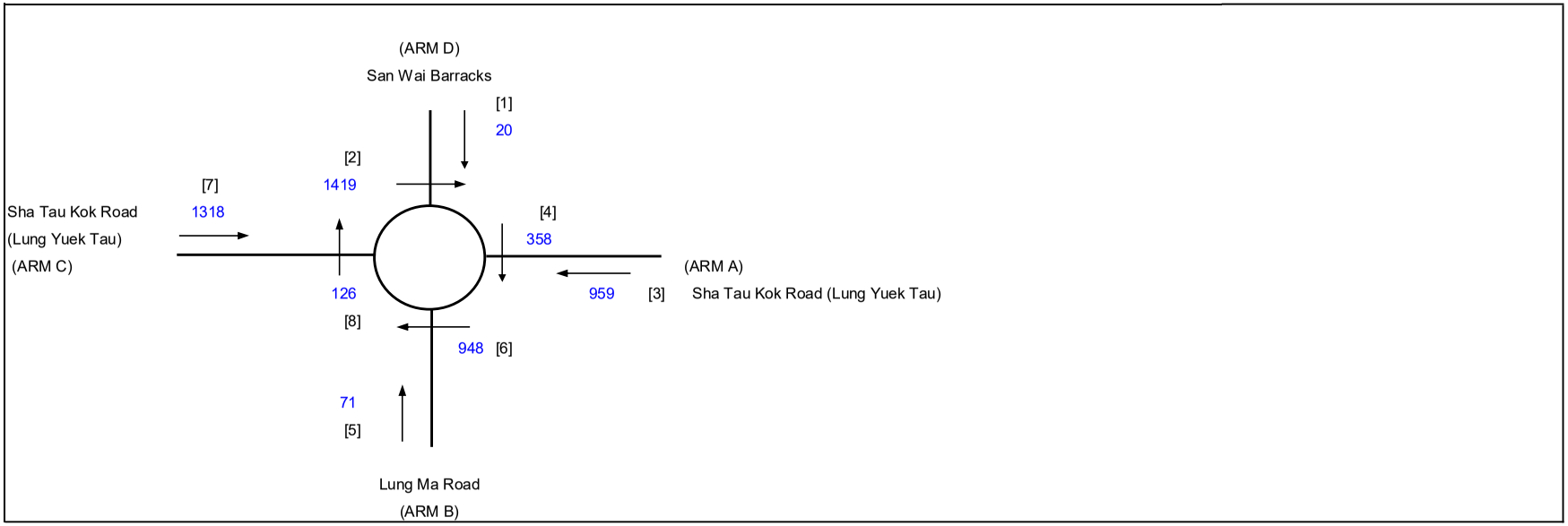
TOTAL FLOW = 750 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0186
DFC b-c	=	0.0599
DFC c-b	=	0.0000
DFCl b-d	=	0.0055
DFCr b-d	=	0.0092
DFC d-c	=	0.0942
DFC d-a	=	0.0133
DFC a-d	=	0.0079
DFCl d-b	=	0.0000
DFCr d-b	=	0.0000
DFC b-acd (shared lane)	=	0.0971
DFC d-abc (shared lane)	=	0.1075

CRITICAL DFC = 0.11

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION				INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2023 Existing AM**	PROJECT NO.:	40876	PREPARED BY:	SKL	Feb-24
		FILENAME :	J5_STKR_LMR.xls	CHECKED BY:	SLN	Feb-24
J5 Sha Tau Kok Road / Lung Ma Road		REFERENCE NO.:		REVIEWED BY:	SLN	Feb-24

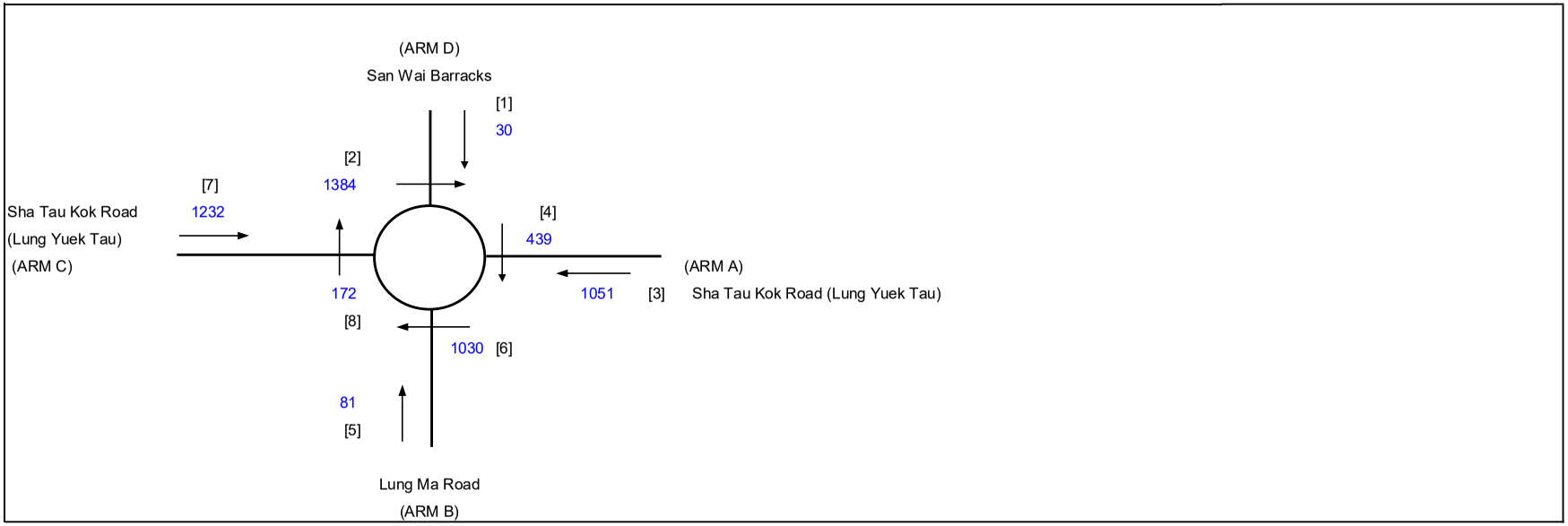


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.30	3.50	7.30	3.00
E	=	Entry width (m)	10.00	7.00	9.50	5.00
L	=	Effective length of flare (m)	11.00	20.00	30.00	15.00
R	=	Entry radius (m)	20.00	100.00	30.00	35.00
D	=	Inscribed circle diameter (m)	55.00	55.00	55.00	55.00
A	=	Entry angle (degree)	20.00	10.00	9.00	15.00
Q	=	Entry flow (pcu/h)	959	71	1318	20
Qc	=	Circulating flow across entry (pcu/h)	358	948	126	1419
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.39	0.28	0.12	0.21
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.11	1.09	1.07
X2	=	V + ((E-V)/(1+2S))	8.81	5.74	9.08	4.40
M	=	EXP((D-60)/10)	0.61	0.61	0.61	0.61
F	=	303*X2	2670	1740	2752	1334
Td	=	1+(0.5/(1+M))	1.31	1.31	1.31	1.31
Fc	=	0.21*Td(1+0.2*X2)	0.76	0.59	0.78	0.52
Qe	=	K(F-Fc*Qc)	2481	1307	2891	643
DFC	=	Design flow/Capacity = Q/Qe	0.39	0.05	0.46	0.03

Total In Sum = 2368 PCU

DFC of Critical Approach = 0.46

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION				INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2023 Existing PM**	PROJECT NO.:	40876	PREPARED BY:	SKL	Feb-24
		FILENAME :	J5_STKR_LMR.xls	CHECKED BY:	SLN	Feb-24
J5 Sha Tau Kok Road / Lung Ma Road		REFERENCE NO.:		REVIEWED BY:	SLN	Feb-24



ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.30	3.50	7.30	3.00
E	=	Entry width (m)	10.00	7.00	9.50	5.00
L	=	Effective length of flare (m)	11.00	20.00	30.00	15.00
R	=	Entry radius (m)	20.00	100.00	30.00	35.00
D	=	Inscribed circle diameter (m)	55.00	55.00	55.00	55.00
A	=	Entry angle (degree)	20.00	10.00	9.00	15.00
Q	=	Entry flow (pcu/h)	1051	81	1232	30
Qc	=	Circulating flow across entry (pcu/h)	439	1030	172	1384
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.39	0.28	0.12	0.21
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.11	1.09	1.07
X2	=	V + ((E-V)/(1+2S))	8.81	5.74	9.08	4.40
M	=	EXP((D-60)/10)	0.61	0.61	0.61	0.61
F	=	303*X2	2670	1740	2752	1334
Td	=	1+(0.5/(1+M))	1.31	1.31	1.31	1.31
Fc	=	0.21*Td(1+0.2*X2)	0.76	0.59	0.78	0.52
Qe	=	K(F-Fc*Qc)	2417	1254	2852	662
DFC	=	Design flow/Capacity = Q/Qe	0.43	0.06	0.43	0.05

Total In Sum = 2394 PCU

DFC of Critical Approach = 0.43

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

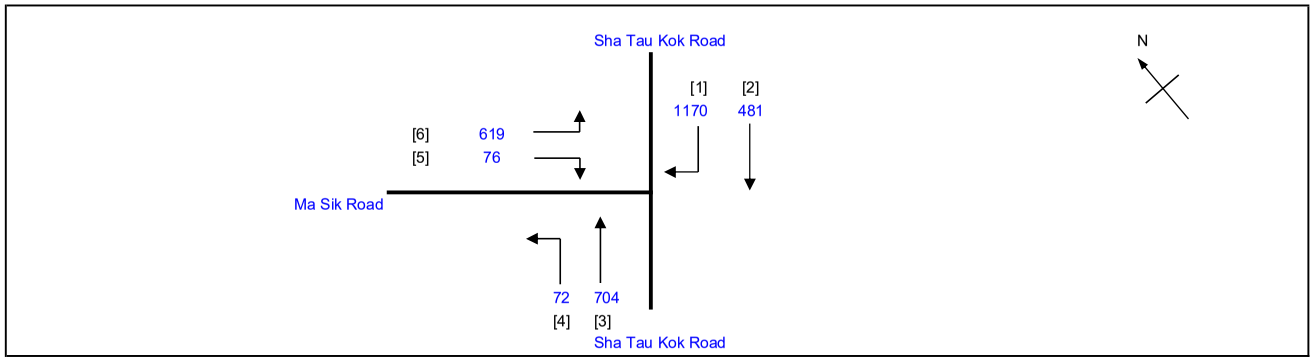
	INITIALS	DATE
Prepared By:	SKL	Aug-24
Checked By:	SLN	Aug-24
Reviewed By:	SLN	Aug-24

Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

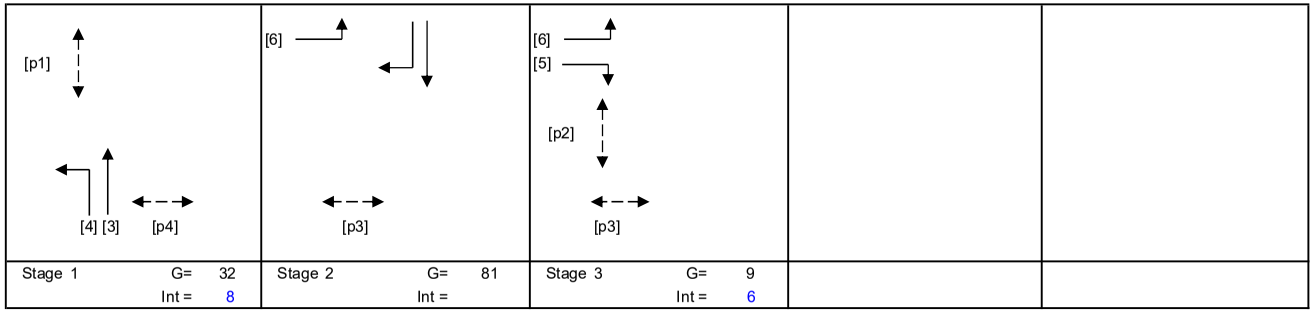
J6 Sha Tau Kok Road / Ma Sik Road

2023 Existing AM

PROJECT NO.: 40876
FILENAME : J6_STKR_MSR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	136 sec
Sum(y)		Y =	0.473
Loss time		L =	12 sec
Total Flow		=	3122 pcu
Co	= (1.5*L+5)/(1-Y)	=	43.7 sec
Cm	= L/(1-Y)	=	22.8 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	71.1 %
Cp	= 0.9*L/(0.9-Y)	=	25.3 sec
Ymax	= 1-L/C	=	0.912
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**73 %**



Stage 1	G= 32	Stage 2	G= 81	Stage 3	G= 9
	Int = 8		Int =		Int = 6

Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
p1	1	5	8		32	8
p2	3	5	10		5	10
p3	2,3	5	9		87	9
p4	1	5	7		33	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	2	3.20	1			N	1935		481		481	0.00	1935							1935	0.249			65	81	0.519	54	24
1,2	2	3.20	1	26			2075		0	587	587	1.00	1962							1962	0.299			78	81	0.519	54	17
1	2	3.20	1	23			2075			583	583	1.00	1948							1948	0.299			78	81	0.519	54	17
6	2,3	3.50	1	15		N	1965	619			619	1.00	1786							1786	0.347	0.347		91	91	0.519	42	12
5	3	3.50	1	20			2105			76	76	1.00	1958							1958	0.039			10	10	0.519	12	66
3,4	1	3.50	1	15		N	1965	72	170		242	0.30	1908							1908	0.127	0.127		33	33	0.519	36	44
3	1	3.50	2				4210		534		534	0.00	4210							4210	0.127			33	33	0.519	45	42

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

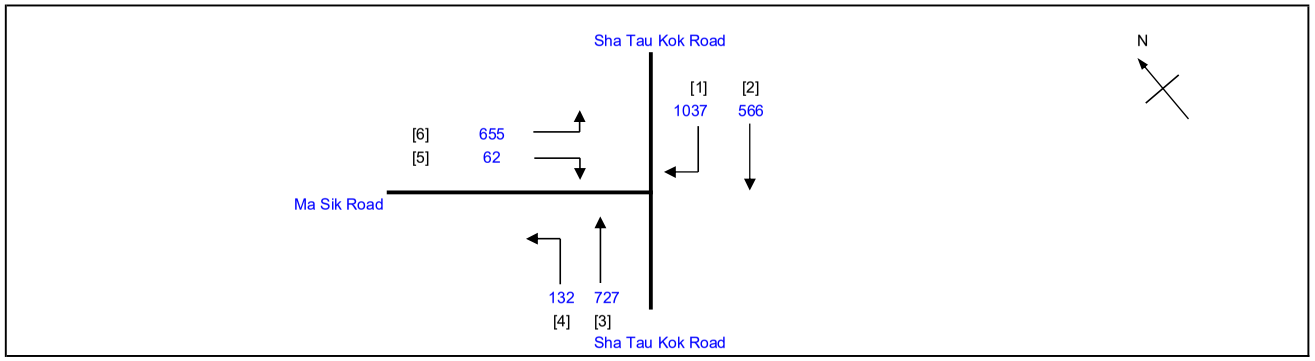
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

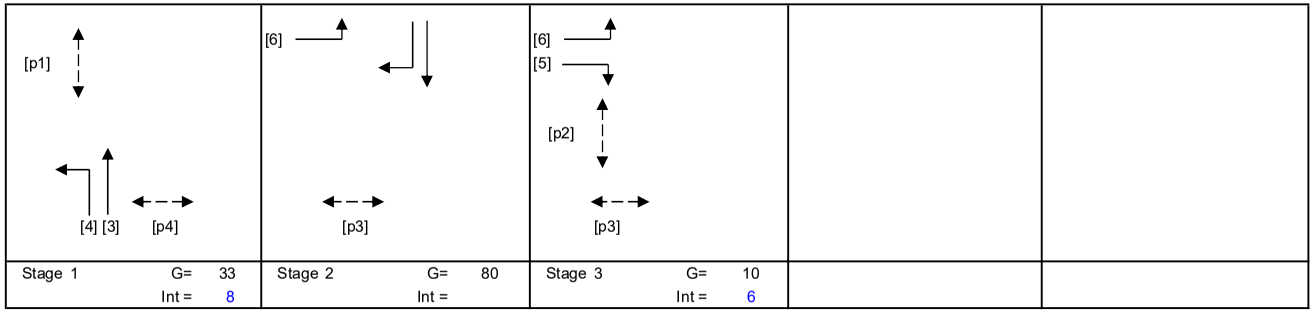
	INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories		
J6 Sha Tau Kok Road / Ma Sik Road		

2023 Existing PM

PROJECT NO.:	40876	Prepared By:	SKL	Aug-24
FILENAME :	J6_STKR_MSR.xlsx	Checked By:	SLN	Aug-24
		Reviewed By:	SLN	Aug-24



No. of stages per cycle	N =	3
Cycle time	C =	136 sec
Sum(y)	Y =	0.508
Loss time	L =	15 sec
Total Flow	=	3179 pcu
Co = (1.5*L+5)/(1-Y)	=	55.9 sec
Cm = L/(1-Y)	=	30.5 sec
Yult	=	0.788
R.C.ult = (Yult-Y)/Y*100%	=	55.1 %
Cp = 0.9*L/(0.9-Y)	=	34.4 sec
Ymax = 1-L/C	=	0.890
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**58 %**



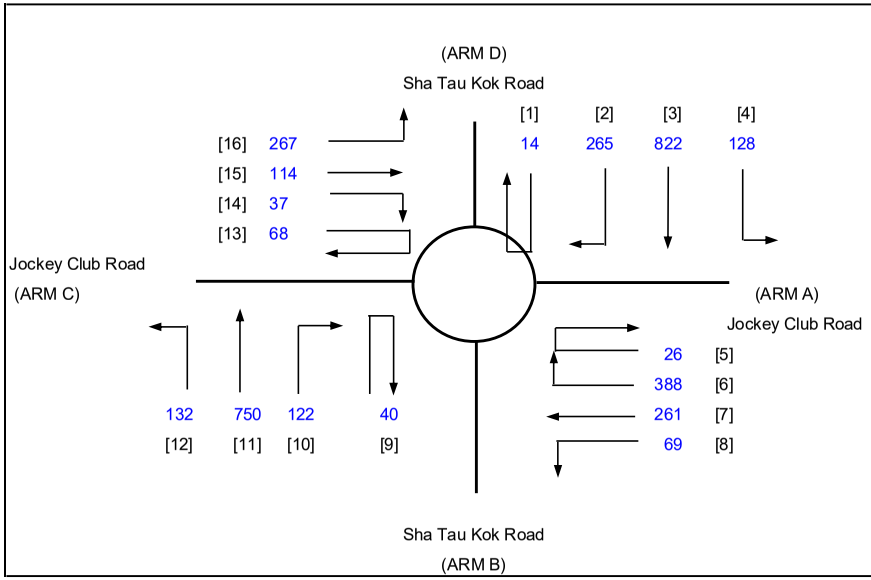
Stage 1	G= 33	Int = 8
Stage 2	G= 80	Int =
Stage 3	G= 10	Int = 6

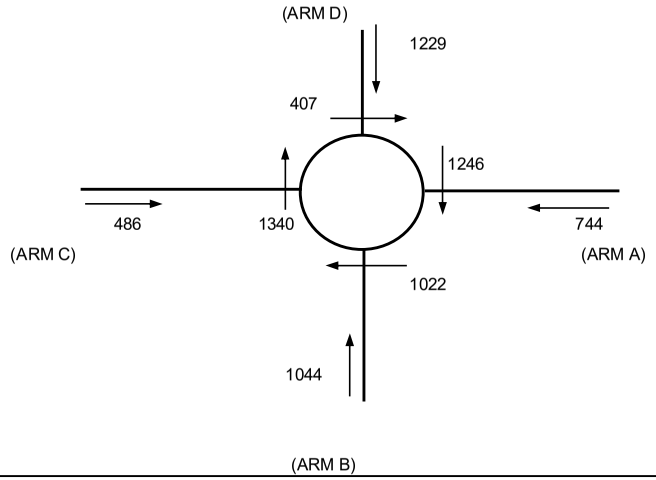
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
p1	1	5	8		33	8
p2	3	5	10		6	10
p3	2,3	5	9		86	9
p4	1	5	7		34	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	2	3.20	1			N	1935		531		531	0.00	1935							1935	0.274			65	80	0.571	60	25
1,2	2	3.20	1	26			2075		35	504	539	0.94	1969							1969	0.274			65	80	0.571	60	25
1	2	3.20	1	23			2075			533	533	1.00	1948							1948	0.274			65	80	0.571	60	25
6	2,3	3.50	1	15		N	1965	655			655	1.00	1786							1786	0.367	0.367		87	87	0.571	48	14
5	3	3.50	1	20			2105			62	62	1.00	1958							1958	0.032		3	8	11	0.571	12	76
3,4	1	3.50	1	15		N	1965	132	132		264	0.50	1871							1871	0.141	0.141		34	34	0.571	42	45
3	1	3.50	2				4210		595		595	0.00	4210							4210	0.141			34	34	0.571	48	42

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2023 Existing AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J7_STKR_JCR.xl	CHECKED BY:	SLN	Aug-24
J7 Sha Tau Kok Road / Jockey Club Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24



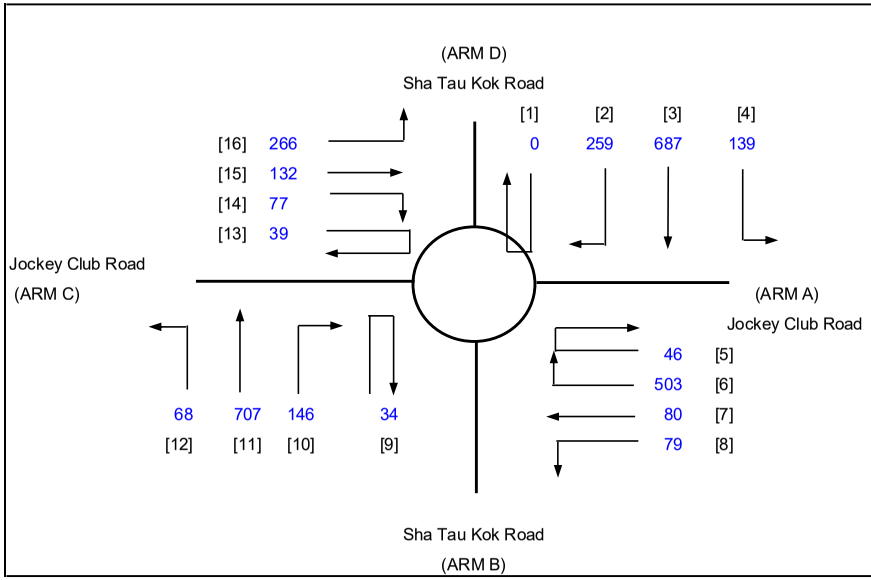


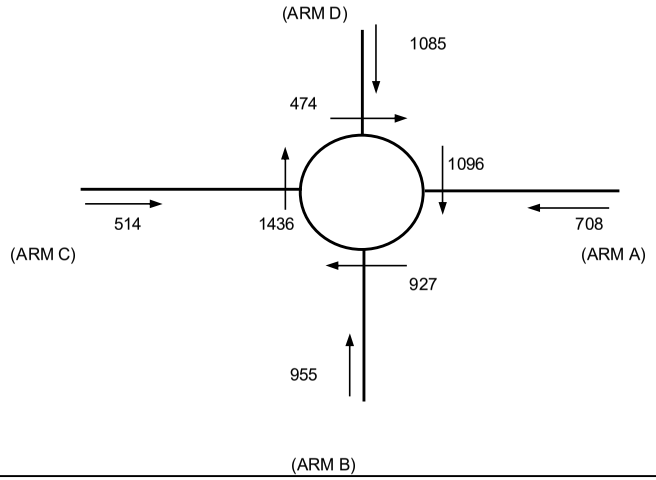
ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.00	7.00	8.00	7.50
E	=	Entry width (m)	7.50	10.00	8.50	8.00
L	=	Effective length of flare (m)	1.00	15.00	2.00	4.00
R	=	Entry radius (m)	25.00	40.00	60.00	35.00
D	=	Inscribed circle diameter (m)	65.00	65.00	65.00	65.00
A	=	Entry angle (degree)	10.00	40.00	20.00	10.00
Q	=	Entry flow (pcu/h)	744	1044	486	1229
Qc	=	Circulating flow across entry (pcu/h)	1246	1022	1340	407
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.80	0.32	0.40	0.20
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.08	0.99	1.07	1.09
X2	=	V + ((E-V)/(1+2S))	7.19	8.83	8.28	7.86
M	=	EXP((D-60)/10)	1.65	1.65	1.65	1.65
F	=	303*X2	2179	2675	2508	2381
Td	=	1+(0.5/(1+M))	1.19	1.19	1.19	1.19
Fc	=	0.21*Td(1+0.2*X2)	0.61	0.69	0.66	0.64
Qe	=	K(F-Fc*Qc)	1533	1949	1729	2311
DFC	=	Design flow/Capacity = Q/Qe	0.49	0.54	0.28	0.53

Total In Sum = 2127 PCU

DFC of Critical Approach = 0.54

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2023 Existing PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J7_STKR_JCR.xl	CHECKED BY:	SLN	Aug-24
J7 Sha Tau Kok Road / Jockey Club Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24





ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.00	7.00	8.00	7.50
E	=	Entry width (m)	7.50	10.00	8.50	8.00
L	=	Effective length of flare (m)	1.00	15.00	2.00	4.00
R	=	Entry radius (m)	25.00	40.00	60.00	35.00
D	=	Inscribed circle diameter (m)	65.00	65.00	65.00	65.00
A	=	Entry angle (degree)	10.00	40.00	20.00	10.00
Q	=	Entry flow (pcu/h)	708	955	514	1085
Qc	=	Circulating flow across entry (pcu/h)	1096	927	1436	474
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.80	0.32	0.40	0.20
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.08	0.99	1.07	1.09
X2	=	V + ((E-V)/(1+2S))	7.19	8.83	8.28	7.86
M	=	EXP((D-60)/10)	1.65	1.65	1.65	1.65
F	=	303*X2	2179	2675	2508	2381
Td	=	1+(0.5/(1+M))	1.19	1.19	1.19	1.19
Fc	=	0.21*Td(1+0.2*X2)	0.61	0.69	0.66	0.64
Qe	=	K(F-Fc*Qc)	1632	2014	1661	2264
DFC	=	Design flow/Capacity = Q/Qe	0.43	0.47	0.31	0.48

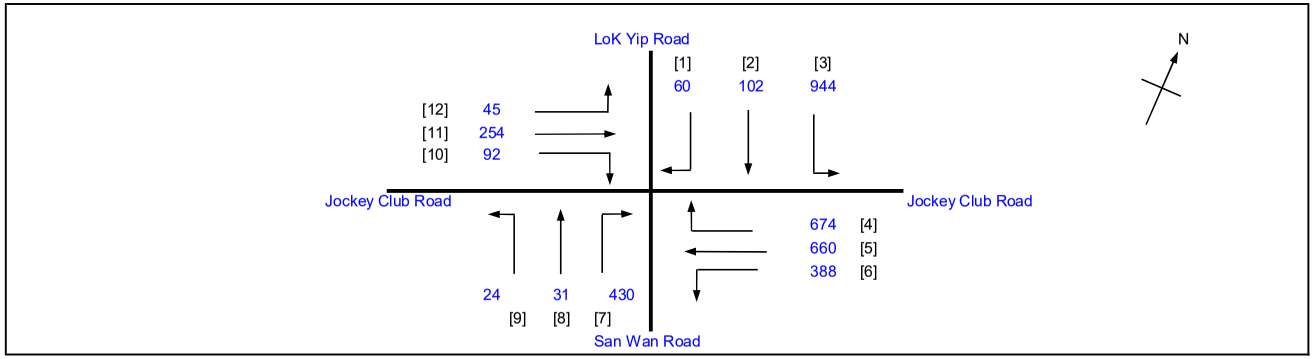
Total In Sum = 1856 PCU

DFC of Critical Approach = 0.48

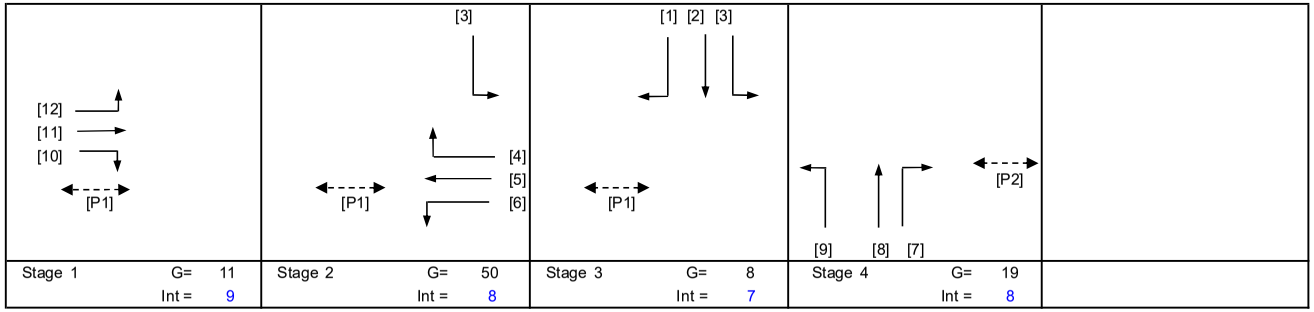
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	PROJECT NO.: 40876	Prepared By:	SKL	Aug-24
2023 Existing AM	FILENAME : J8_LYR_JCR_SWR.xlsx	Checked By:	SLN	Aug-24
J8 Lok Yip Road / Jockey Club Road / San Wan Road		Reviewed By:	SLN	Aug-24



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.505
Loss time		L =	28 sec
Total Flow		=	3704 pcu
Co	= (1.5*L+5)/(1-Y)	=	94.9 sec
Cm	= L/(1-Y)	=	56.5 sec
Yult		=	0.690
R.C.ult	= (Yult-Y)/Y*100%	=	36.7 %
Cp	= 0.9*L/(0.9-Y)	=	63.8 sec
Ymax	= 1-L/C	=	0.767
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**37 %**



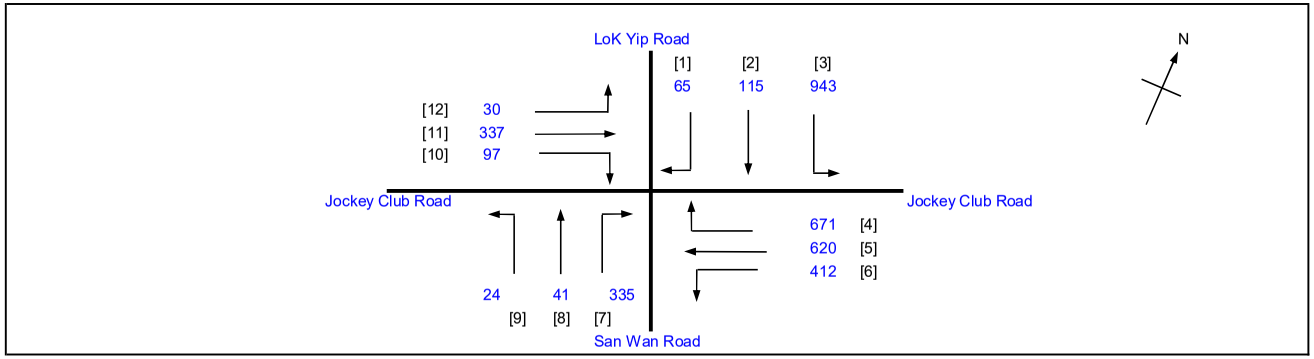
Stage 1	G= 11	Int = 9
Stage 2	G= 50	Int = 8
Stage 3	G= 8	Int = 7
Stage 4	G= 19	Int = 8

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,2,3	9.4	7	9	0	62	9
P2	4	10.8	6	12	4	11	12

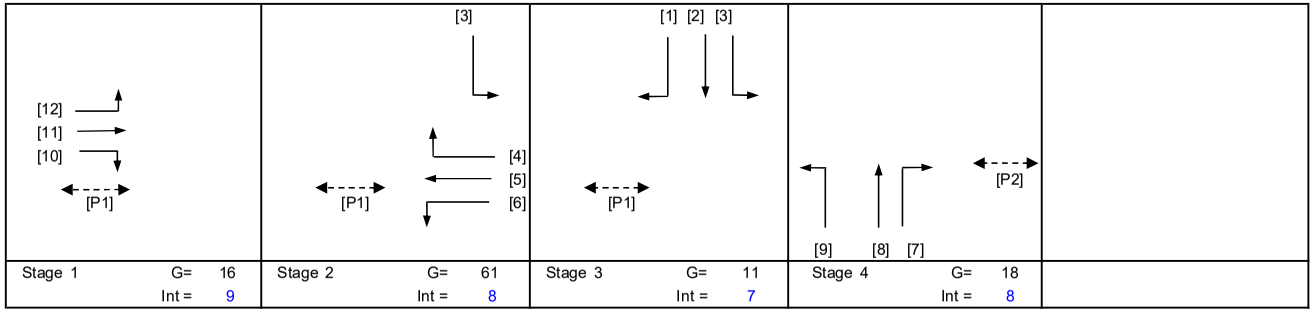
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							28					
1	3	3.30	1	20			2085			60	60	1.00	1940							1940	0.031			6	9	0.416	6	56
2	3	3.30	1				2085		102		102	0.00	2085							2085	0.049	0.049		9	9	0.658	18	69
3	2,3	3.30	2	15		N	4030	944			944	1.00	3664							3664	0.258			47	47	0.658	57	29
4	2	3.30	1	20			2085			541	541	1.00	1940							1940	0.279			51	51	0.658	60	29
4,5	2	3.30	1	20			2085		439	133	572	0.23	2049							2049	0.279			51	51	0.658	60	28
5,6	2	3.30	1	15		N	1945	388	221		609	0.64	1829	30	353					2181	0.279	0.279		51	51	0.658	66	28
7	4	3.40	1	20			2095			215	215	1.00	1949							1949	0.110	0.110		20	20	0.658	36	52
7,8	4	3.40	1	20			2095		0	215	215	1.00	1949							1949	0.110			20	20	0.658	36	52
8,9	4	3.30	1	15		N	1945	24	31		55	0.44	1864							1864	0.030			5	20	0.176	6	40
10,11	1	3.40	1	20			2095		40	92	132	0.70	1991							1991	0.066	0.066		12	12	0.658	24	62
11	1	3.40	1				2095		137		137	0.00	2095							2095	0.065			12	12	0.649	24	61
11,12	1	3.40	1	10		N	1955	45	77		122	0.37	1853							1853	0.066			12	12	0.654	18	63

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2023 Existing PM**	PROJECT NO.: 40876	Prepared By:	SKL	Aug-24
J8 Lok Yip Road / Jockey Club Road / San Wan Road		FILENAME : J8_LYR_JCR_SWR.xlsx	Checked By:	SLN	Aug-24
			Reviewed By:	SLN	Aug-24



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.412
Loss time		L =	29 sec
Total Flow		=	3690 pcu
Co	= (1.5*L+5)/(1-Y)	=	82.5 sec
Cm	= L/(1-Y)	=	49.3 sec
Yult		=	0.683
R.C.ult	= (Yult-Y)/Y*100%	=	65.6 %
Cp	= 0.9*L/(0.9-Y)	=	53.5 sec
Ymax	= 1-L/C	=	0.758
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**66 %**



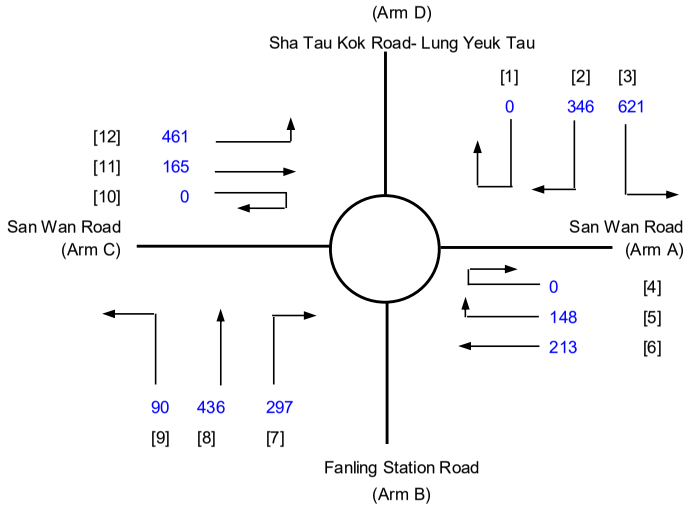
Stage 1	G= 16	Stage 2	G= 61	Stage 3	G= 11	Stage 4	G= 18
	Int = 9		Int = 8		Int = 7		Int = 8

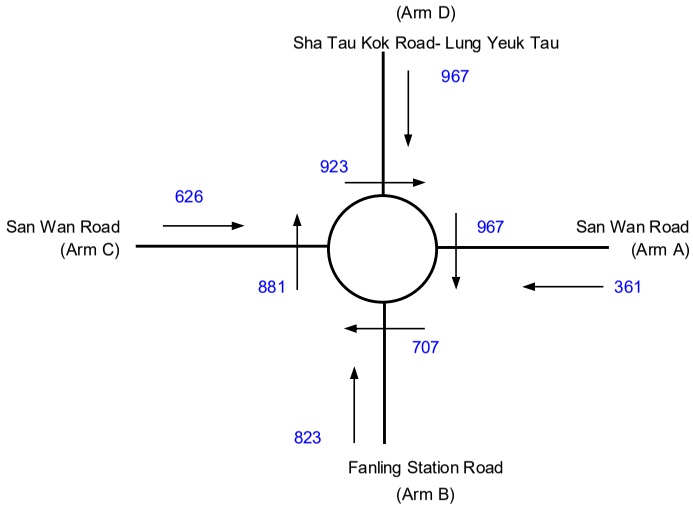
Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,2,3	9.4	7	9	0	77	9
P2	4	10.8	6	12	4	10	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							29					
1	3	3.30	1	20			2085			65	65	1.00	1940							1940	0.034			7	12	0.330	6	49
2	3	3.30	1				2085		115		115	0.00	2085							2085	0.055	0.055		12	12	0.543	18	55
3	2,3	3.30	2	15		N	4030	943			943	1.00	3664							3664	0.257			57	57	0.543	48	21
4	2	3.30	1	20			2085			541	541	1.00	1940							1940	0.279			62	62	0.542	48	20
4,5	2	3.30	1	20			2085		443	130	573	0.23	2050							2050	0.279	0.279		62	62	0.543	54	20
5,6	2	3.30	1	15		N	1945	412	177		589	0.70	1818	30	290					2108	0.279			62	62	0.543	54	19
7	4	3.40	1	20			2095			167	167	1.00	1949							1949	0.086			19	19	0.540	24	48
7,8	4	3.40	1	20			2095		0	168	168	1.00	1949							1949	0.086			19	19	0.543	24	48
8,9	4	3.30	1	15		N	1945	24	41		65	0.37	1876							1876	0.035			8	19	0.218	6	41
10,11	1	3.40	1	20			2095		58	97	155	0.63	2001							2001	0.077			17	17	0.543	24	50
11	1	3.40	1				2095		162		162	0.00	2095							2095	0.077			17	17	0.542	24	49
11,12	1	3.40	1	10		N	1955	30	117		147	0.20	1897							1897	0.077	0.077		17	17	0.543	24	50

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2023 Existing AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J9_SWR_STKR_FS	CHECKED BY:	SLN	Aug-24
J9 Sha Tau Kok Road / San Wan Road / Fanling Station Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24



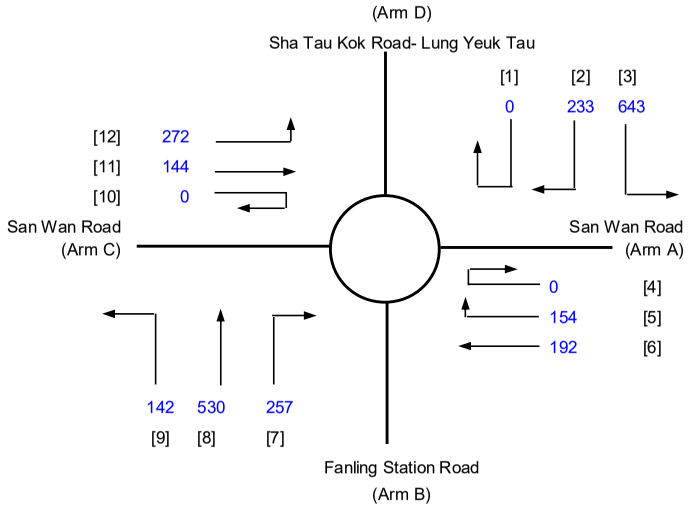


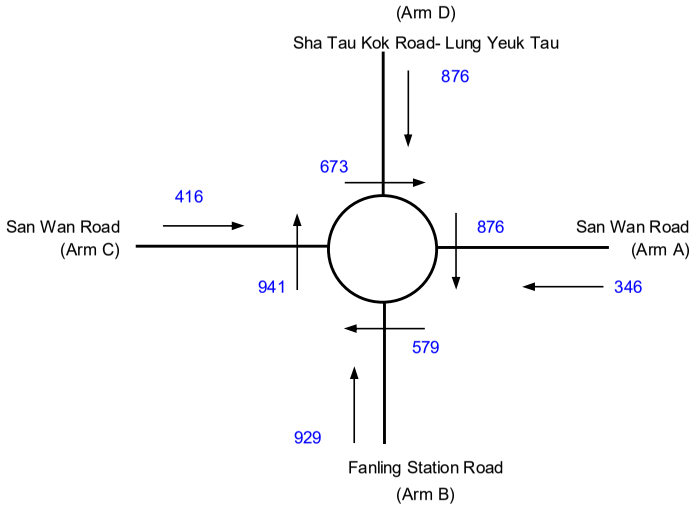
ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.50	5.00	7.50	6.00
E	=	Entry width (m)	9.50	8.50	9.00	9.50
L	=	Effective length of flare (m)	50.00	15.00	50.00	50.00
R	=	Entry radius (m)	100.00	20.00	45.00	50.00
D	=	Inscribed circle diameter (m)	55.00	55.00	55.00	55.00
A	=	Entry angle (degree)	30.00	60.00	30.00	25.00
Q	=	Entry flow (pcu/h)	361	823	626	967
Qc	=	Circulating flow across entry (pcu/h)	967	707	881	923
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.06	0.37	0.05	0.11
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.04	0.90	1.03	1.05
X2	=	V + ((E-V)/(1+2S))	9.27	7.00	8.87	8.86
M	=	EXP((D-60)/10)	1	1	1	1
F	=	303*X2	2810	2122	2687	2684
Td	=	1+(0.5/(1+M))	1.31	1.31	1.31	1.31
Fc	=	0.21*Td(1+0.2*X2)	0.79	0.66	0.76	0.76
Qe	=	K(F-Fc*Qc)	2130	1483	2069	2072
DFC	=	Design flow/Capacity = Q/Qe	0.17	0.56	0.30	0.47

Total In Sum = 2234 PCU

DFC of Critical Approach = 0.56

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2023 Existing PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J9_SWR_STKR_FS	CHECKED BY:	SLN	Aug-24
J9 Sha Tau Kok Road / San Wan Road / Fanling Station Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24





ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.50	5.00	7.50	6.00
E	=	Entry width (m)	9.50	8.50	9.00	9.50
L	=	Effective length of flare (m)	50.00	15.00	50.00	50.00
R	=	Entry radius (m)	100.00	20.00	45.00	50.00
D	=	Inscribed circle diameter (m)	55.00	55.00	55.00	55.00
A	=	Entry angle (degree)	30.00	60.00	30.00	25.00
Q	=	Entry flow (pcu/h)	346	929	416	876
Qc	=	Circulating flow across entry (pcu/h)	876	579	941	673
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.06	0.37	0.05	0.11
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.04	0.90	1.03	1.05
X2	=	V + ((E-V)/(1+2S))	9.27	7.00	8.87	8.86
M	=	EXP((D-60)/10)	1	1	1	1
F	=	303*X2	2810	2122	2687	2684
Td	=	1+(0.5/(1+M))	1.31	1.31	1.31	1.31
Fc	=	0.21*Td(1+0.2*X2)	0.79	0.66	0.76	0.76
Qe	=	K(F-Fc*Qc)	2204	1558	2022	2272
DFC	=	Design flow/Capacity = Q/Qe	0.16	0.60	0.21	0.39

Total In Sum = 2234 PCU

DFC of Critical Approach = 0.60

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Aug-24
Checked By:	SLN	Aug-24
Reviewed By:	SLN	Aug-24

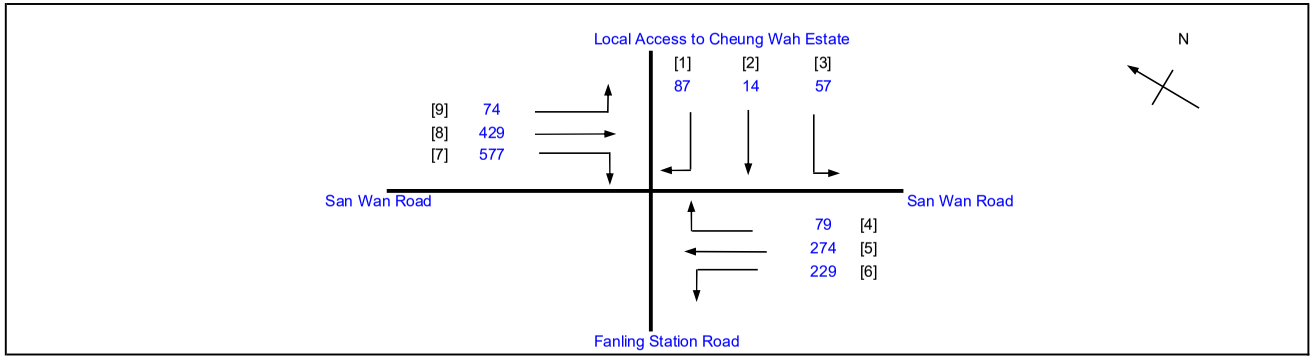
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

J10 San Wan Road / Fanling Station Road

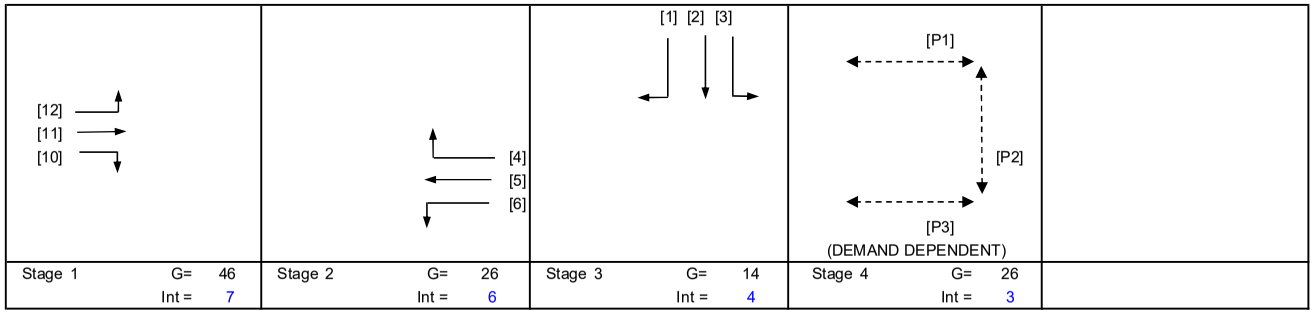
2023 Existing AM

PROJECT NO.: 40876

FILENAME : J10_SWR_FSR.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	122 sec
Sum(y)		Y =	0.486
Loss time		L =	33 sec
Total Flow		=	1820 pcu
Co	= (1.5*L+5)/(1-Y)	=	106.0 sec
Cm	= L/(1-Y)	=	64.2 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	34.2 %
Cp	= 0.9*L/(0.9-Y)	=	71.8 sec
Ymax	= 1-L/C	=	0.730
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**35 %**



Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		6	15	5	9	15
P2	4		6	15	5	9	15
P3	4		6	15	5	9	15

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							17					
4	1	3.30	1	14			2085			483	483	1.00	1883							1883	0.256	0.256		47	47	0.666	60	32
4,5	1	3.30	1	14			2085		429	94	523	0.18	2046							2046	0.256			47	47	0.664	60	32
6	1	3.30	1	10		N	1945	74			74	1.00	1691							1691	0.044			8	47	0.114	6	22
2,3	2	3.50	1	18			2105	229	68		297	0.77	1978							1978	0.150	0.150		27	27	0.666	42	46
1,2	2	3.50	1	12		N	1965		206	79	285	0.28	1899							1899	0.150			27	27	0.666	42	46
7,8,9	3	6.00	1	12		N	2215	57	14	87	158	0.91	1988							1988	0.079	0.079		15	15	0.666	24	60
PED	4	(DEMAND DEPENDENT STAGE)																					26					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Aug-24
Checked By:	SLN	Aug-24
Reviewed By:	SLN	Aug-24

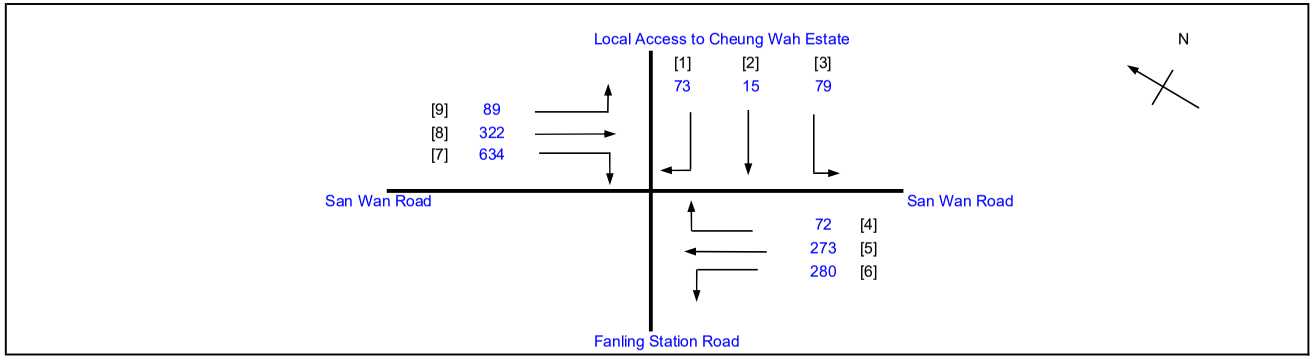
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

J10 San Wan Road / Fanling Station Road

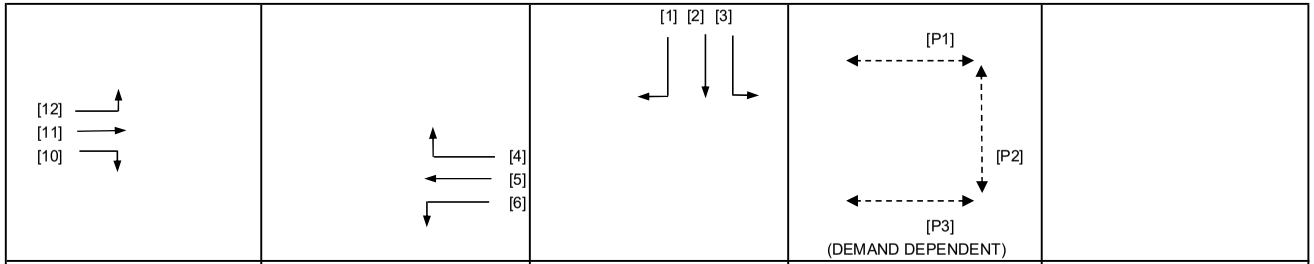
2023 Existing PM

PROJECT NO.: 40876

FILENAME : J10_SWR_FSR.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	122 sec
Sum(y)	Y =	0.492
Loss time	L =	33 sec
Total Flow	=	1837 pcu
Co = (1.5*L+5)/(1-Y)	=	107.2 sec
Cm = L/(1-Y)	=	64.9 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	32.8 %
Cp = 0.9*L/(0.9-Y)	=	72.7 sec
Ymax = 1-L/C	=	0.730
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**34 %**



Stage 1	G= 44	Int = 7
Stage 2	G= 28	Int = 6
Stage 3	G= 14	Int = 4
Stage 4	G= 26	Int = 3

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		6	15	5	9	15
P2	4		6	15	5	9	15
P3	4		6	15	5	9	15

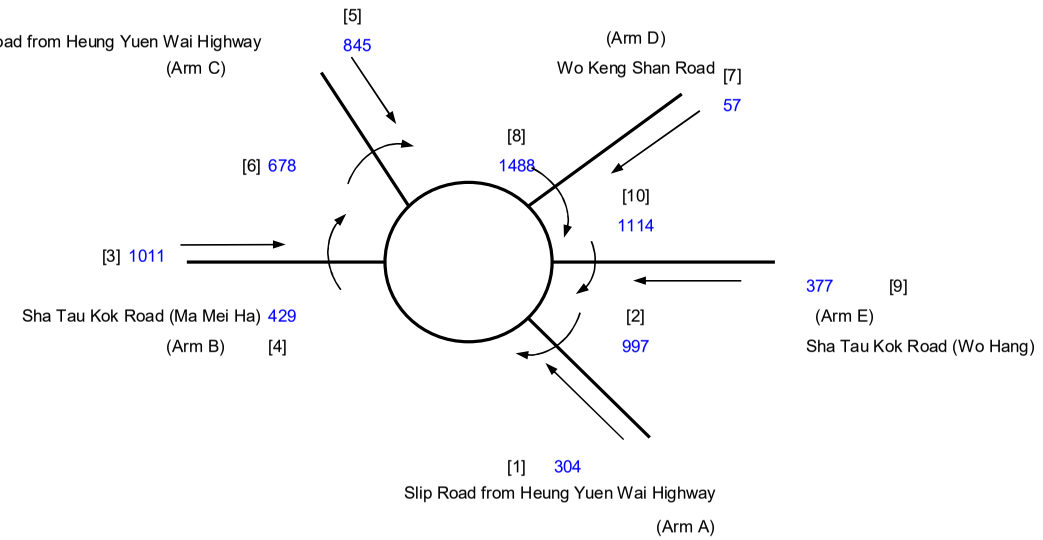
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							17					
4	1	3.30	1	14			2085			463	463	1.00	1883							1883	0.246	0.246		45	45	0.674	54	34
4,5	1	3.30	1	14			2085		322	171	493	0.35	2010							2010	0.245			44	45	0.672	60	34
6	1	3.30	1	10		N	1945	89			89	1.00	1691							1691	0.053			10	45	0.144	6	24
2,3	2	3.50	1	18			2105	280	37		317	0.88	1961							1961	0.162	0.162		29	29	0.674	48	45
1,2	2	3.50	1	12		N	1965		236	72	308	0.23	1909							1909	0.161			29	29	0.674	42	45
7,8,9	3	6.00	1	12		N	2215	79	15	73	167	0.91	1989							1989	0.084	0.084		15	15	0.674	30	59
PED	4	(DEMAND DEPENDENT STAGE)																					26					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

Appendix B

Junction Capacity Assessments
- Reference & Design Scenarios

LLA CONSULTANCY LIMITED		ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
			FILENAME: J1_STKR_HYWH.xls	CHECKED BY:	SLN	Aug-24
J1	Sha Tau Kok Road / Heung Yuen Wai Highway		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24

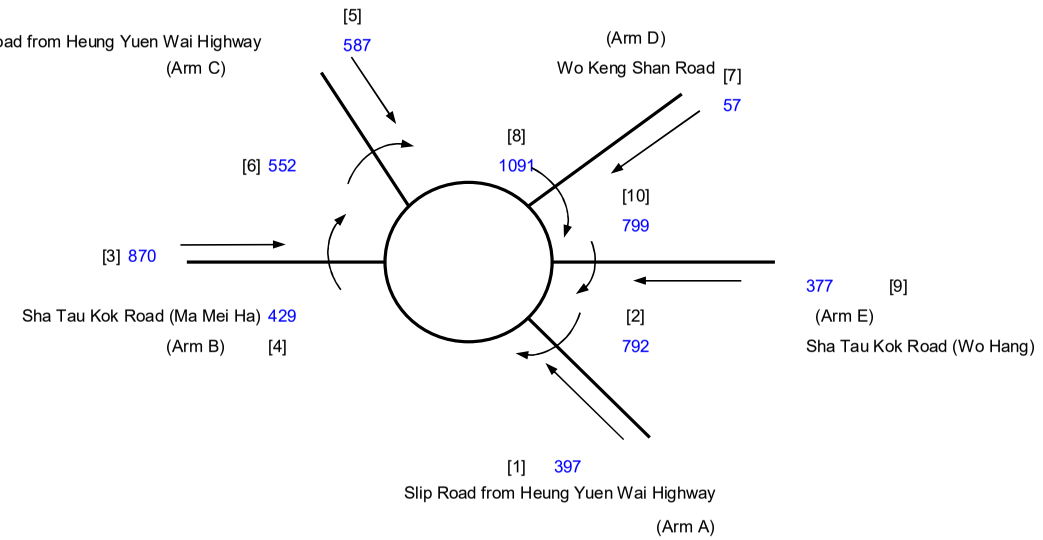


ARM			A	B	C	D	E
INPUT PARAMETERS:							
V	=	Approach half width (m)	4.00	3.30	4.00	3.90	3.70
E	=	Entry width (m)	9.90	7.60	9.80	7.70	7.70
L	=	Effective length of flare (m)	24.00	33.00	28.00	27.00	35.00
R	=	Entry radius (m)	60.00	40.00	40.00	44.00	27.00
D	=	Inscribed circle diameter (m)	50.00	50.00	50.00	50.00	50.00
A	=	Entry angle (degree)	35.00	35.00	35.00	35.00	10.00
Q	=	Entry flow (pcu/h)	304	1011	845	57	377
Qc	=	Circulating flow across entry (pcu/h)	997	429	678	1488	1114
OUTPUT PARAMETERS:							
S	=	Sharpness of flare = 1.6(E-V)/L	0.39	0.21	0.33	0.23	0.18
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	1.01	1.01	1.01	1.08
X2	=	V + ((E-V)/(1+2S))	7.30	6.33	7.49	6.52	6.63
M	=	EXP((D-60)/10)	0	0	0	0	0
F	=	303*X2	2213	1919	2269	1976	2009
Td	=	1+(0.5/(1+M))	1.37	1.37	1.37	1.37	1.37
Fc	=	0.21*Td(1+0.2*X2)	0.71	0.65	0.72	0.66	0.67
Qe	=	K(F-Fc*Qc)	1532	1652	1796	1002	1369
DFC	=	Design flow/Capacity = Q/Qe	0.20	0.61	0.47	0.06	0.28

Total In Sum = 2594 PCU

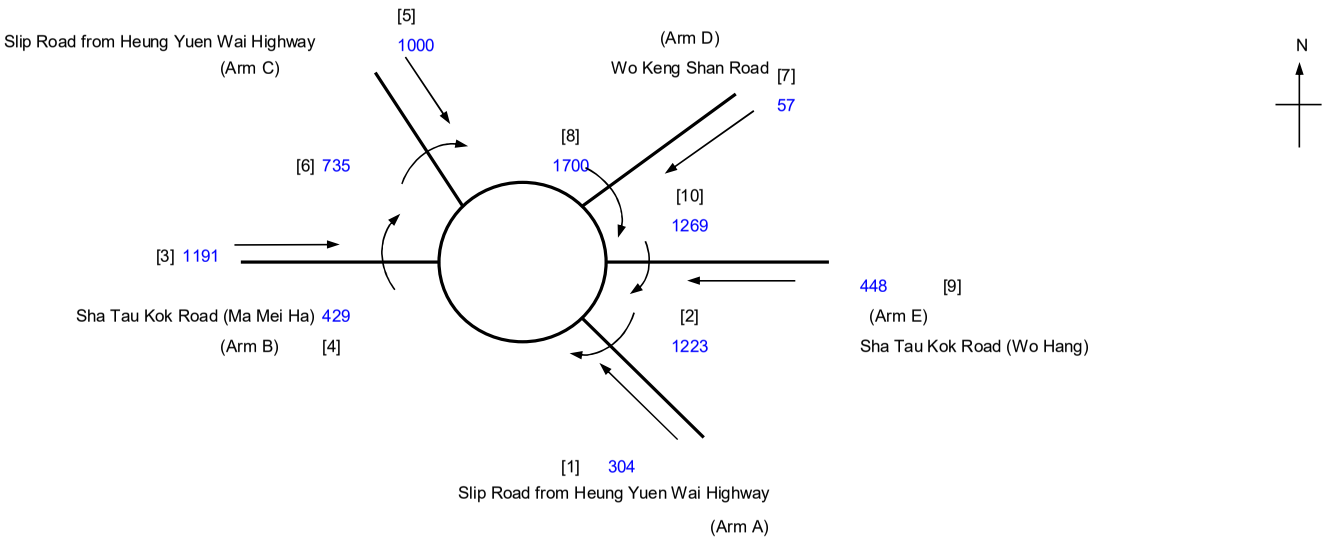
DFC of Critical Approach = 0.61

LLA CONSULTANCY LIMITED		ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
			FILENAME: J1_STKR_HYWH.xls	CHECKED BY:	SLN	Aug-24
J1	Sha Tau Kok Road / Heung Yuen Wai Highway		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24



ARM			A	B	C	D	E			
INPUT PARAMETERS:										
V	=	Approach half width (m)	4.00	3.30	4.00	3.90	3.70			
E	=	Entry width (m)	9.90	7.60	9.80	7.70	7.70			
L	=	Effective length of flare (m)	24.00	33.00	28.00	27.00	35.00			
R	=	Entry radius (m)	60.00	40.00	40.00	44.00	27.00			
D	=	Inscribed circle diameter (m)	50.00	50.00	50.00	50.00	50.00			
A	=	Entry angle (degree)	35.00	35.00	35.00	35.00	10.00			
Q	=	Entry flow (pcu/h)	397	870	587	57	377			
Qc	=	Circulating flow across entry (pcu/h)	792	429	552	1091	799			
OUTPUT PARAMETERS:										
S	=	Sharpness of flare = 1.6(E-V)/L	0.39	0.21	0.33	0.23	0.18			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	1.01	1.01	1.01	1.08			
X2	=	V + ((E-V)/(1+2S))	7.30	6.33	7.49	6.52	6.63			
M	=	EXP((D-60)/10)	0	0	0	0	0			
F	=	303*X2	2213	1919	2269	1976	2009			
Td	=	1+(0.5/(1+M))	1.37	1.37	1.37	1.37	1.37			
Fc	=	0.21*Td(1+0.2*X2)	0.71	0.65	0.72	0.66	0.67			
Qe	=	K(F-Fc*Qc)	1679	1652	1887	1266	1597	Total In Sum =	2288	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.24	0.53	0.31	0.05	0.24	DFC of Critical Approach =	0.53	

LLA CONSULTANCY LIMITED		ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Design AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
			FILENAME: J1_STKR_HYWH.xls	CHECKED BY:	SLN	Aug-24
J1	Sha Tau Kok Road / Heung Yuen Wai Highway		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24

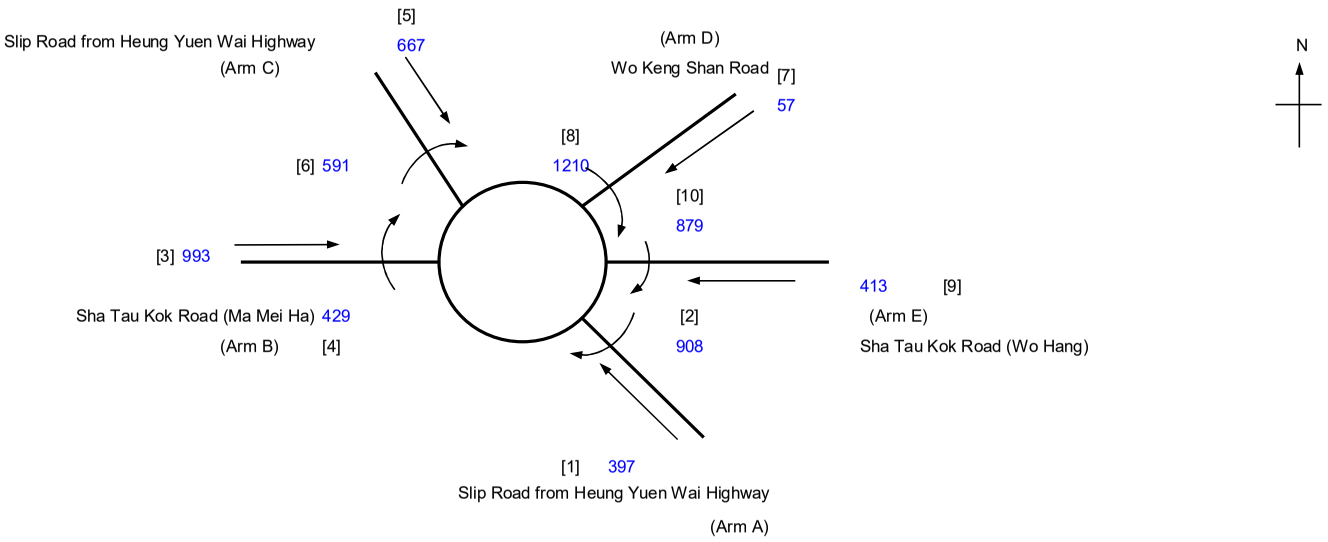


ARM			A	B	C	D	E
INPUT PARAMETERS:							
V	=	Approach half width (m)	4.00	3.30	4.00	3.90	3.70
E	=	Entry width (m)	9.90	7.60	9.80	7.70	7.70
L	=	Effective length of flare (m)	24.00	33.00	28.00	27.00	35.00
R	=	Entry radius (m)	60.00	40.00	40.00	44.00	27.00
D	=	Inscribed circle diameter (m)	50.00	50.00	50.00	50.00	50.00
A	=	Entry angle (degree)	35.00	35.00	35.00	35.00	10.00
Q	=	Entry flow (pcu/h)	304	1191	1000	57	448
Qc	=	Circulating flow across entry (pcu/h)	1223	429	735	1700	1269
OUTPUT PARAMETERS:							
S	=	Sharpness of flare = 1.6(E-V)/L	0.39	0.21	0.33	0.23	0.18
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	1.01	1.01	1.01	1.08
X2	=	V + ((E-V)/(1+2S))	7.30	6.33	7.49	6.52	6.63
M	=	EXP((D-60)/10)	0	0	0	0	0
F	=	303*X2	2213	1919	2269	1976	2009
Td	=	1+(0.5/(1+M))	1.37	1.37	1.37	1.37	1.37
Fc	=	0.21*Td(1+0.2*X2)	0.71	0.65	0.72	0.66	0.67
Qe	=	K(F-Fc*Qc)	1370	1652	1755	860	1258
DFC	=	Design flow/Capacity = Q/Qe	0.22	0.72	0.57	0.07	0.36

Total In Sum = 3000 PCU

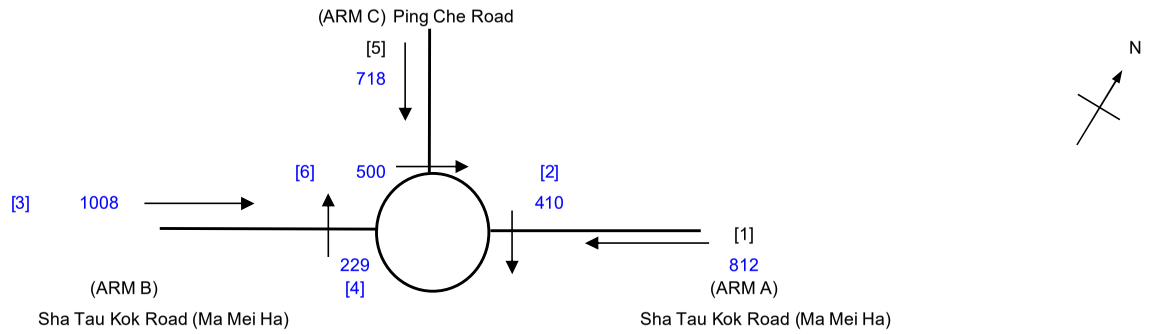
DFC of Critical Approach = 0.72

LLA CONSULTANCY LIMITED		ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Design PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
			FILENAME: J1_STKR_HYWH.xls	CHECKED BY:	SLN	Aug-24
J1	Sha Tau Kok Road / Heung Yuen Wai Highway		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24



ARM			A	B	C	D	E			
INPUT PARAMETERS:										
V	=	Approach half width (m)	4.00	3.30	4.00	3.90	3.70			
E	=	Entry width (m)	9.90	7.60	9.80	7.70	7.70			
L	=	Effective length of flare (m)	24.00	33.00	28.00	27.00	35.00			
R	=	Entry radius (m)	60.00	40.00	40.00	44.00	27.00			
D	=	Inscribed circle diameter (m)	50.00	50.00	50.00	50.00	50.00			
A	=	Entry angle (degree)	35.00	35.00	35.00	35.00	10.00			
Q	=	Entry flow (pcu/h)	397	993	667	57	413			
Qc	=	Circulating flow across entry (pcu/h)	908	429	591	1210	879			
OUTPUT PARAMETERS:										
S	=	Sharpness of flare = 1.6(E-V)/L	0.39	0.21	0.33	0.23	0.18			
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	1.01	1.01	1.01	1.08			
X2	=	V + ((E-V)/(1+2S))	7.30	6.33	7.49	6.52	6.63			
M	=	EXP((D-60)/10)	0	0	0	0	0			
F	=	303*X2	2213	1919	2269	1976	2009			
Td	=	1+(0.5/(1+M))	1.37	1.37	1.37	1.37	1.37			
Fc	=	0.21*Td(1+0.2*X2)	0.71	0.65	0.72	0.66	0.67			
Qe	=	K(F-Fc*Qc)	1596	1652	1859	1187	1539	Total In Sum =	2527	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.25	0.60	0.36	0.05	0.27	DFC of Critical Approach =	0.60	

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME: J2_STKR_PCR.xlsx	CHECKED BY:	SLN	Aug-24
J2 Sha Tau Kok Road / Ping Che Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24

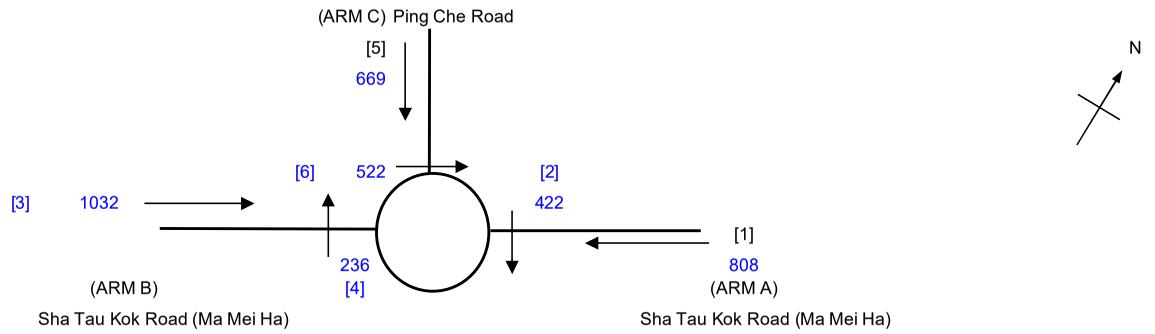


ARM			A	B	C
INPUT PARAMETERS:					
V	=	Approach half width (m)	7.40	7.30	4.10
E	=	Entry width (m)	8.20	7.90	8.10
L	=	Effective length of flare (m)	1.00	1.00	5.00
R	=	Entry radius (m)	75.00	60.00	40.00
D	=	Inscribed circle diameter (m)	53.00	53.00	53.00
A	=	Entry angle (degree)	10.00	15.00	10.00
Q	=	Entry flow (pcu/h)	812	1008	718
Qc	=	Circulating flow across entry (pcu/h)	410	229	500
OUTPUT PARAMETERS:					
S	=	Sharpness of flare = 1.6(E-V)/L	1.28	0.96	1.28
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.11	1.08	1.09
X2	=	V + ((E-V)/(1+2S))	7.62	7.51	5.22
M	=	EXP((D-60)/10)	0.50	0.50	0.50
F	=	303*X2	2310	2274	1583
Td	=	1+(0.5/(1+M))	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)	0.71	0.70	0.57
Qe	=	K(F-Fc*Qc)	2233	2293	1418
DFC	=	Design flow/Capacity = Q/Qe	0.36	0.44	0.51

Total In Sum = 3677 PCU

DFC of Critical Approach = 0.51

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME: J2_STKR_PCR.xlsx	CHECKED BY:	SLN	Aug-24
J2 Sha Tau Kok Road / Ping Che Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24

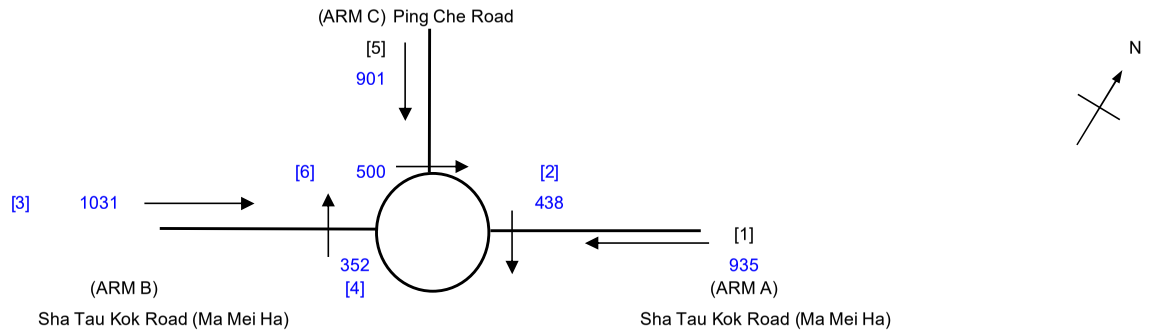


ARM			A	B	C
INPUT PARAMETERS:					
V	=	Approach half width (m)	7.40	7.30	4.10
E	=	Entry width (m)	8.20	7.90	8.10
L	=	Effective length of flare (m)	1.00	1.00	5.00
R	=	Entry radius (m)	75.00	60.00	40.00
D	=	Inscribed circle diameter (m)	53.00	53.00	53.00
A	=	Entry angle (degree)	10.00	15.00	10.00
Q	=	Entry flow (pcu/h)	808	1032	669
Qc	=	Circulating flow across entry (pcu/h)	422	236	522
OUTPUT PARAMETERS:					
S	=	Sharpness of flare = 1.6(E-V)/L	1.28	0.96	1.28
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.11	1.08	1.09
X2	=	V + ((E-V)/(1+2S))	7.62	7.51	5.22
M	=	EXP((D-60)/10)	0.50	0.50	0.50
F	=	303*X2	2310	2274	1583
Td	=	1+(0.5/(1+M))	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)	0.71	0.70	0.57
Qe	=	K(F-Fc*Qc)	2224	2287	1404
DFC	=	Design flow/Capacity = Q/Qe	0.36	0.45	0.48

Total In Sum = 3689 PCU

DFC of Critical Approach = 0.48

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Design AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME: J2_STKR_PCR.xlsx	CHECKED BY:	SLN	Aug-24
J2 Sha Tau Kok Road / Ping Che Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24

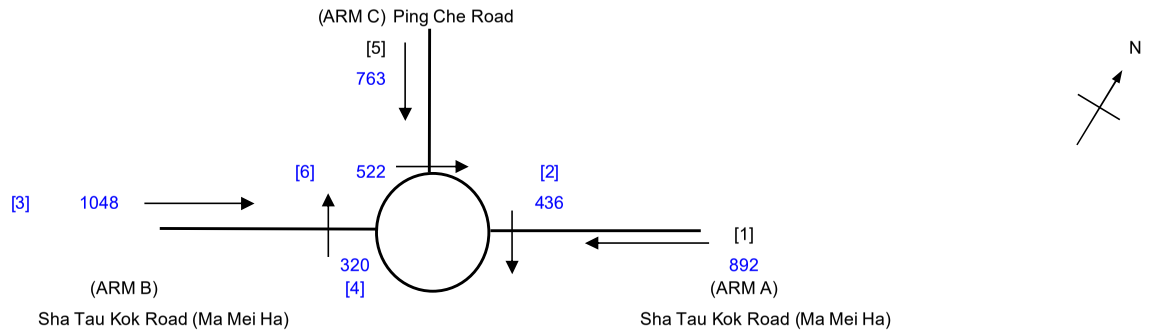


ARM			A	B	C
INPUT PARAMETERS:					
V	=	Approach half width (m)	7.40	7.30	4.10
E	=	Entry width (m)	8.20	7.90	8.10
L	=	Effective length of flare (m)	1.00	1.00	5.00
R	=	Entry radius (m)	75.00	60.00	40.00
D	=	Inscribed circle diameter (m)	53.00	53.00	53.00
A	=	Entry angle (degree)	10.00	15.00	10.00
Q	=	Entry flow (pcu/h)	935	1031	901
Qc	=	Circulating flow across entry (pcu/h)	438	352	500
OUTPUT PARAMETERS:					
S	=	Sharpness of flare = 1.6(E-V)/L	1.28	0.96	1.28
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.11	1.08	1.09
X2	=	V + ((E-V)/(1+2S))	7.62	7.51	5.22
M	=	EXP((D-60)/10)	0.50	0.50	0.50
F	=	303*X2	2310	2274	1583
Td	=	1+(0.5/(1+M))	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)	0.71	0.70	0.57
Qe	=	K(F-Fc*Qc)	2211	2199	1418
DFC	=	Design flow/Capacity = Q/Qe	0.42	0.47	0.64

Total In Sum = 4157 PCU

DFC of Critical Approach = 0.64

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Design PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME: J2_STKR_PCR.xlsx	CHECKED BY:	SLN	Aug-24
J2 Sha Tau Kok Road / Ping Che Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24

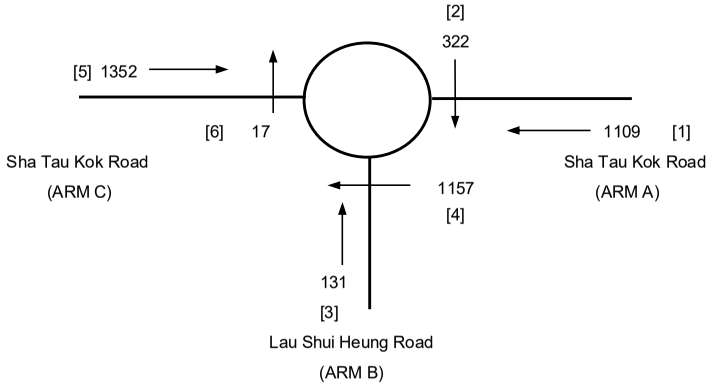


ARM			A	B	C
INPUT PARAMETERS:					
V	=	Approach half width (m)	7.40	7.30	4.10
E	=	Entry width (m)	8.20	7.90	8.10
L	=	Effective length of flare (m)	1.00	1.00	5.00
R	=	Entry radius (m)	75.00	60.00	40.00
D	=	Inscribed circle diameter (m)	53.00	53.00	53.00
A	=	Entry angle (degree)	10.00	15.00	10.00
Q	=	Entry flow (pcu/h)	892	1048	763
Qc	=	Circulating flow across entry (pcu/h)	436	320	522
OUTPUT PARAMETERS:					
S	=	Sharpness of flare = 1.6(E-V)/L	1.28	0.96	1.28
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.11	1.08	1.09
X2	=	V + ((E-V)/(1+2S))	7.62	7.51	5.22
M	=	EXP((D-60)/10)	0.50	0.50	0.50
F	=	303*X2	2310	2274	1583
Td	=	1+(0.5/(1+M))	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)	0.71	0.70	0.57
Qe	=	K(F-Fc*Qc)	2213	2223	1404
DFC	=	Design flow/Capacity = Q/Qe	0.40	0.47	0.54

Total In Sum = 3981 PCU

DFC of Critical Approach = 0.54

LLA CONSULTANCY LIMITED		ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
			FILENAME : J3_STKR_LSHR.x	CHECKED BY:	SLN	Aug-24
J3	Sha Tau Kok Road / Lau Shui Heung Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24

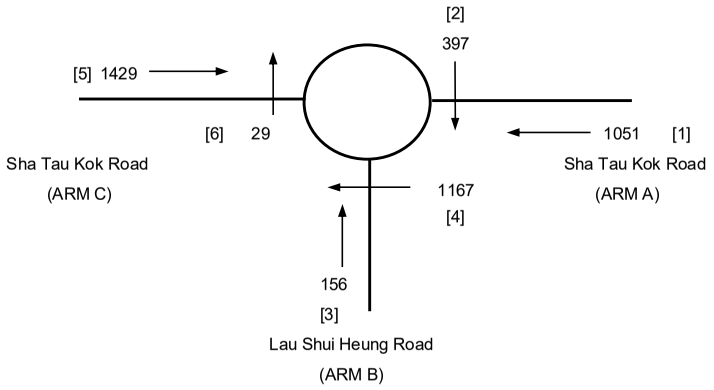


ARM			A	B	C
INPUT PARAMETERS:					
V	=	Approach half width (m)	6.30	3.60	6.60
E	=	Entry width (m)	6.90	5.60	7.00
L	=	Effective length of flare (m)	1.00	7.00	1.00
R	=	Entry radius (m)	80.00	110.00	16.00
D	=	Inscribed circle diameter (m)	53.00	53.00	53.00
A	=	Entry angle (degree)	15.00	15.00	15.00
Q	=	Entry flow (pcu/h)	1109	131	1352
Qc	=	Circulating flow across entry (pcu/h)	322	1157	17
OUTPUT PARAMETERS:					
S	=	Sharpness of flare = 1.6(E-V)/L	0.96	0.46	0.64
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.09	1.09	1.04
X2	=	V + ((E-V)/(1+2S))	6.51	4.64	6.78
M	=	EXP((D-60)/10)	0.50	0.50	0.50
F	=	303*X2	1971	1407	2053
Td	=	1+(0.5/(1+M))	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)	0.64	0.54	0.66
Qe	=	K(F-Fc*Qc)	1920	854	2123
DFC	=	Design flow/Capacity = Q/Qe	0.58	0.15	0.64

Total In Sum = 2592 PCU

DFC of Critical Approach = 0.64

LLA CONSULTANCY LIMITED		ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
			FILENAME : J3_STKR_LSHR.x	CHECKED BY:	SLN	Aug-24
J3	Sha Tau Kok Road / Lau Shui Heung Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24

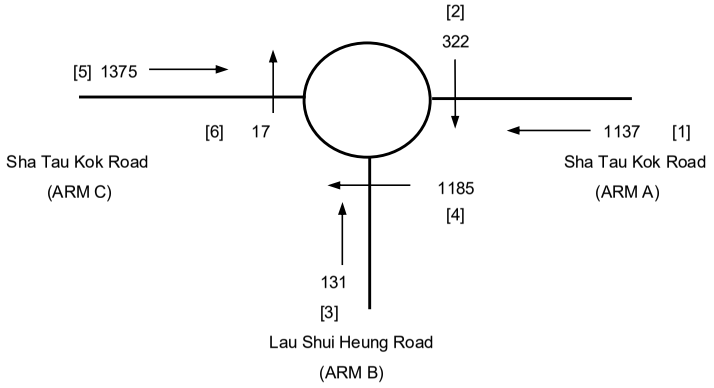


ARM			A	B	C
INPUT PARAMETERS:					
V	=	Approach half width (m)	6.30	3.60	6.60
E	=	Entry width (m)	6.90	5.60	7.00
L	=	Effective length of flare (m)	1.00	7.00	1.00
R	=	Entry radius (m)	80.00	110.00	16.00
D	=	Inscribed circle diameter (m)	53.00	53.00	53.00
A	=	Entry angle (degree)	15.00	15.00	15.00
Q	=	Entry flow (pcu/h)	1051	156	1429
Qc	=	Circulating flow across entry (pcu/h)	397	1167	29
OUTPUT PARAMETERS:					
S	=	Sharpness of flare = 1.6(E-V)/L	0.96	0.46	0.64
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.09	1.09	1.04
X2	=	V + ((E-V)/(1+2S))	6.51	4.64	6.78
M	=	EXP((D-60)/10)	0.50	0.50	0.50
F	=	303*X2	1971	1407	2053
Td	=	1+(0.5/(1+M))	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)	0.64	0.54	0.66
Qe	=	K(F-Fc*Qc)	1867	848	2115
DFC	=	Design flow/Capacity = Q/Qe	0.56	0.18	0.68

Total In Sum = 2636 PCU

DFC of Critical Approach = 0.68

LLA CONSULTANCY LIMITED		ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Design AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
			FILENAME : J3_STKR_LSHR.x	CHECKED BY:	SLN	Aug-24
J3	Sha Tau Kok Road / Lau Shui Heung Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24

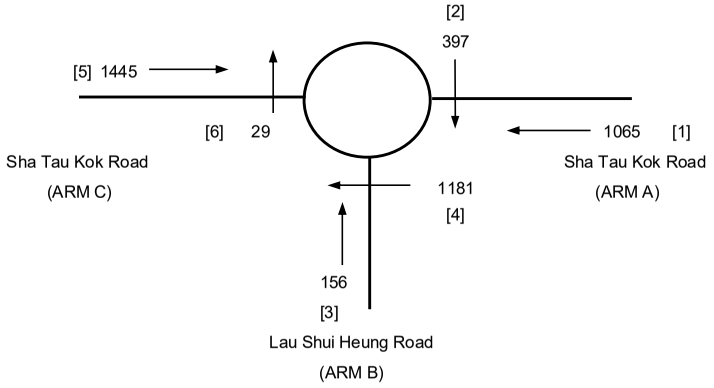


ARM			A	B	C
INPUT PARAMETERS:					
V	=	Approach half width (m)	6.30	3.60	6.60
E	=	Entry width (m)	6.90	5.60	7.00
L	=	Effective length of flare (m)	1.00	7.00	1.00
R	=	Entry radius (m)	80.00	110.00	16.00
D	=	Inscribed circle diameter (m)	53.00	53.00	53.00
A	=	Entry angle (degree)	15.00	15.00	15.00
Q	=	Entry flow (pcu/h)	1137	131	1375
Qc	=	Circulating flow across entry (pcu/h)	322	1185	17
OUTPUT PARAMETERS:					
S	=	Sharpness of flare = 1.6(E-V)/L	0.96	0.46	0.64
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.09	1.09	1.04
X2	=	V + ((E-V)/(1+2S))	6.51	4.64	6.78
M	=	EXP((D-60)/10)	0.50	0.50	0.50
F	=	303*X2	1971	1407	2053
Td	=	1+(0.5/(1+M))	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)	0.64	0.54	0.66
Qe	=	K(F-Fc*Qc)	1920	838	2123
DFC	=	Design flow/Capacity = Q/Qe	0.59	0.16	0.65

Total In Sum = 2643 PCU

DFC of Critical Approach = 0.65

LLA CONSULTANCY LIMITED		ROUNDABOUT CALCULATION			INITIALS	DATE
Job Title:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Design PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
			FILENAME : J3_STKR_LSHR.x	CHECKED BY:	SLN	Aug-24
J3	Sha Tau Kok Road / Lau Shui Heung Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24

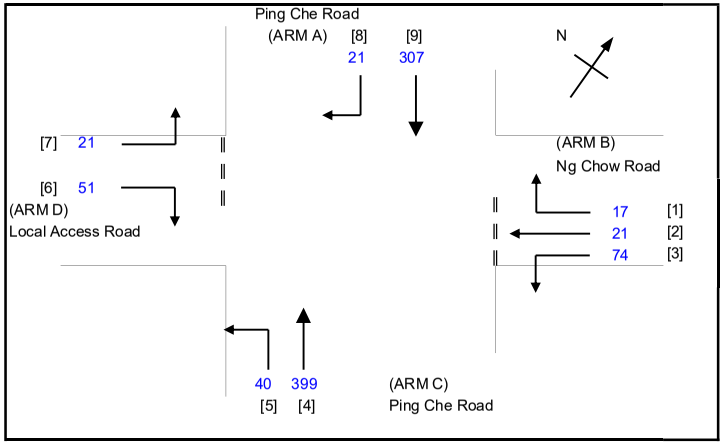


ARM			A	B	C
INPUT PARAMETERS:					
V	=	Approach half width (m)	6.30	3.60	6.60
E	=	Entry width (m)	6.90	5.60	7.00
L	=	Effective length of flare (m)	1.00	7.00	1.00
R	=	Entry radius (m)	80.00	110.00	16.00
D	=	Inscribed circle diameter (m)	53.00	53.00	53.00
A	=	Entry angle (degree)	15.00	15.00	15.00
Q	=	Entry flow (pcu/h)	1065	156	1445
Qc	=	Circulating flow across entry (pcu/h)	397	1181	29
OUTPUT PARAMETERS:					
S	=	Sharpness of flare = 1.6(E-V)/L	0.96	0.46	0.64
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.09	1.09	1.04
X2	=	V + ((E-V)/(1+2S))	6.51	4.64	6.78
M	=	EXP((D-60)/10)	0.50	0.50	0.50
F	=	303*X2	1971	1407	2053
Td	=	1+(0.5/(1+M))	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)	0.64	0.54	0.66
Qe	=	K(F-Fc*Qc)	1867	840	2115
DFC	=	Design flow/Capacity = Q/Qe	0.57	0.19	0.68

Total In Sum = 2666 PCU

DFC of Critical Approach = 0.68

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J4_PCR_NCR.xlsx	CHECKED BY:	SLN	Aug-24
J4 Ping Che Road / Ng Chow Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24



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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	7.30	(metres)		
W cr	=	0	(metres)	Y =	0.748

MAJOR ROAD (ARM A)				MAJOR ROAD (ARM C)			
W a-d	=	3.65	(metres)	W c-b	=	0.00	(metres)
Vr a-d	=	100	(metres)	Vr c-b	=	0	(metres)
q a-b	=	0	(pcu/hr)	q c-a	=	399	(pcu/hr)
q a-c	=	307	(pcu/hr)	q c-b	=	0	(pcu/hr)
q a-d	=	21	(pcu/hr)	q c-d	=	40	(pcu/hr)

MINOR ROAD (ARM B)				MINOR ROAD (ARM D)			
W b-a	=	0.00	(metres)	W d-c	=	3.40	(metres)
W b-c	=	5.00	(metres)	W d-a	=	0.00	(metres)
Vl b-a	=	30	(metres)	Vl d-c	=	18	(metres)
Vr b-a	=	18	(metres)	Vr d-c	=	19	(metres)
Vr b-c	=	18	(metres)	Vr d-a	=	19	(metres)
q b-a	=	17	(pcu/hr)	q d-c	=	51	(pcu/hr)
q b-c	=	74	(pcu/hr)	q d-a	=	21	(pcu/hr)
q b-d	=	21	(pcu/hr)	q d-b	=	0	(pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.554	X a	=	0.982
X c	=	0.586	X d	=	0.817
Z b	=	1.023	Z d	=	0.597
M b	=	0.950	M d	=	0.550

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.049	r d-c	=	0.147
ql b-d	=	11.014 (pcu/hr)	ql d-b	=	0 (pcu/hr)
qr b-d	=	9.9856 (pcu/hr)	qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	253 (pcu/hr)	Q d-c	=	347 (pcu/hr)
Q b-c	=	669 (pcu/hr)	Q d-a	=	364 (pcu/hr)
Q c-b	=	383 (pcu/hr)	Q a-d	=	614 (pcu/hr)
Ql b-d	=	439 (pcu/hr)	Ql d-b	=	249 (pcu/hr)
Qr b-d	=	256 (pcu/hr)	Qr d-b	=	371 (pcu/hr)
Q b-acd	=	429 (pcu/hr)	Q d-abc	=	352 (pcu/hr)

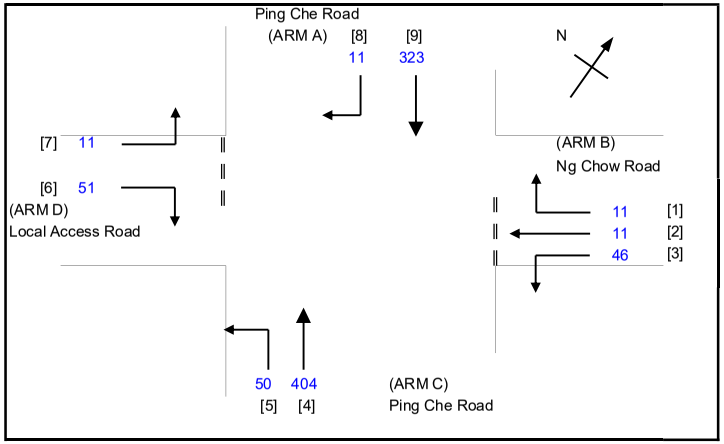
TOTAL FLOW = 951 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0672
DFC b-c	=	0.1106
DFC c-b	=	0.0000
DFCl b-d	=	0.0251
DFCr b-d	=	0.0390
DFC d-c	=	0.1470
DFC d-a	=	0.0577
DFC a-d	=	0.0342
DFCl d-b	=	0.0000
DFCr d-b	=	0.0000
DFC b-acd (shared lane)	=	0.2608
DFC d-abc (shared lane)	=	0.2047

CRITICAL DFC = 0.26

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J4_PCR_NCR.xlsx	CHECKED BY:	SLN	Aug-24
J4 Ping Che Road / Ng Chow Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24



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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	7.30	(metres)		
W cr	=	0	(metres)	Y =	0.748

MAJOR ROAD (ARM A)				MAJOR ROAD (ARM C)			
W a-d	=	3.65	(metres)	W c-b =	0.00	(metres)	
Vr a-d	=	100	(metres)	Vr c-b =	0	(metres)	
q a-b	=	0	(pcu/hr)	q c-a =	404	(pcu/hr)	
q a-c	=	323	(pcu/hr)	q c-b =	0	(pcu/hr)	
q a-d	=	11	(pcu/hr)	q c-d =	50	(pcu/hr)	

MINOR ROAD (ARM B)				MINOR ROAD (ARM D)			
W b-a	=	0.00	(metres)	W d-c =	3.40	(metres)	
W b-c	=	5.00	(metres)	W d-a =	0.00	(metres)	
Vl b-a	=	30	(metres)	Vl d-c =	18	(metres)	
Vr b-a	=	18	(metres)	Vr d-c =	19	(metres)	
Vr b-c	=	18	(metres)	Vr d-a =	19	(metres)	
q b-a	=	11	(pcu/hr)	q d-c =	51	(pcu/hr)	
q b-c	=	46	(pcu/hr)	q d-a =	11	(pcu/hr)	
q b-d	=	11	(pcu/hr)	q d-b =	0	(pcu/hr)	

GEOMETRIC FACTORS :

X b	=	0.554	X a	=	0.982
X c	=	0.586	X d	=	0.817
Z b	=	1.023	Z d	=	0.597
M b	=	0.950	M d	=	0.550

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.0309		r d-c	=	0.143	
ql b-d	=	5.6699	(pcu/hr)	ql d-b	=	0	(pcu/hr)
qr b-d	=	5.3301	(pcu/hr)	qr d-b	=	0	(pcu/hr)

CAPACITY OF MOVEMENT :

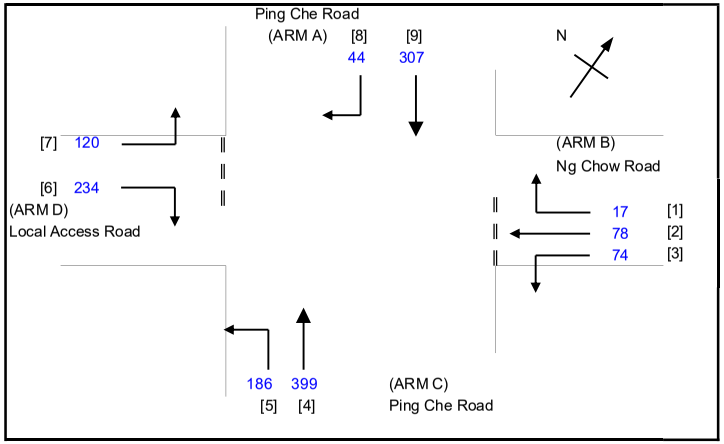
Q b-a	=	253	(pcu/hr)	Q d-c	=	356	(pcu/hr)
Q b-c	=	667	(pcu/hr)	Q d-a	=	363	(pcu/hr)
Q c-b	=	382	(pcu/hr)	Q a-d	=	610	(pcu/hr)
Ql b-d	=	435	(pcu/hr)	Ql d-b	=	249	(pcu/hr)
Qr b-d	=	254	(pcu/hr)	Qr d-b	=	369	(pcu/hr)
Q b-acd	=	436	(pcu/hr)	Q d-abc	=	357	(pcu/hr)
TOTAL FLOW	=	918	(PCU/HR)				

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0435
DFC b-c	=	0.0690
DFC c-b	=	0.0000
DFCl b-d	=	0.0130
DFCr b-d	=	0.0210
DFC d-c	=	0.1433
DFC d-a	=	0.0303
DFC a-d	=	0.0180
DFCl d-b	=	0.0000
DFCr d-b	=	0.0000
DFC b-acd (shared lane)	=	0.1559
DFC d-abc (shared lane)	=	0.1736

CRITICAL DFC = 0.17

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Design AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J4_PCR_NCR.xlsx	CHECKED BY:	SLN	Aug-24
J4 Ping Che Road / Ng Chow Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24



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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	8.00	(metres)		
W cr	=	3.50	(metres)	Y =	0.724

MAJOR ROAD (ARM A)				MAJOR ROAD (ARM C)			
W a-d	=	3.50	(metres)	W c-b =	0.00		(metres)
Vr a-d	=	100	(metres)	Vr c-b =	0		(metres)
q a-b	=	0	(pcu/hr)	q c-a =	399		(pcu/hr)
q a-c	=	307	(pcu/hr)	q c-b =	0		(pcu/hr)
q a-d	=	44	(pcu/hr)	q c-d =	186		(pcu/hr)

MINOR ROAD (ARM B)				MINOR ROAD (ARM D)			
W b-a	=	0.00	(metres)	W d-c =	5.00		(metres)
W b-c	=	5.00	(metres)	W d-a =	5.00		(metres)
Vl b-a	=	30	(metres)	Vl d-c =	36		(metres)
Vr b-a	=	18	(metres)	Vr d-c =	37		(metres)
Vr b-c	=	18	(metres)	Vr d-a =	37		(metres)
q b-a	=	17	(pcu/hr)	q d-c =	234		(pcu/hr)
q b-c	=	74	(pcu/hr)	q d-a =	120		(pcu/hr)
q b-d	=	78	(pcu/hr)	q d-b =	0		(pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.554	X a	=	0.968
X c	=	0.586	X d	=	0.971
Z b	=	1.023	Z d	=	1.043
M b	=	0.950	M d	=	0.971

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.0396		r d-c	=	0.545	
ql b-d	=	40.545	(pcu/hr)	ql d-b	=	0	(pcu/hr)
qr b-d	=	37.455	(pcu/hr)	qr d-b	=	0	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	252	(pcu/hr)	Q d-c	=	429	(pcu/hr)
Q b-c	=	673	(pcu/hr)	Q d-a	=	559	(pcu/hr)
Q c-b	=	379	(pcu/hr)	Q a-d	=	572	(pcu/hr)
Ql b-d	=	462	(pcu/hr)	Ql d-b	=	470	(pcu/hr)
Qr b-d	=	269	(pcu/hr)	Qr d-b	=	470	(pcu/hr)
Q b-acd	=	347	(pcu/hr)	Q d-abc	=	466	(pcu/hr)

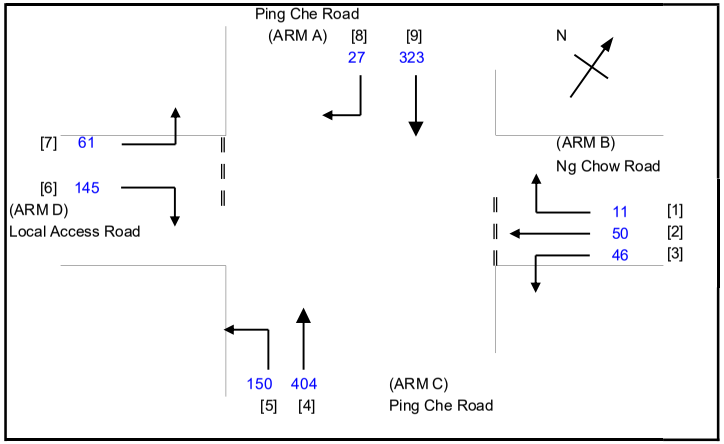
TOTAL FLOW = 1459 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0675
DFC b-c	=	0.1100
DFC c-b	=	0.0000
DFCl b-d	=	0.0878
DFCr b-d	=	0.1392
DFC d-c	=	0.5455
DFC d-a	=	0.2147
DFC a-d	=	0.0769
DFCl d-b	=	0.0000
DFCr d-b	=	0.0000
DFC b-acd (shared lane)	=	0.4869
DFC d-abc (shared lane)	=	0.7601

CRITICAL DFC = 0.76

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Design PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J4_PCR_NCR.xlsx	CHECKED BY:	SLN	Aug-24
J4 Ping Che Road / Ng Chow Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24



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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	8.00	(metres)		
W cr	=	3.50	(metres)	Y =	0.724

MAJOR ROAD (ARM A)				MAJOR ROAD (ARM C)			
W a-d	=	3.50	(metres)	W c-b =	0.00		(metres)
Vr a-d	=	100	(metres)	Vr c-b =	0		(metres)
q a-b	=	0	(pcu/hr)	q c-a =	404		(pcu/hr)
q a-c	=	323	(pcu/hr)	q c-b =	0		(pcu/hr)
q a-d	=	27	(pcu/hr)	q c-d =	150		(pcu/hr)

MINOR ROAD (ARM B)				MINOR ROAD (ARM D)			
W b-a	=	0.00	(metres)	W d-c =	5.00		(metres)
W b-c	=	5.00	(metres)	W d-a =	5.00		(metres)
Vl b-a	=	30	(metres)	Vl d-c =	36		(metres)
Vr b-a	=	18	(metres)	Vr d-c =	37		(metres)
Vr b-c	=	18	(metres)	Vr d-a =	37		(metres)
q b-a	=	11	(pcu/hr)	q d-c =	145		(pcu/hr)
q b-c	=	46	(pcu/hr)	q d-a =	61		(pcu/hr)
q b-d	=	50	(pcu/hr)	q d-b =	0		(pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.554	X a	=	0.968
X c	=	0.586	X d	=	0.971
Z b	=	1.023	Z d	=	1.043
M b	=	0.950	M d	=	0.971

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.0244		r d-c	=	0.322	
ql b-d	=	25.611	(pcu/hr)	ql d-b	=	0	(pcu/hr)
qr b-d	=	24.389	(pcu/hr)	qr d-b	=	0	(pcu/hr)

CAPACITY OF MOVEMENT :

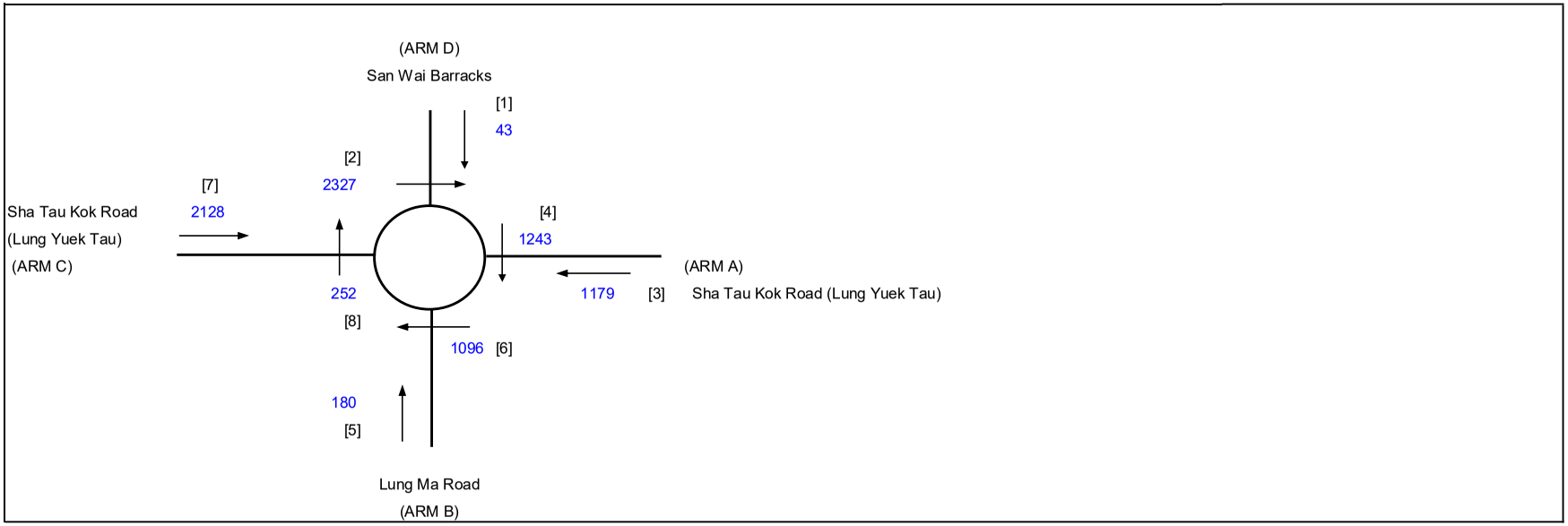
Q b-a	=	267	(pcu/hr)	Q d-c	=	450	(pcu/hr)
Q b-c	=	671	(pcu/hr)	Q d-a	=	597	(pcu/hr)
Q c-b	=	381	(pcu/hr)	Q a-d	=	580	(pcu/hr)
Ql b-d	=	467	(pcu/hr)	Ql d-b	=	476	(pcu/hr)
Qr b-d	=	272	(pcu/hr)	Qr d-b	=	476	(pcu/hr)
Q b-acd	=	360	(pcu/hr)	Q d-abc	=	485	(pcu/hr)
TOTAL FLOW	=	1217	(PCU/HR)				

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0412
DFC b-c	=	0.0686
DFC c-b	=	0.0000
DFCl b-d	=	0.0548
DFCr b-d	=	0.0897
DFC d-c	=	0.3222
DFC d-a	=	0.1022
DFC a-d	=	0.0466
DFCl d-b	=	0.0000
DFCr d-b	=	0.0000
DFC b-acd (shared lane)	=	0.2970
DFC d-abc (shared lane)	=	0.4244

CRITICAL DFC = 0.42

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION				INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference AM**	PROJECT NO.:	40876	PREPARED BY:	SKL	Aug-24
		FILENAME :	J5_STKR_LMR.xls	CHECKED BY:	SLN	Aug-24
J5 Sha Tau Kok Road / Lung Ma Road		REFERENCE NO.:		REVIEWED BY:	SLN	Aug-24

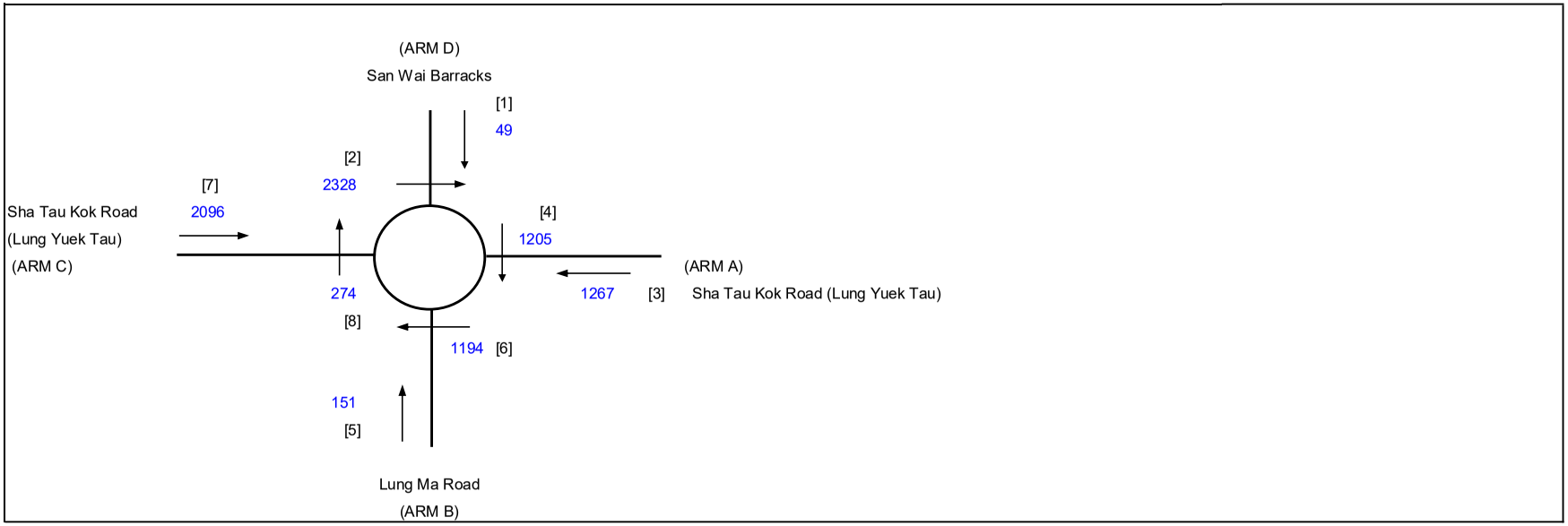


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.30	3.50	7.30	3.00
E	=	Entry width (m)	10.00	7.00	9.50	5.00
L	=	Effective length of flare (m)	11.00	20.00	30.00	15.00
R	=	Entry radius (m)	20.00	100.00	30.00	35.00
D	=	Inscribed circle diameter (m)	55.00	55.00	55.00	55.00
A	=	Entry angle (degree)	20.00	10.00	9.00	15.00
Q	=	Entry flow (pcu/h)	1179	180	2128	43
Qc	=	Circulating flow across entry (pcu/h)	1243	1096	252	2327
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.39	0.28	0.12	0.21
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.11	1.09	1.07
X2	=	V + ((E-V)/(1+2S))	8.81	5.74	9.08	4.40
M	=	EXP((D-60)/10)	0.61	0.61	0.61	0.61
F	=	303*X2	2670	1740	2752	1334
Td	=	1+(0.5/(1+M))	1.31	1.31	1.31	1.31
Fc	=	0.21*Td(1+0.2*X2)	0.76	0.59	0.78	0.52
Qe	=	K(F-Fc*Qc)	1784	1210	2784	138
DFC	=	Design flow/Capacity = Q/Qe	0.66	0.15	0.76	0.31

Total In Sum = 3530 PCU

DFC of Critical Approach = 0.76

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION				INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference PM**	PROJECT NO.:	40876	PREPARED BY:	SKL	Aug-24
		FILENAME :	J5_STKR_LMR.xls	CHECKED BY:	SLN	Aug-24
J5 Sha Tau Kok Road / Lung Ma Road		REFERENCE NO.:		REVIEWED BY:	SLN	Aug-24

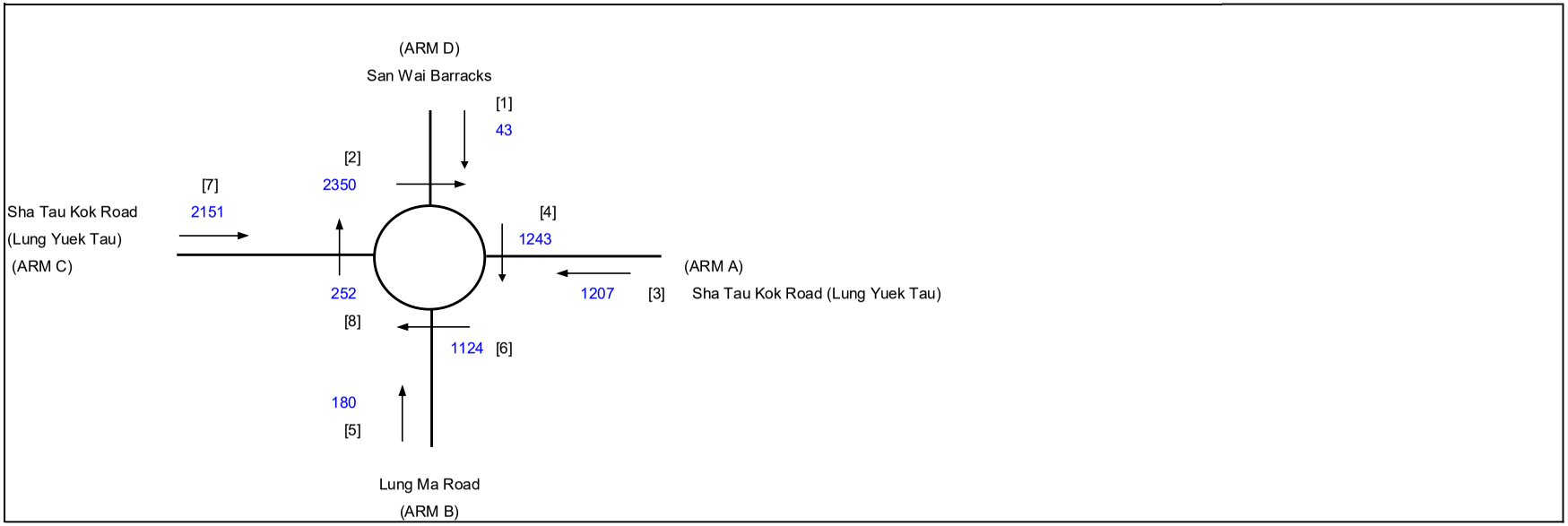


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.30	3.50	7.30	3.00
E	=	Entry width (m)	10.00	7.00	9.50	5.00
L	=	Effective length of flare (m)	11.00	20.00	30.00	15.00
R	=	Entry radius (m)	20.00	100.00	30.00	35.00
D	=	Inscribed circle diameter (m)	55.00	55.00	55.00	55.00
A	=	Entry angle (degree)	20.00	10.00	9.00	15.00
Q	=	Entry flow (pcu/h)	1267	151	2096	49
Qc	=	Circulating flow across entry (pcu/h)	1205	1194	274	2328
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.39	0.28	0.12	0.21
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.11	1.09	1.07
X2	=	V + ((E-V)/(1+2S))	8.81	5.74	9.08	4.40
M	=	EXP((D-60)/10)	0.61	0.61	0.61	0.61
F	=	303*X2	2670	1740	2752	1334
Td	=	1+(0.5/(1+M))	1.31	1.31	1.31	1.31
Fc	=	0.21*Td(1+0.2*X2)	0.76	0.59	0.78	0.52
Qe	=	K(F-Fc*Qc)	1814	1146	2766	138
DFC	=	Design flow/Capacity = Q/Qe	0.70	0.13	0.76	0.36

Total In Sum = 3563 PCU

DFC of Critical Approach = 0.76

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION				INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Design AM**	PROJECT NO.:	40876	PREPARED BY:	SKL	Aug-24
		FILENAME :	J5_STKR_LMR.xls	CHECKED BY:	SLN	Aug-24
J5 Sha Tau Kok Road / Lung Ma Road		REFERENCE NO.:		REVIEWED BY:	SLN	Aug-24

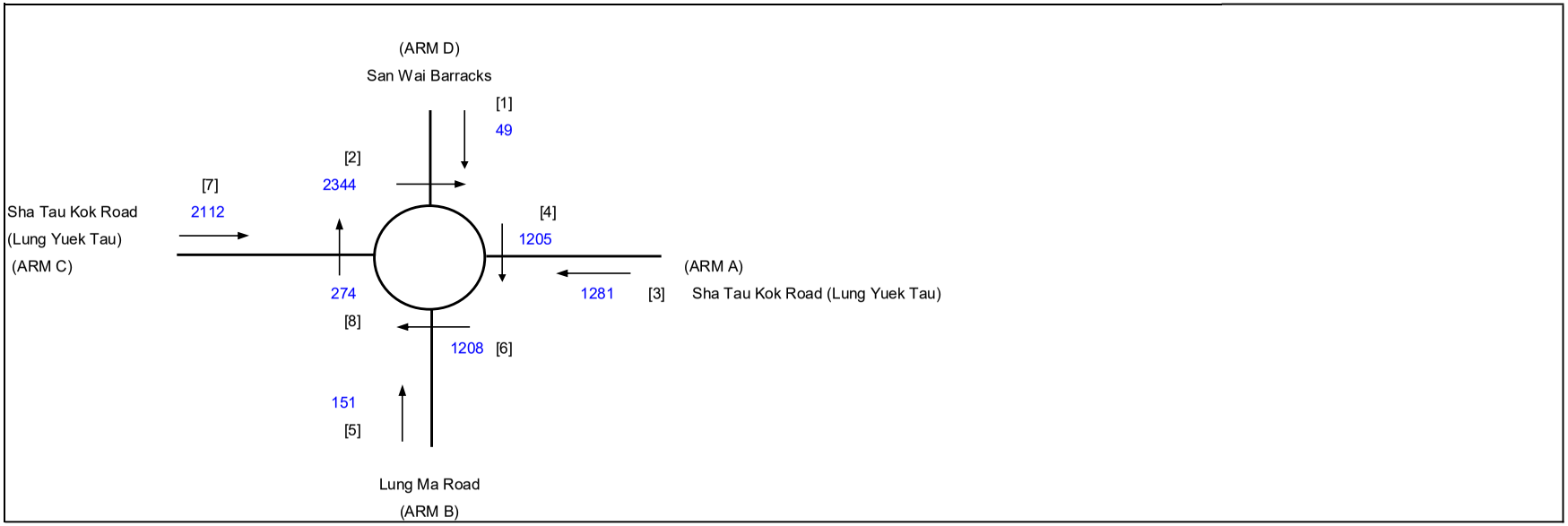


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.30	3.50	7.30	3.00
E	=	Entry width (m)	10.00	7.00	9.50	5.00
L	=	Effective length of flare (m)	11.00	20.00	30.00	15.00
R	=	Entry radius (m)	20.00	100.00	30.00	35.00
D	=	Inscribed circle diameter (m)	55.00	55.00	55.00	55.00
A	=	Entry angle (degree)	20.00	10.00	9.00	15.00
Q	=	Entry flow (pcu/h)	1207	180	2151	43
Qc	=	Circulating flow across entry (pcu/h)	1243	1124	252	2350
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.39	0.28	0.12	0.21
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.11	1.09	1.07
X2	=	V + ((E-V)/(1+2S))	8.81	5.74	9.08	4.40
M	=	EXP((D-60)/10)	0.61	0.61	0.61	0.61
F	=	303*X2	2670	1740	2752	1334
Td	=	1+(0.5/(1+M))	1.31	1.31	1.31	1.31
Fc	=	0.21*Td(1+0.2*X2)	0.76	0.59	0.78	0.52
Qe	=	K(F-Fc*Qc)	1784	1192	2784	126
DFC	=	Design flow/Capacity = Q/Qe	0.68	0.15	0.77	0.34

Total In Sum = 3581 PCU

DFC of Critical Approach = 0.77

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION				INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Design PM**	PROJECT NO.:	40876	PREPARED BY:	SKL	Aug-24
		FILENAME :	J5_STKR_LMR.xls	CHECKED BY:	SLN	Aug-24
J5 Sha Tau Kok Road / Lung Ma Road		REFERENCE NO.:		REVIEWED BY:	SLN	Aug-24



ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.30	3.50	7.30	3.00
E	=	Entry width (m)	10.00	7.00	9.50	5.00
L	=	Effective length of flare (m)	11.00	20.00	30.00	15.00
R	=	Entry radius (m)	20.00	100.00	30.00	35.00
D	=	Inscribed circle diameter (m)	55.00	55.00	55.00	55.00
A	=	Entry angle (degree)	20.00	10.00	9.00	15.00
Q	=	Entry flow (pcu/h)	1281	151	2112	49
Qc	=	Circulating flow across entry (pcu/h)	1205	1208	274	2344
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.39	0.28	0.12	0.21
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.03	1.11	1.09	1.07
X2	=	V + ((E-V)/(1+2S))	8.81	5.74	9.08	4.40
M	=	EXP((D-60)/10)	0.61	0.61	0.61	0.61
F	=	303*X2	2670	1740	2752	1334
Td	=	1+(0.5/(1+M))	1.31	1.31	1.31	1.31
Fc	=	0.21*Td(1+0.2*X2)	0.76	0.59	0.78	0.52
Qe	=	K(F-Fc*Qc)	1814	1137	2766	129
DFC	=	Design flow/Capacity = Q/Qe	0.71	0.13	0.76	0.38

Total In Sum = 3593 PCU

DFC of Critical Approach = 0.76

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

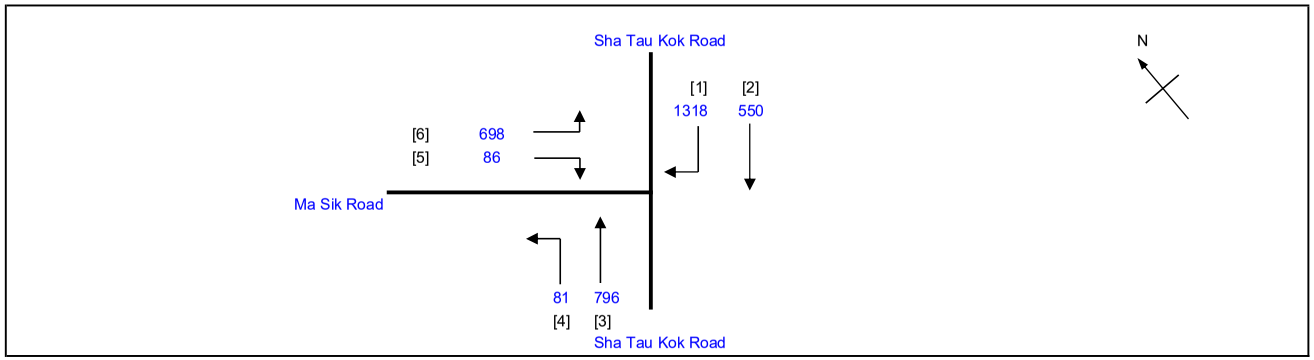
	INITIALS	DATE
Prepared By:	SKL	Aug-24
Checked By:	SLN	Aug-24
Reviewed By:	SLN	Aug-24

Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

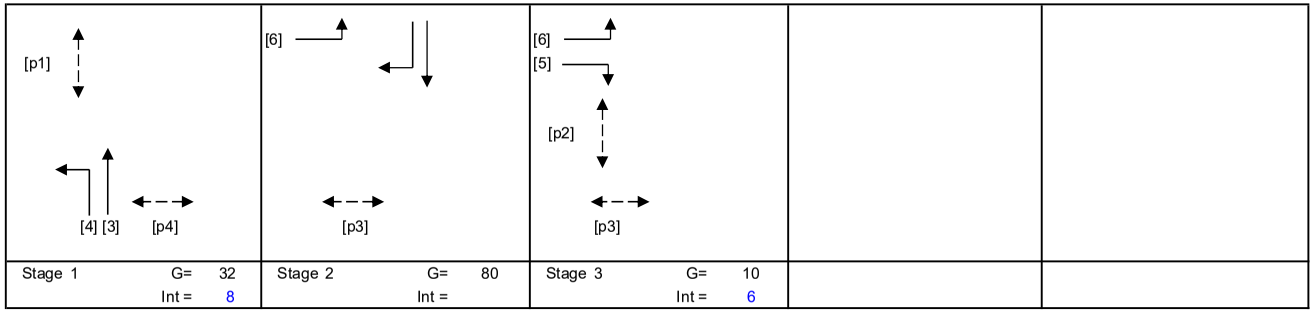
J6 Sha Tau Kok Road / Ma Sik Road

2035 Reference AM

PROJECT NO.: 40876
FILENAME : J6_STKR_MSR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	136 sec
Sum(y)		Y =	0.534
Loss time		L =	13 sec
Total Flow		=	3529 pcu
Co	= (1.5*L+5)/(1-Y)	=	52.6 sec
Cm	= L/(1-Y)	=	27.9 sec
Yult		=	0.803
R.C.ult	= (Yult-Y)/Y*100%	=	50.3 %
Cp	= 0.9*L/(0.9-Y)	=	31.9 sec
Ymax	= 1-L/C	=	0.904
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**52 %**



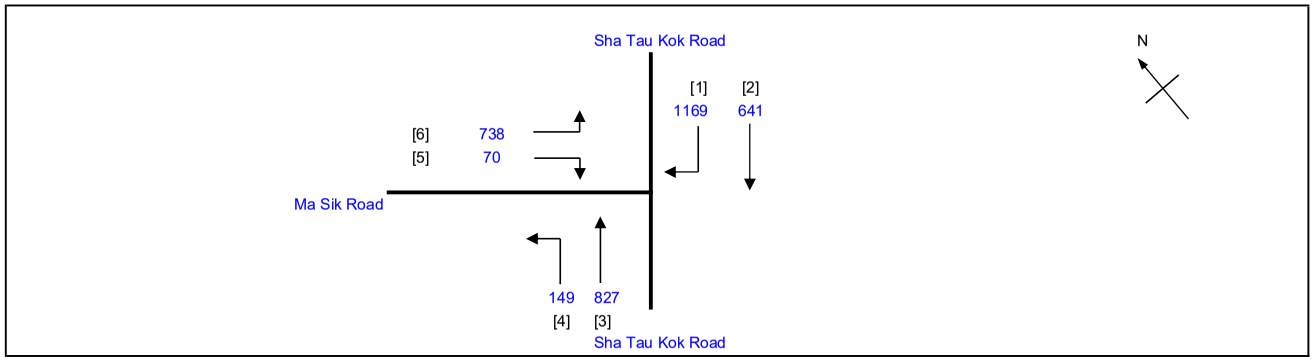
Stage 1	G= 32	Stage 2	G= 80	Stage 3	G= 10
	Int = 8		Int =		Int = 6

Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
p1	1	5	8		32	8
p2	3	5	10		6	10
p3	2,3	5	9		87	9
p4	1	5	7		33	7

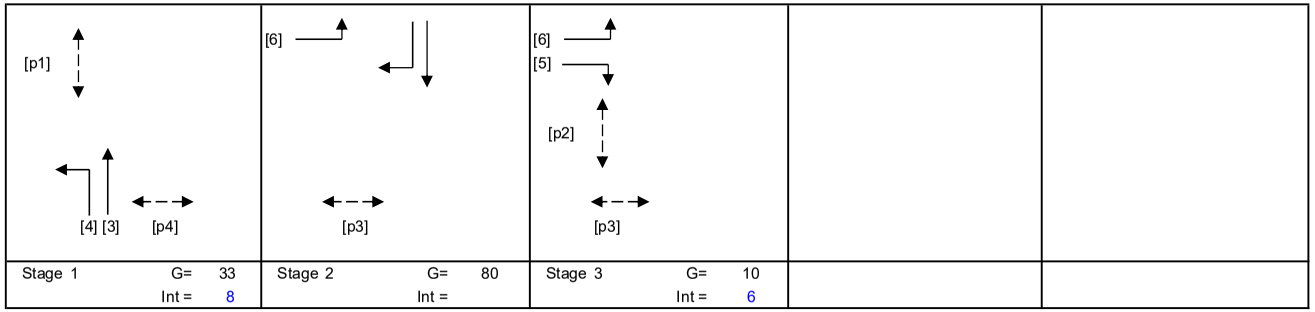
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	2	3.20	1			N	1935		550		550	0.00	1935							1935	0.284			65	80	0.590	60	25
1,2	2	3.20	1	26			2075		0	662	662	1.00	1962							1962	0.337			78	80	0.590	60	19
1	2	3.20	1	23			2075			656	656	1.00	1948							1948	0.337			78	80	0.590	60	19
6	2,3	3.50	1	15		N	1965	698			698	1.00	1786							1786	0.391	0.391		90	90	0.590	48	13
5	3	3.50	1	20			2105			86	86	1.00	1958							1958	0.044		1	10	11	0.590	18	71
3,4	1	3.50	1	15		N	1965	81	192		273	0.30	1908							1908	0.143	0.143		33	33	0.590	42	46
3	1	3.50	2				4210		604		604	0.00	4210							4210	0.143			33	33	0.590	51	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference PM**	PROJECT NO.: 40876	Prepared By:	SKL	Aug-24
		FILENAME : J6_STKR_MSR.xlsx	Checked By:	SLN	Aug-24
J6 Sha Tau Kok Road / Ma Sik Road			Reviewed By:	SLN	Aug-24



No. of stages per cycle	N =	3
Cycle time	C =	136 sec
Sum(y)	Y =	0.574
Loss time	L =	15 sec
Total Flow	=	3594 pcu
Co = (1.5*L+5)/(1-Y)	=	64.5 sec
Cm = L/(1-Y)	=	35.2 sec
Yult	=	0.788
R.C.ult = (Yult-Y)/Y*100%	=	37.2 %
Cp = 0.9*L/(0.9-Y)	=	41.4 sec
Ymax = 1-L/C	=	0.890
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**40 %**



Stage 1	G= 33	Stage 2	G= 80	Stage 3	G= 10
	Int = 8		Int =		Int = 6

Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
p1	1	5	8		33	8
p2	3	5	10		6	10
p3	2,3	5	9		86	9
p4	1	5	7		34	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	2	3.20	1			N	1935		599		599	0.00	1935							1935	0.310			65	80	0.645	66	27
1,2	2	3.20	1	26			2075		42	567	609	0.93	1969							1969	0.309			65	80	0.645	66	27
1	2	3.20	1	23			2075			602	602	1.00	1948							1948	0.309			65	80	0.645	66	27
6	2,3	3.50	1	15		N	1965	738			738	1.00	1786							1786	0.413	0.413		87	87	0.645	60	16
5	3	3.50	1	20			2105			70	70	1.00	1958							1958	0.036		3	8	11	0.645	12	84
3,4	1	3.50	1	15		N	1965	149	152		301	0.50	1872							1872	0.161	0.161		34	34	0.645	48	47
3	1	3.50	2				4210		675		675	0.00	4210							4210	0.160			34	34	0.645	57	44

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

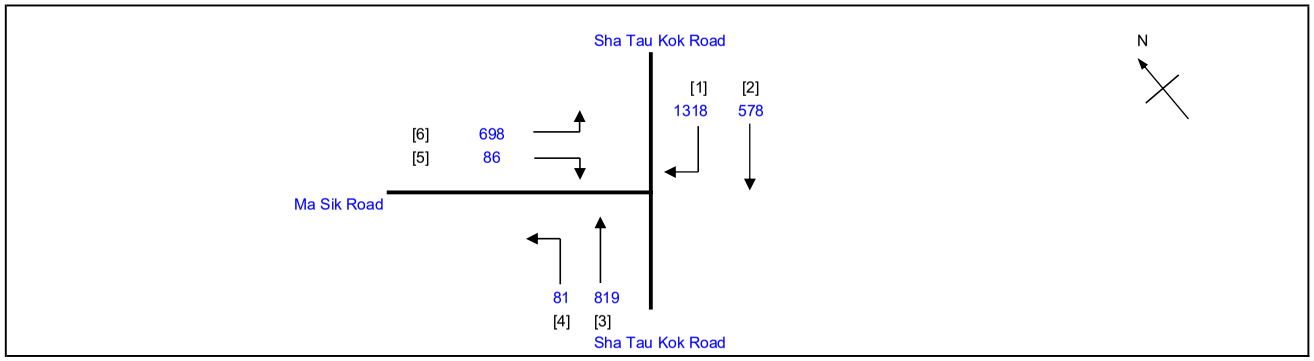
	INITIALS	DATE
Prepared By:	SKL	Aug-24
Checked By:	SLN	Aug-24
Reviewed By:	SLN	Aug-24

Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

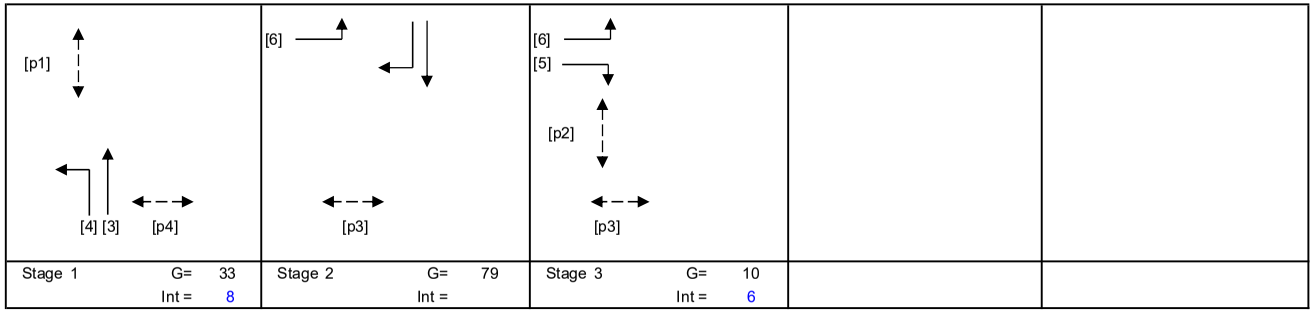
J6 Sha Tau Kok Road / Ma Sik Road

2035 Design AM

PROJECT NO.: 40876
FILENAME : J6_STKR_MSR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	136 sec
Sum(y)		Y =	0.538
Loss time		L =	13 sec
Total Flow		=	3580 pcu
Co	= (1.5*L+5)/(1-Y)	=	53.0 sec
Cm	= L/(1-Y)	=	28.1 sec
Yult		=	0.803
R.C.ult	= (Yult-Y)/Y*100%	=	49.2 %
Cp	= 0.9*L/(0.9-Y)	=	32.3 sec
Ymax	= 1-L/C	=	0.904
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**51 %**



Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
p1	1	5	8		33	8
p2	3	5	10		6	10
p3	2,3	5	9		86	9
p4	1	5	7		34	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	2	3.20	1			N	1935		578		578	0.00	1935							1935	0.299			68	79	0.595	60	24
1,2	2	3.20	1	26			2075		0	662	662	1.00	1962							1962	0.337			77	79	0.595	60	19
1	2	3.20	1	23			2075			656	656	1.00	1948							1948	0.337			77	79	0.595	60	20
6	2,3	3.50	1	15		N	1965	698			698	1.00	1786							1786	0.391	0.391		89	89	0.595	54	14
5	3	3.50	1	20			2105			86	86	1.00	1958							1958	0.044		1	10	11	0.595	18	71
3,4	1	3.50	1	15		N	1965	81	200		281	0.29	1910							1910	0.147	0.147		34	34	0.595	42	46
3	1	3.50	2				4210		619		619	0.00	4210							4210	0.147			34	34	0.595	51	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

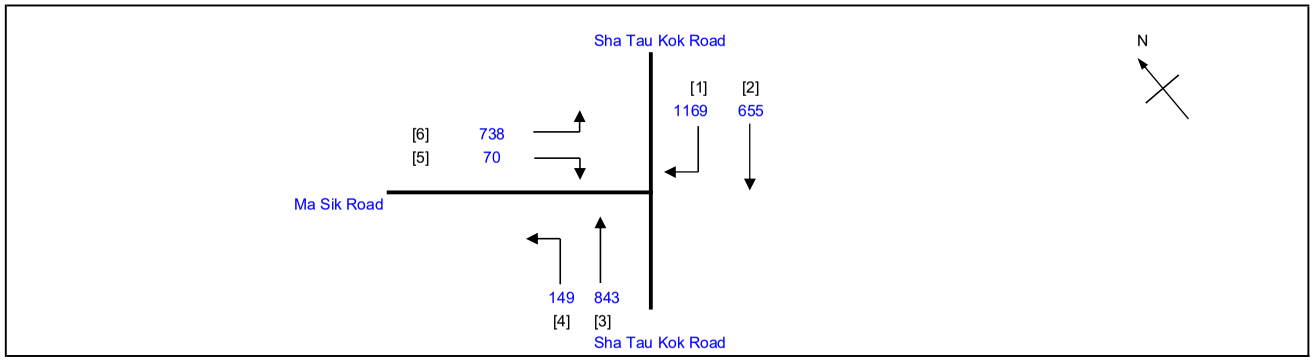
	INITIALS	DATE
Prepared By:	SKL	Aug-24
Checked By:	SLN	Aug-24
Reviewed By:	SLN	Aug-24

Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

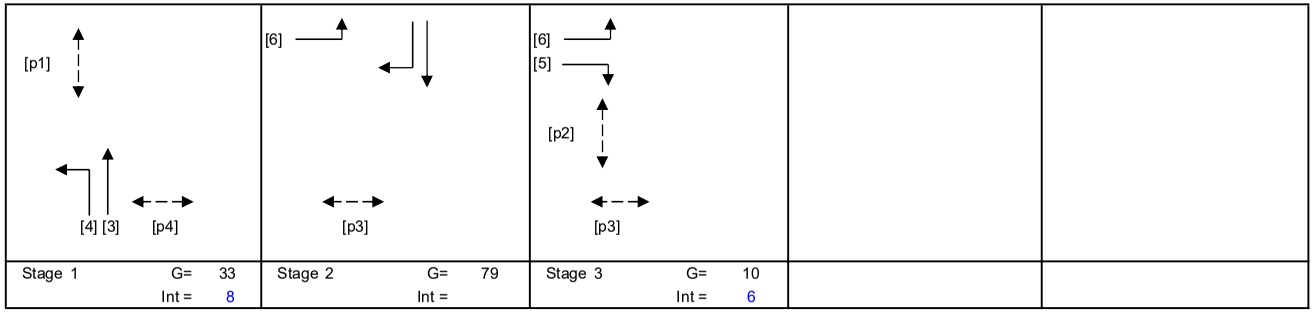
J6 Sha Tau Kok Road / Ma Sik Road

2035 Design PM

PROJECT NO.: 40876
FILENAME : J6_STKR_MSR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	136 sec
Sum(y)		Y =	0.576
Loss time		L =	15 sec
Total Flow		=	3624 pcu
Co	= (1.5*L+5)/(1-Y)	=	64.8 sec
Cm	= L/(1-Y)	=	35.4 sec
Yult		=	0.788
R.C.ult	= (Yult-Y)/Y*100%	=	36.7 %
Cp	= 0.9*L/(0.9-Y)	=	41.7 sec
Ymax	= 1-L/C	=	0.890
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**39 %**



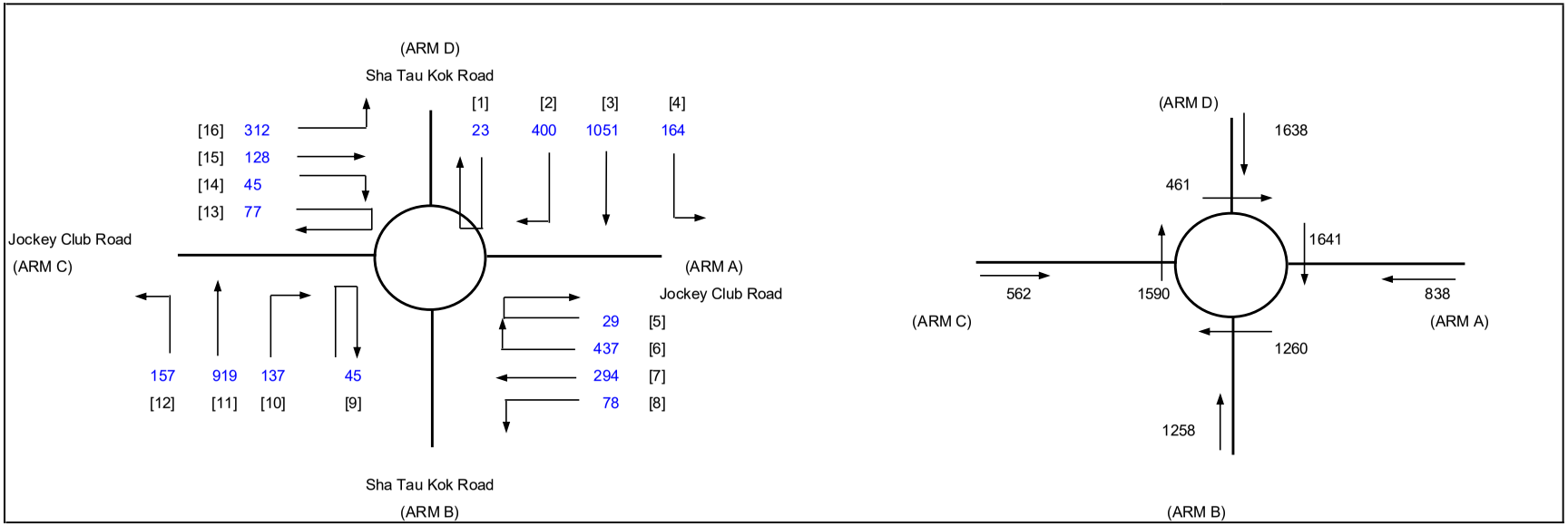
Stage 1	G= 33	Stage 2	G= 79	Stage 3	G= 10
	Int = 8		Int =		Int = 6

Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
p1	1	5	8		33	8
p2	3	5	10		6	10
p3	2,3	5	9		86	9
p4	1	5	7		34	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
2	2	3.20	1			N	1935		603		603	0.00	1935							1935	0.312		12	65	79	0.647	66	27
1,2	2	3.20	1	26			2075		52	562	614	0.92	1971							1971	0.312			65	79	0.647	72	27
1	2	3.20	1	23			2075			607	607	1.00	1948							1948	0.312			65	79	0.647	66	27
6	2,3	3.50	1	15		N	1965	738			738	1.00	1786							1786	0.413	0.413		87	87	0.647	60	16
5	3	3.50	1	20			2105			70	70	1.00	1958							1958	0.036		3	8	11	0.647	12	84
3,4	1	3.50	1	15		N	1965	149	156		305	0.49	1873							1873	0.163	0.163		34	34	0.647	48	47
3	1	3.50	2				4210		687		687	0.00	4210							4210	0.163			34	34	0.647	57	44

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J7_STKR_JCR.xl	CHECKED BY:	SLN	Aug-24
J7 Sha Tau Kok Road / Jockey Club Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24

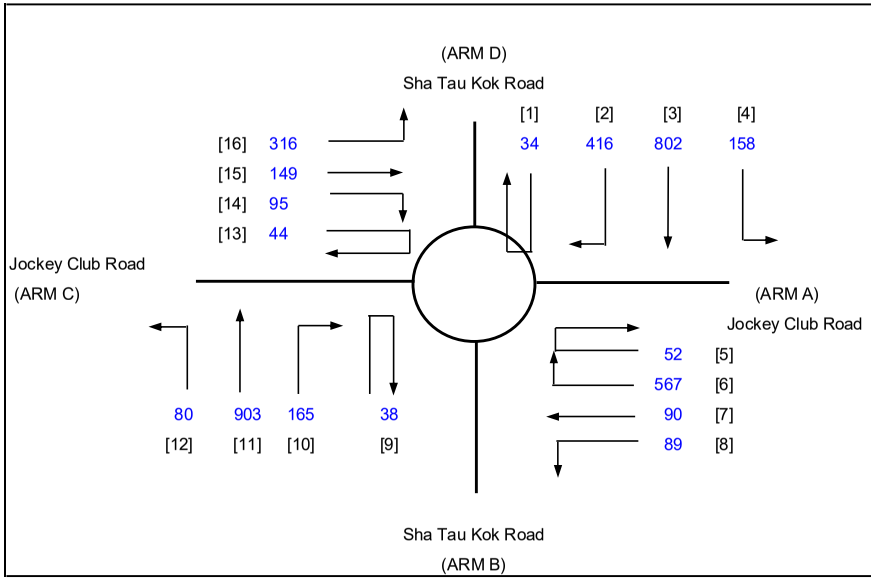


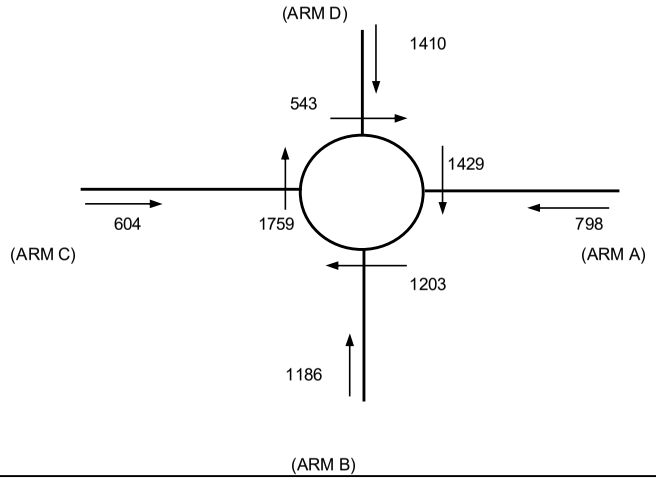
ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.00	7.00	8.00	7.50
E	=	Entry width (m)	7.50	10.00	8.50	8.00
L	=	Effective length of flare (m)	1.00	15.00	2.00	4.00
R	=	Entry radius (m)	25.00	40.00	60.00	35.00
D	=	Inscribed circle diameter (m)	65.00	65.00	65.00	65.00
A	=	Entry angle (degree)	10.00	40.00	20.00	10.00
Q	=	Entry flow (pcu/h)	838	1258	562	1638
Qc	=	Circulating flow across entry (pcu/h)	1641	1260	1590	461
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.80	0.32	0.40	0.20
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.08	0.99	1.07	1.09
X2	=	V + ((E-V)/(1+2S))	7.19	8.83	8.28	7.86
M	=	EXP((D-60)/10)	1.65	1.65	1.65	1.65
F	=	303*X2	2179	2675	2508	2381
Td	=	1+(0.5/(1+M))	1.19	1.19	1.19	1.19
Fc	=	0.21*Td(1+0.2*X2)	0.61	0.69	0.66	0.64
Qe	=	K(F-Fc*Qc)	1274	1787	1552	2273
DFC	=	Design flow/Capacity = Q/Qe	0.66	0.70	0.36	0.72

Total In Sum = 2598 PCU

DFC of Critical Approach = 0.72

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J7_STKR_JCR.xl	CHECKED BY:	SLN	Aug-24
J7 Sha Tau Kok Road / Jockey Club Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24



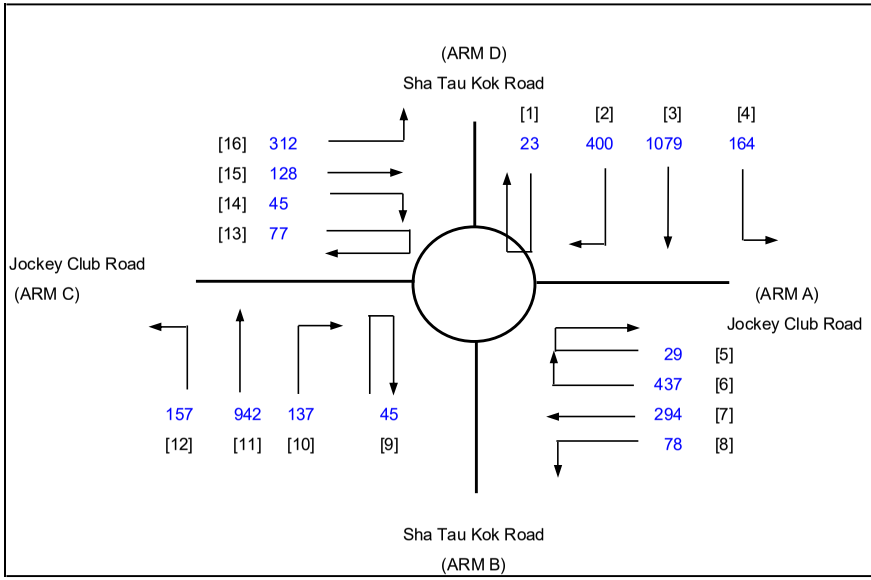


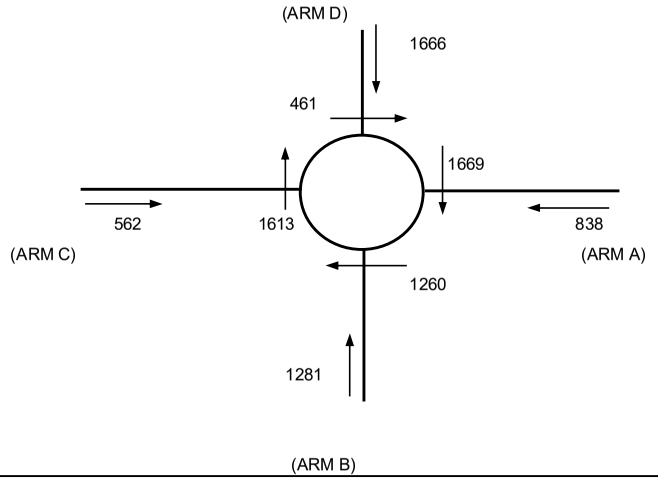
ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.00	7.00	8.00	7.50
E	=	Entry width (m)	7.50	10.00	8.50	8.00
L	=	Effective length of flare (m)	1.00	15.00	2.00	4.00
R	=	Entry radius (m)	25.00	40.00	60.00	35.00
D	=	Inscribed circle diameter (m)	65.00	65.00	65.00	65.00
A	=	Entry angle (degree)	10.00	40.00	20.00	10.00
Q	=	Entry flow (pcu/h)	798	1186	604	1410
Qc	=	Circulating flow across entry (pcu/h)	1429	1203	1759	543
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.80	0.32	0.40	0.20
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.08	0.99	1.07	1.09
X2	=	V + ((E-V)/(1+2S))	7.19	8.83	8.28	7.86
M	=	EXP((D-60)/10)	1.65	1.65	1.65	1.65
F	=	303*X2	2179	2675	2508	2381
Td	=	1+(0.5/(1+M))	1.19	1.19	1.19	1.19
Fc	=	0.21*Td(1+0.2*X2)	0.61	0.69	0.66	0.64
Qe	=	K(F-Fc*Qc)	1413	1826	1432	2216
DFC	=	Design flow/Capacity = Q/Qe	0.56	0.65	0.42	0.64

Total In Sum = 2234 PCU

DFC of Critical Approach = 0.65

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Design AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J7_STKR_JCR.xl	CHECKED BY:	SLN	Aug-24
J7 Sha Tau Kok Road / Jockey Club Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24



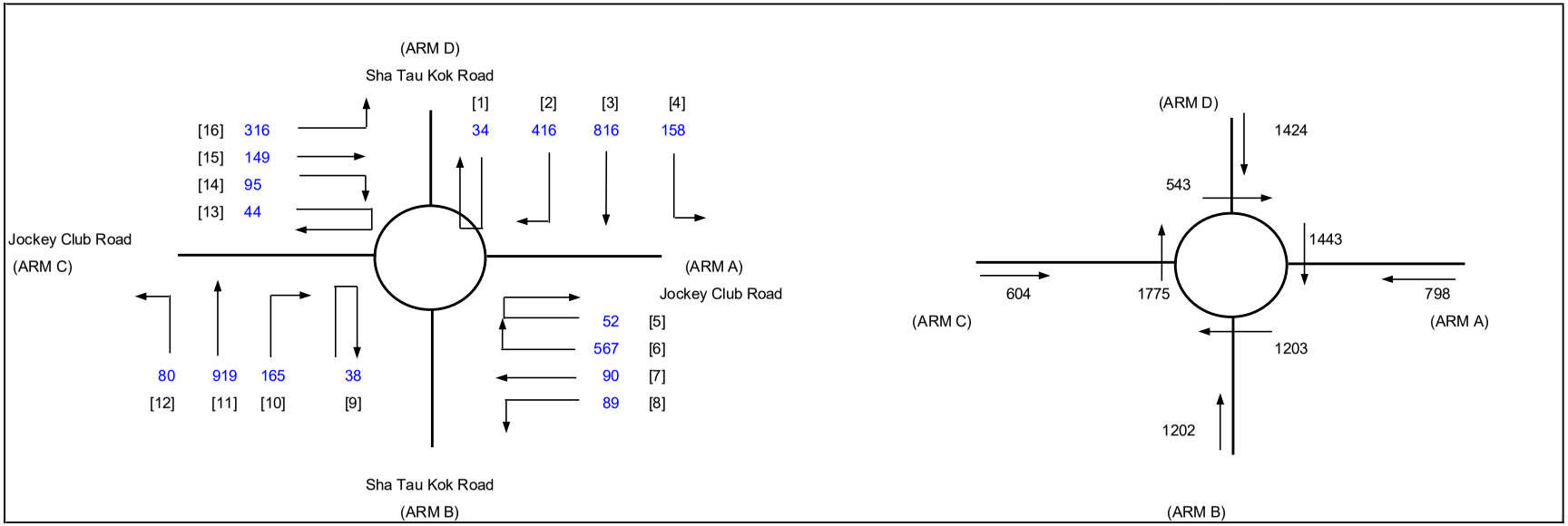


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.00	7.00	8.00	7.50
E	=	Entry width (m)	7.50	10.00	8.50	8.00
L	=	Effective length of flare (m)	1.00	15.00	2.00	4.00
R	=	Entry radius (m)	25.00	40.00	60.00	35.00
D	=	Inscribed circle diameter (m)	65.00	65.00	65.00	65.00
A	=	Entry angle (degree)	10.00	40.00	20.00	10.00
Q	=	Entry flow (pcu/h)	838	1281	562	1666
Qc	=	Circulating flow across entry (pcu/h)	1669	1260	1613	461
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.80	0.32	0.40	0.20
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.08	0.99	1.07	1.09
X2	=	V + ((E-V)/(1+2S))	7.19	8.83	8.28	7.86
M	=	EXP((D-60)/10)	1.65	1.65	1.65	1.65
F	=	303*X2	2179	2675	2508	2381
Td	=	1+(0.5/(1+M))	1.19	1.19	1.19	1.19
Fc	=	0.21*Td(1+0.2*X2)	0.61	0.69	0.66	0.64
Qe	=	K(F-Fc*Qc)	1255	1787	1536	2273
DFC	=	Design flow/Capacity = Q/Qe	0.67	0.72	0.37	0.73

Total In Sum = 2649 PCU

DFC of Critical Approach = 0.73

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Design PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J7_STKR_JCR.xl	CHECKED BY:	SLN	Aug-24
J7 Sha Tau Kok Road / Jockey Club Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24

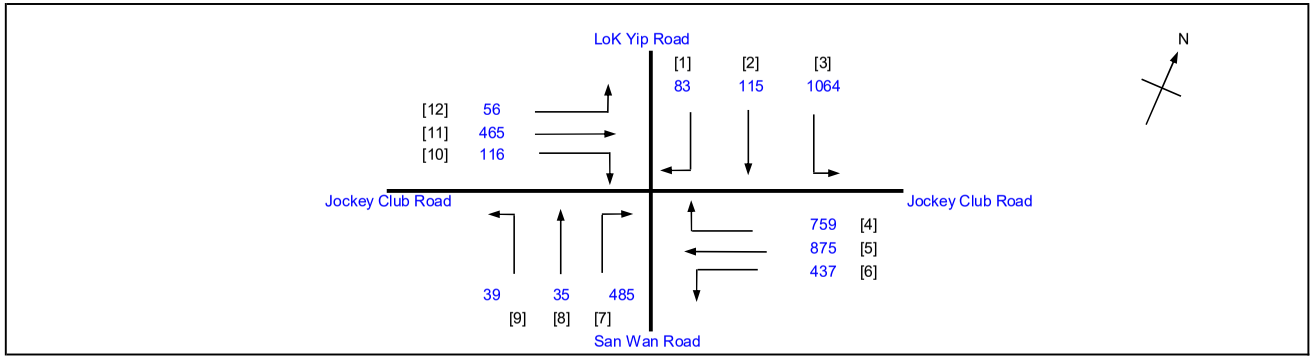


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.00	7.00	8.00	7.50
E	=	Entry width (m)	7.50	10.00	8.50	8.00
L	=	Effective length of flare (m)	1.00	15.00	2.00	4.00
R	=	Entry radius (m)	25.00	40.00	60.00	35.00
D	=	Inscribed circle diameter (m)	65.00	65.00	65.00	65.00
A	=	Entry angle (degree)	10.00	40.00	20.00	10.00
Q	=	Entry flow (pcu/h)	798	1202	604	1424
Qc	=	Circulating flow across entry (pcu/h)	1443	1203	1775	543
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.80	0.32	0.40	0.20
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.08	0.99	1.07	1.09
X2	=	V + ((E-V)/(1+2S))	7.19	8.83	8.28	7.86
M	=	EXP((D-60)/10)	1.65	1.65	1.65	1.65
F	=	303*X2	2179	2675	2508	2381
Td	=	1+(0.5/(1+M))	1.19	1.19	1.19	1.19
Fc	=	0.21*Td(1+0.2*X2)	0.61	0.69	0.66	0.64
Qe	=	K(F-Fc*Qc)	1404	1826	1421	2216
DFC	=	Design flow/Capacity = Q/Qe	0.57	0.66	0.43	0.64

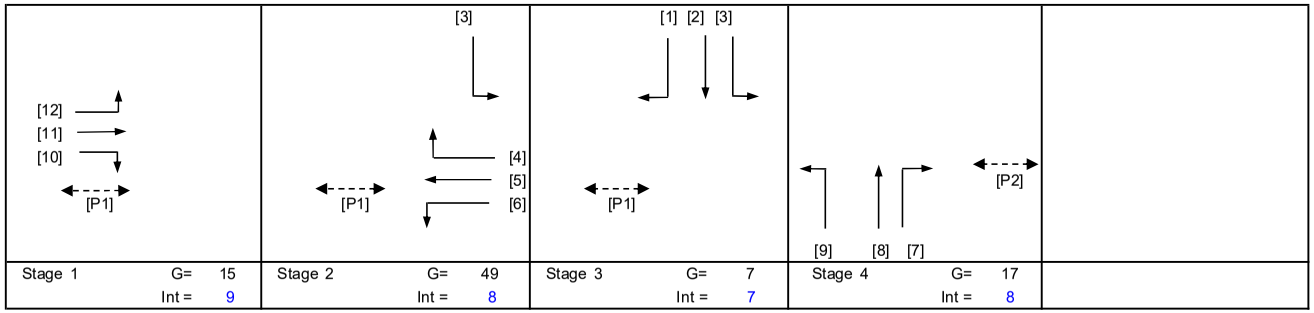
Total In Sum = 2264 PCU

DFC of Critical Approach = 0.66

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference AM**	PROJECT NO.: 40876	Prepared By:	SKL	Aug-24
J8 Lok Yip Road / Jockey Club Road / San Wan Road		FILENAME : J8_LYR_JCR_SWR.xlsx	Checked By:	SLN	Aug-24
			Reviewed By:	SLN	Aug-24



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.621
Loss time		L =	28 sec
Total Flow		=	4529 pcu
Co	= (1.5*L+5)/(1-Y)	=	124.0 sec
Cm	= L/(1-Y)	=	73.9 sec
Yult		=	0.690
R.C.ult	= (Yult-Y)/Y*100%	=	11.1 %
Cp	= 0.9*L/(0.9-Y)	=	90.3 sec
Ymax	= 1-L/C	=	0.767
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**11 %**



Stage 1	G= 15	Int = 9
Stage 2	G= 49	Int = 8
Stage 3	G= 7	Int = 7
Stage 4	G= 17	Int = 8

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	Green Time Required FG	Green Time Required Delay	Green Time Provided SG	Green Time Provided FG
P1	1,2,3	9.4	7	9	0	62	9
P2	4	10.8	6	12	4	9	12

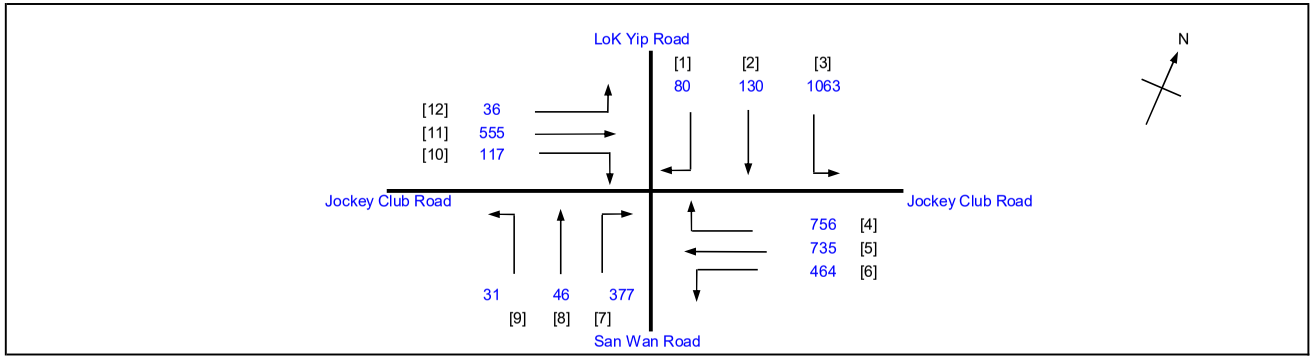
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Movement Straight pcu/h	Movement Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							28					
1	3	3.30	1	20			2085			83	83	1.00	1940							1940	0.043			6	8	0.629	12	70
2	3	3.30	1				2085		115		115	0.00	2085							2085	0.055	0.055		8	8	0.810	24	98
3	2,3	3.30	2	15		N	4030	1064			1064	1.00	3664							3664	0.290			43	43	0.810	66	37
4	2	3.30	1	20			2085			648	648	1.00	1940							1940	0.334			49	50	0.809	72	37
4,5	2	3.30	1	20			2085		578	111	689	0.16	2060							2060	0.334	0.334		50	50	0.810	78	36
5,6	2	3.30	1	15		N	1945	437	297		734	0.60	1836	30	360					2196	0.334			50	50	0.810	84	36
7	4	3.40	1	20			2095			243	243	1.00	1949							1949	0.125	0.125		18	18	0.810	42	67
7,8	4	3.40	1	20			2095		0	242	242	1.00	1949							1949	0.124			18	18	0.807	42	67
8,9	4	3.30	1	15		N	1945	39	35		74	0.53	1848							1848	0.040			6	18	0.260	12	42
10,11	1	3.40	1	20			2095		99	116	215	0.54	2014							2014	0.107	0.107		16	16	0.810	42	72
11	1	3.40	1				2095		222		222	0.00	2095							2095	0.106			16	16	0.804	42	70
11,12	1	3.40	1	10		N	1955	56	144		200	0.28	1876							1876	0.107			16	16	0.809	36	73

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

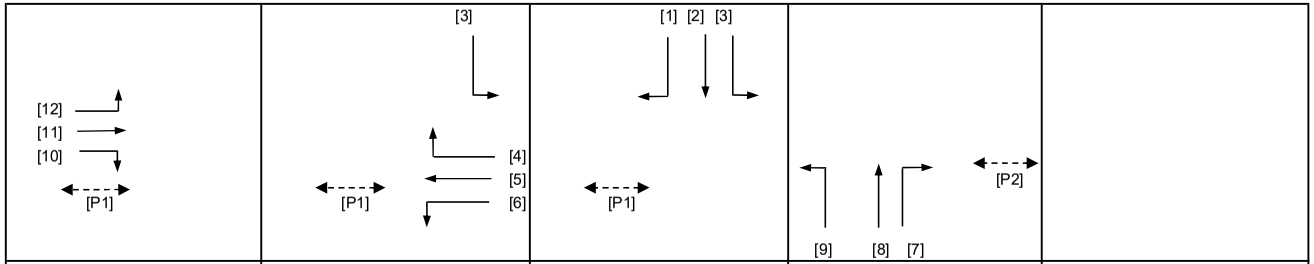
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	PROJECT NO.: 40876	Prepared By:	SKL	Aug-24
2035 Reference PM	FILENAME : J8_LYR_JCR_SWR.xlsx	Checked By:	SLN	Aug-24
J8 Lok Yip Road / Jockey Club Road / San Wan Road		Reviewed By:	SLN	Aug-24



No. of stages per cycle	N =	4
Cycle time	C =	120 sec
Sum(y)	Y =	0.594
Loss time	L =	28 sec
Total Flow	=	4390 pcu
Co = (1.5*L+5)/(1-Y)	=	115.8 sec
Cm = L/(1-Y)	=	69.0 sec
Yult	=	0.690
R.C.ult = (Yult-Y)/Y*100%	=	16.2 %
Cp = 0.9*L/(0.9-Y)	=	82.3 sec
Ymax = 1-L/C	=	0.767
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**16 %**



Stage 1	G= 17	Int = 9
Stage 2	G= 48	Int = 8
Stage 3	G= 9	Int = 7
Stage 4	G= 14	Int = 8

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,2,3	9.4	7	9	0	66	9
P2	4	10.8	6	12	4	6	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							28					
1	3	3.30	1	20			2085			80	80	1.00	1940							1940	0.041			6	10	0.513	12	59
2	3	3.30	1				2085		130		130	0.00	2085							2085	0.062	0.062		10	10	0.775	24	82
3	2,3	3.30	2	15		N	4030	1063			1063	1.00	3664							3664	0.290			45	45	0.775	66	34
4	2	3.30	1	20			2085			614	614	1.00	1940							1940	0.317			49	49	0.774	72	35
4,5	2	3.30	1	20			2085		508	142	650	0.22	2051							2051	0.317	0.317		49	49	0.775	72	34
5,6	2	3.30	1	15		N	1945	464	227		691	0.67	1823	30	367					2190	0.316			49	49	0.772	78	34
7	4	3.40	1	20			2095			189	189	1.00	1949							1949	0.097	0.097		15	15	0.775	36	69
7,8	4	3.40	1	20			2095		0	188	188	1.00	1949							1949	0.096			15	15	0.771	36	68
8,9	4	3.30	1	15		N	1945	31	46		77	0.40	1870							1870	0.041			6	15	0.329	12	46
10,11	1	3.40	1	20			2095		121	117	238	0.49	2021							2021	0.118	0.118		18	18	0.775	42	62
11	1	3.40	1				2095		246		246	0.00	2095							2095	0.117			18	18	0.772	42	61
11,12	1	3.40	1	10		N	1955	36	188		224	0.16	1909							1909	0.117			18	18	0.772	42	63

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Aug-24
Checked By:	SLN	Aug-24
Reviewed By:	SLN	Aug-24

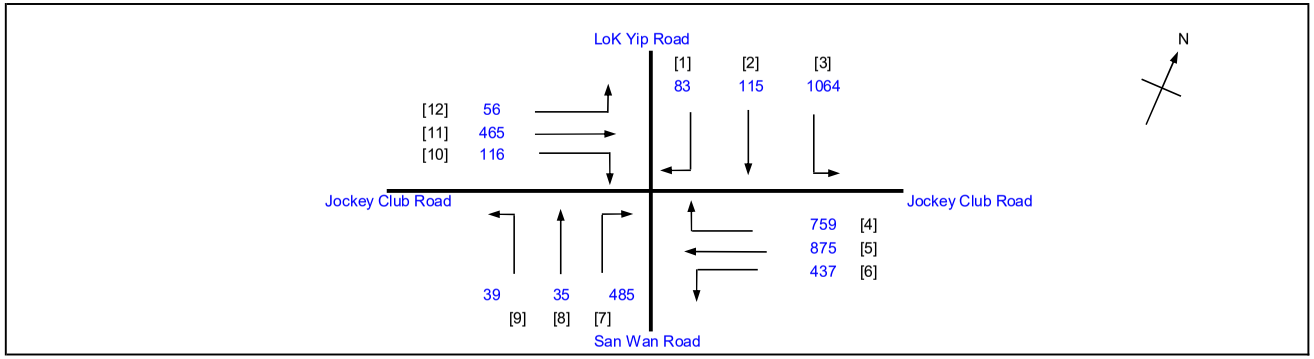
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

J8 Lok Yip Road / Jockey Club Road / San Wan Road

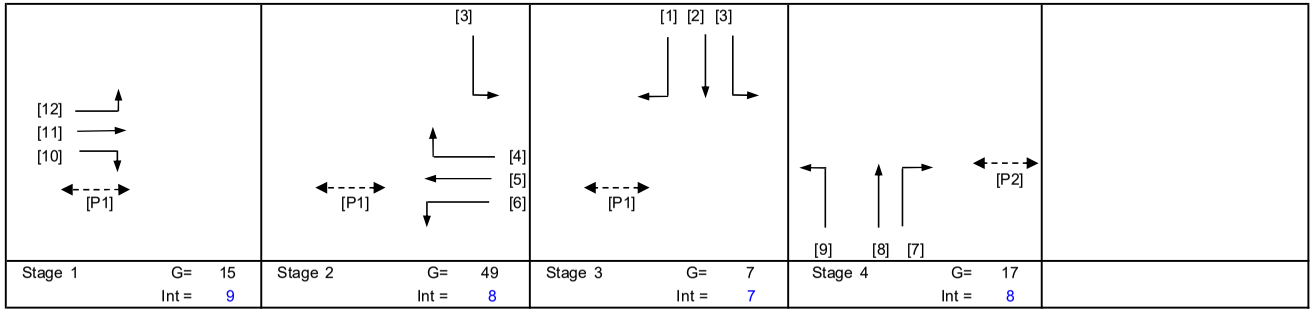
2035 Design AM

PROJECT NO.: 40876

FILENAME : J8_LYR_JCR_SWR.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	120 sec
Sum(y)	Y =	0.621
Loss time	L =	28 sec
Total Flow	=	4529 pcu
Co = (1.5*L+5)/(1-Y)	=	124.0 sec
Cm = L/(1-Y)	=	73.9 sec
Yult	=	0.690
R.C.ult = (Yult-Y)/Y*100%	=	11.1 %
Cp = 0.9*L/(0.9-Y)	=	90.3 sec
Ymax = 1-L/C	=	0.767
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**11 %**



Stage 1	G= 15	Int = 9
Stage 2	G= 49	Int = 8
Stage 3	G= 7	Int = 7
Stage 4	G= 17	Int = 8

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,2,3	9.4	7	9	0	62	9
P2	4	10.8	6	12	4	9	12

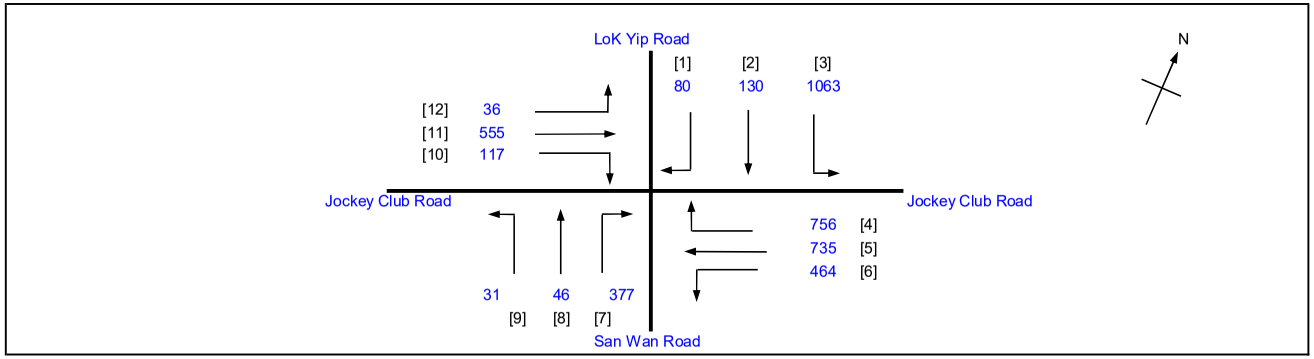
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							28					
1	3	3.30	1	20			2085			83	83	1.00	1940							1940	0.043			6	8	0.629	12	70
2	3	3.30	1				2085		115		115	0.00	2085							2085	0.055	0.055		8	8	0.810	24	98
3	2,3	3.30	2	15		N	4030	1064			1064	1.00	3664							3664	0.290			43	43	0.810	66	37
4	2	3.30	1	20			2085			648	648	1.00	1940							1940	0.334			49	50	0.809	72	37
4,5	2	3.30	1	20			2085		578	111	689	0.16	2060							2060	0.334	0.334		50	50	0.810	78	36
5,6	2	3.30	1	15		N	1945	437	297		734	0.60	1836	30	360					2196	0.334			50	50	0.810	84	36
7	4	3.40	1	20			2095			243	243	1.00	1949							1949	0.125	0.125		18	18	0.810	42	67
7,8	4	3.40	1	20			2095		0	242	242	1.00	1949							1949	0.124			18	18	0.807	42	67
8,9	4	3.30	1	15		N	1945	39	35		74	0.53	1848							1848	0.040			6	18	0.260	12	42
10,11	1	3.40	1	20			2095		99	116	215	0.54	2014							2014	0.107	0.107		16	16	0.810	42	72
11	1	3.40	1				2095		222		222	0.00	2095							2095	0.106			16	16	0.804	42	70
11,12	1	3.40	1	10		N	1955	56	144		200	0.28	1876							1876	0.107			16	16	0.809	36	73

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

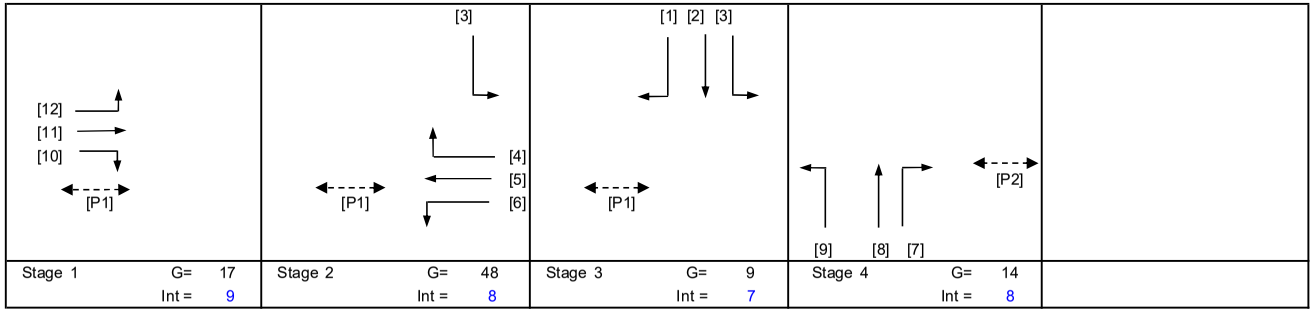
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	PROJECT NO.: 40876	Prepared By:	SKL	Aug-24
2035 Design PM	FILENAME : J8_LYR_JCR_SWR.xlsx	Checked By:	SLN	Aug-24
J8 Lok Yip Road / Jockey Club Road / San Wan Road		Reviewed By:	SLN	Aug-24



No. of stages per cycle	N =	4
Cycle time	C =	120 sec
Sum(y)	Y =	0.594
Loss time	L =	28 sec
Total Flow	=	4390 pcu
Co = (1.5*L+5)/(1-Y)	=	115.8 sec
Cm = L/(1-Y)	=	69.0 sec
Yult	=	0.690
R.C.ult = (Yult-Y)/Y*100%	=	16.2 %
Cp = 0.9*L/(0.9-Y)	=	82.3 sec
Ymax = 1-L/C	=	0.767
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**16 %**



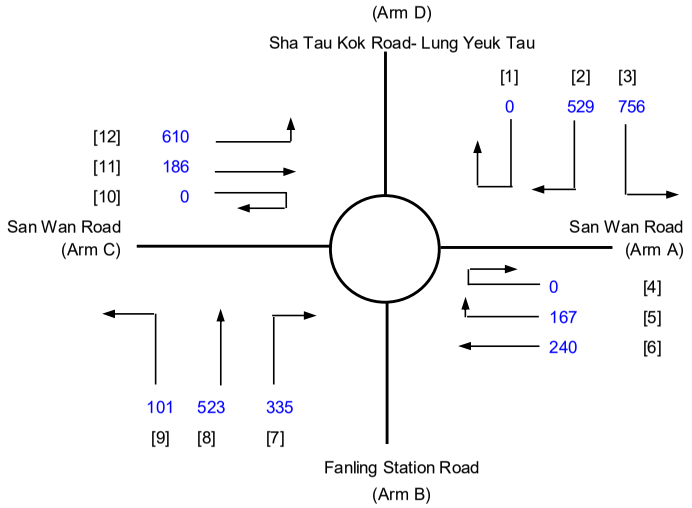
Stage 1	G= 17	Int = 9
Stage 2	G= 48	Int = 8
Stage 3	G= 9	Int = 7
Stage 4	G= 14	Int = 8

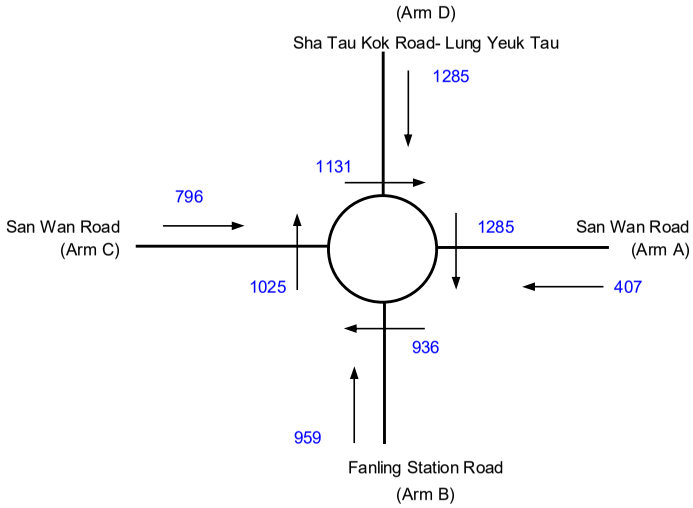
Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,2,3	9.4	7	9	0	66	9
P2	4	10.8	6	12	4	6	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							28					
1	3	3.30	1	20			2085			80	80	1.00	1940							1940	0.041			6	10	0.513	12	59
2	3	3.30	1				2085		130		130	0.00	2085							2085	0.062	0.062		10	10	0.775	24	82
3	2,3	3.30	2	15		N	4030	1063			1063	1.00	3664							3664	0.290			45	45	0.775	66	34
4	2	3.30	1	20			2085			614	614	1.00	1940							1940	0.317			49	49	0.774	72	35
4,5	2	3.30	1	20			2085		508	142	650	0.22	2051							2051	0.317	0.317		49	49	0.775	72	34
5,6	2	3.30	1	15		N	1945	464	227		691	0.67	1823	30	367					2190	0.316			49	49	0.772	78	34
7	4	3.40	1	20			2095			189	189	1.00	1949							1949	0.097	0.097		15	15	0.775	36	69
7,8	4	3.40	1	20			2095		0	188	188	1.00	1949							1949	0.096			15	15	0.771	36	68
8,9	4	3.30	1	15		N	1945	31	46		77	0.40	1870							1870	0.041			6	15	0.329	12	46
10,11	1	3.40	1	20			2095		121	117	238	0.49	2021							2021	0.118	0.118		18	18	0.775	42	62
11	1	3.40	1				2095		246		246	0.00	2095							2095	0.117			18	18	0.772	42	61
11,12	1	3.40	1	10		N	1955	36	188		224	0.16	1909							1909	0.117			18	18	0.772	42	63

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J9_SWR_STKR_FS	CHECKED BY:	SLN	Aug-24
J9 Sha Tau Kok Road / San Wan Road / Fanling Station Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24



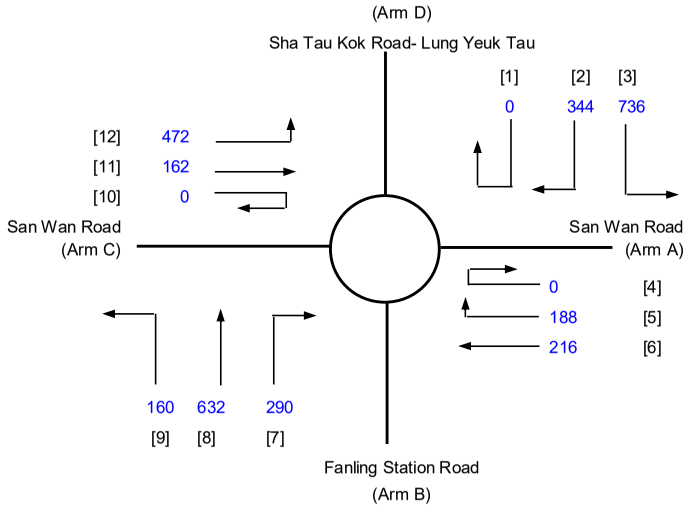


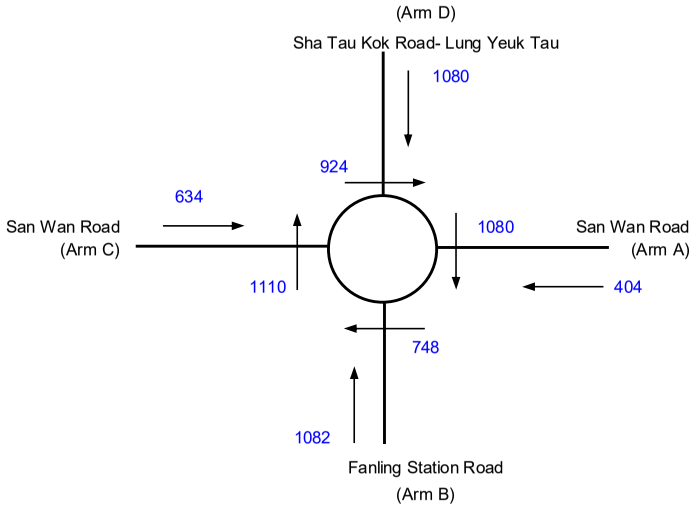
ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.50	5.00	7.50	6.00
E	=	Entry width (m)	9.50	8.50	9.00	9.50
L	=	Effective length of flare (m)	50.00	15.00	50.00	50.00
R	=	Entry radius (m)	100.00	20.00	45.00	50.00
D	=	Inscribed circle diameter (m)	55.00	55.00	55.00	55.00
A	=	Entry angle (degree)	30.00	60.00	30.00	25.00
Q	=	Entry flow (pcu/h)	407	959	796	1285
Qc	=	Circulating flow across entry (pcu/h)	1285	936	1025	1131
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.06	0.37	0.05	0.11
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.04	0.90	1.03	1.05
X2	=	V + ((E-V)/(1+2S))	9.27	7.00	8.87	8.86
M	=	EXP((D-60)/10)	1	1	1	1
F	=	303*X2	2810	2122	2687	2684
Td	=	1+(0.5/(1+M))	1.31	1.31	1.31	1.31
Fc	=	0.21*Td(1+0.2*X2)	0.79	0.66	0.76	0.76
Qe	=	K(F-Fc*Qc)	1870	1347	1956	1906
DFC	=	Design flow/Capacity = Q/Qe	0.22	0.71	0.41	0.67

Total In Sum = 2234 PCU

DFC of Critical Approach = 0.71

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Reference PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J9_SWR_STKR_FS	CHECKED BY:	SLN	Aug-24
J9 Sha Tau Kok Road / San Wan Road / Fanling Station Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24



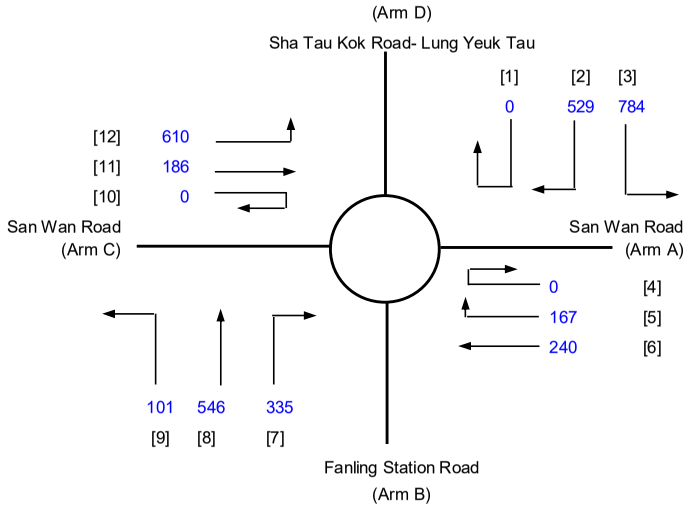


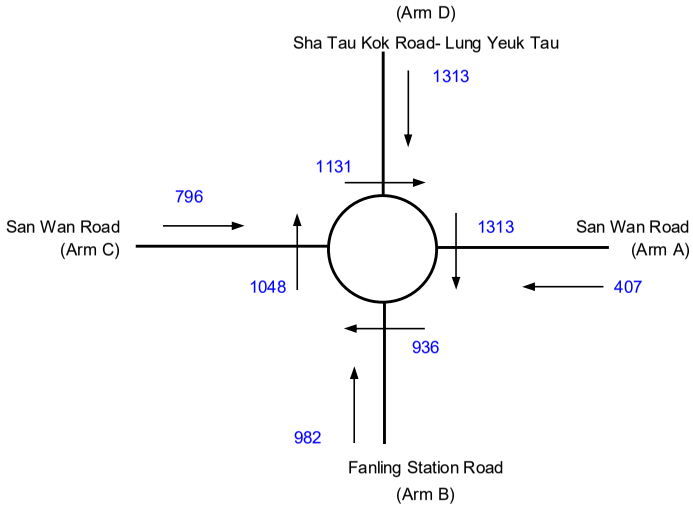
ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.50	5.00	7.50	6.00
E	=	Entry width (m)	9.50	8.50	9.00	9.50
L	=	Effective length of flare (m)	50.00	15.00	50.00	50.00
R	=	Entry radius (m)	100.00	20.00	45.00	50.00
D	=	Inscribed circle diameter (m)	55.00	55.00	55.00	55.00
A	=	Entry angle (degree)	30.00	60.00	30.00	25.00
Q	=	Entry flow (pcu/h)	404	1082	634	1080
Qc	=	Circulating flow across entry (pcu/h)	1080	748	1110	924
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.06	0.37	0.05	0.11
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.04	0.90	1.03	1.05
X2	=	V + ((E-V)/(1+2S))	9.27	7.00	8.87	8.86
M	=	EXP((D-60)/10)	1	1	1	1
F	=	303*X2	2810	2122	2687	2684
Td	=	1+(0.5/(1+M))	1.31	1.31	1.31	1.31
Fc	=	0.21*Td(1+0.2*X2)	0.79	0.66	0.76	0.76
Qe	=	K(F-Fc*Qc)	2038	1458	1889	2072
DFC	=	Design flow/Capacity = Q/Qe	0.20	0.74	0.34	0.52

Total In Sum = 2234 PCU

DFC of Critical Approach = 0.74

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Design AM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J9_SWR_STKR_FS	CHECKED BY:	SLN	Aug-24
J9 Sha Tau Kok Road / San Wan Road / Fanling Station Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24



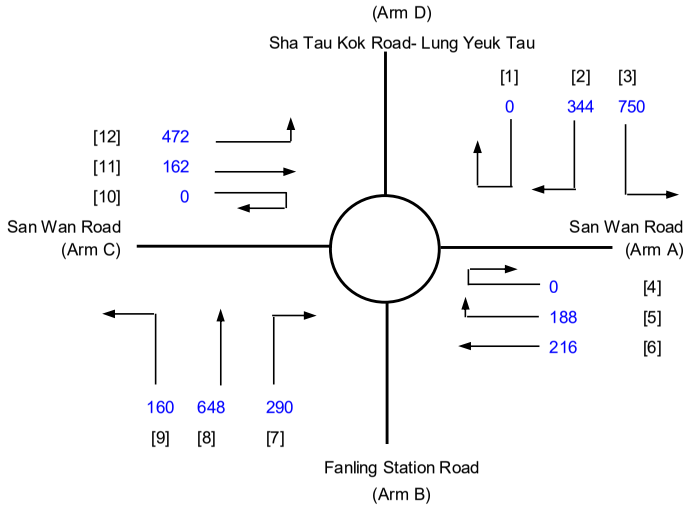


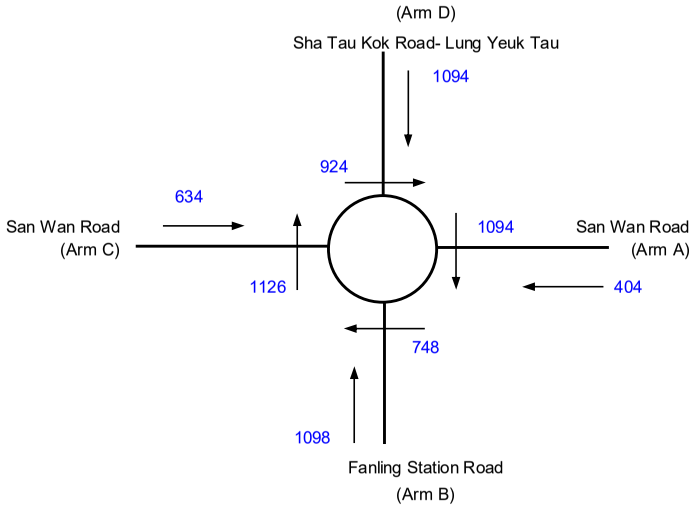
ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.50	5.00	7.50	6.00
E	=	Entry width (m)	9.50	8.50	9.00	9.50
L	=	Effective length of flare (m)	50.00	15.00	50.00	50.00
R	=	Entry radius (m)	100.00	20.00	45.00	50.00
D	=	Inscribed circle diameter (m)	55.00	55.00	55.00	55.00
A	=	Entry angle (degree)	30.00	60.00	30.00	25.00
Q	=	Entry flow (pcu/h)	407	982	796	1313
Qc	=	Circulating flow across entry (pcu/h)	1313	936	1048	1131
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.06	0.37	0.05	0.11
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.04	0.90	1.03	1.05
X2	=	V + ((E-V)/(1+2S))	9.27	7.00	8.87	8.86
M	=	EXP((D-60)/10)	1	1	1	1
F	=	303*X2	2810	2122	2687	2684
Td	=	1+(0.5/(1+M))	1.31	1.31	1.31	1.31
Fc	=	0.21*Td(1+0.2*X2)	0.79	0.66	0.76	0.76
Qe	=	K(F-Fc*Qc)	1847	1347	1938	1906
DFC	=	Design flow/Capacity = Q/Qe	0.22	0.73	0.41	0.69

Total In Sum = 2234 PCU

DFC of Critical Approach = 0.73

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	**2035 Design PM**	PROJECT NO.: 40876	PREPARED BY:	SKL	Aug-24
		FILENAME : J9_SWR_STKR_FS	CHECKED BY:	SLN	Aug-24
J9 Sha Tau Kok Road / San Wan Road / Fanling Station Road		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-24





ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.50	5.00	7.50	6.00
E	=	Entry width (m)	9.50	8.50	9.00	9.50
L	=	Effective length of flare (m)	50.00	15.00	50.00	50.00
R	=	Entry radius (m)	100.00	20.00	45.00	50.00
D	=	Inscribed circle diameter (m)	55.00	55.00	55.00	55.00
A	=	Entry angle (degree)	30.00	60.00	30.00	25.00
Q	=	Entry flow (pcu/h)	404	1098	634	1094
Qc	=	Circulating flow across entry (pcu/h)	1094	748	1126	924
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.06	0.37	0.05	0.11
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.04	0.90	1.03	1.05
X2	=	V + ((E-V)/(1+2S))	9.27	7.00	8.87	8.86
M	=	EXP((D-60)/10)	1	1	1	1
F	=	303*X2	2810	2122	2687	2684
Td	=	1+(0.5/(1+M))	1.31	1.31	1.31	1.31
Fc	=	0.21*Td(1+0.2*X2)	0.79	0.66	0.76	0.76
Qe	=	K(F-Fc*Qc)	2026	1458	1877	2072
DFC	=	Design flow/Capacity = Q/Qe	0.20	0.75	0.34	0.53

Total In Sum = 2234 PCU

DFC of Critical Approach = 0.75

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Aug-24
Checked By:	SLN	Aug-24
Reviewed By:	SLN	Aug-24

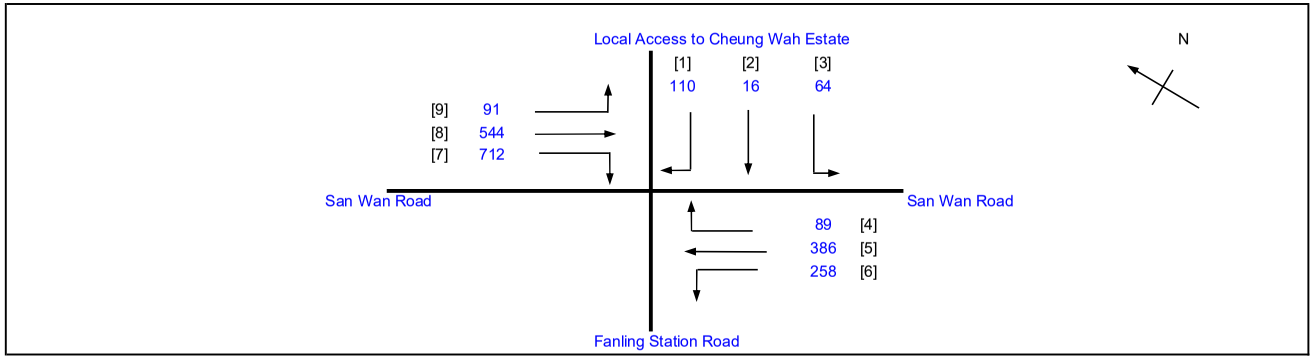
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

J10 San Wan Road / Fanling Station Road

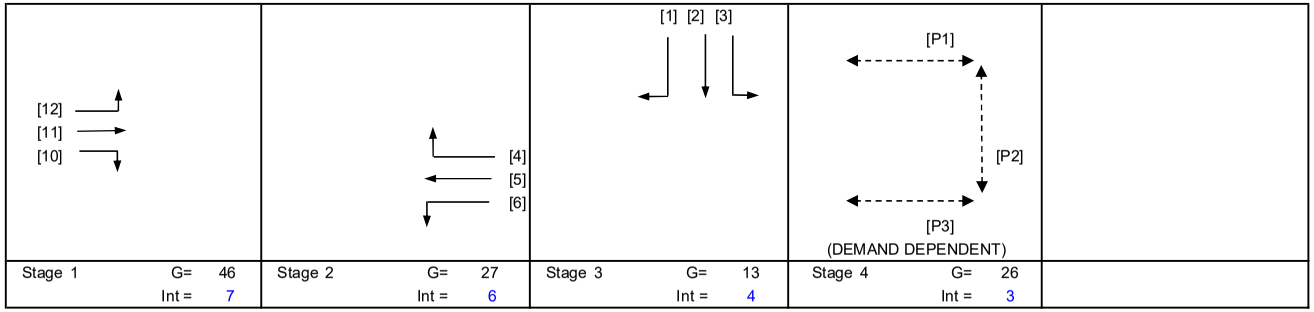
2035 Reference AM

PROJECT NO.: 40876

FILENAME : J10_SWR_FSR.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	122 sec
Sum(y)	Y =	0.604
Loss time	L =	33 sec
Total Flow	=	2270 pcu
Co = (1.5*L+5)/(1-Y)	=	137.5 sec
Cm = L/(1-Y)	=	83.3 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	8.1 %
Cp = 0.9*L/(0.9-Y)	=	100.2 sec
Ymax = 1-L/C	=	0.730
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**9 %**



Stage 1	G= 46	Int = 7
Stage 2	G= 27	Int = 6
Stage 3	G= 13	Int = 4
Stage 4	G= 26	Int = 3

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		6	15	5	9	15
P2	4		6	15	5	9	15
P3	4		6	15	5	9	15

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							17					
4	1	3.30	1	14			2085			602	602	1.00	1883							1883	0.320	0.320		47	47	0.827	78	41
4,5	1	3.30	1	14			2085		544	110	654	0.17	2048							2048	0.319			47	47	0.827	84	40
6	1	3.30	1	10		N	1945	91			91	1.00	1691							1691	0.054			8	47	0.139	6	22
2,3	2	3.50	1	18			2105	258	116		374	0.69	1991							1991	0.188			28	28	0.825	60	57
1,2	2	3.50	1	12		N	1965		270	89	359	0.25	1906							1906	0.188	0.188		28	28	0.827	60	58
7,8,9	3	6.00	1	12		N	2215	64	16	110	190	0.92	1987							1987	0.096	0.096		14	14	0.827	42	81
PED	4	(DEMAND DEPENDENT STAGE)																					26					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Aug-24
Checked By:	SLN	Aug-24
Reviewed By:	SLN	Aug-24

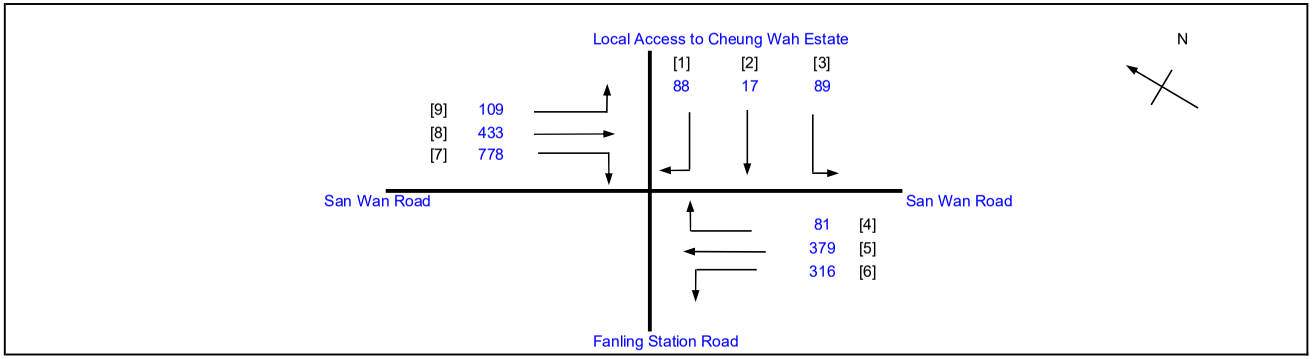
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

J10 San Wan Road / Fanling Station Road

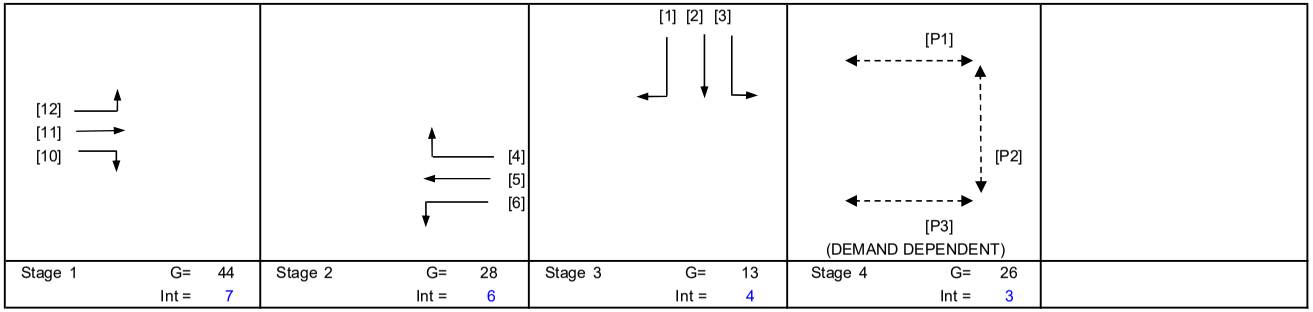
2035 Reference PM

PROJECT NO.: 40876

FILENAME : J10_SWR_FSR.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	122 sec
Sum(y)		Y =	0.608
Loss time		L =	33 sec
Total Flow		=	2290 pcu
Co	= (1.5*L+5)/(1-Y)	=	139.0 sec
Cm	= L/(1-Y)	=	84.2 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	7.3 %
Cp	= 0.9*L/(0.9-Y)	=	101.7 sec
Ymax	= 1-L/C	=	0.730
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**8 %**



Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		6	15	5	9	15
P2	4		6	15	5	9	15
P3	4		6	15	5	9	15

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							17				
4	1	3.30	1	14			2085			585	585	1.00	1883							1883	0.311	0.311		45	45	0.833	78	43
4,5	1	3.30	1	14			2085		433	193	626	0.31	2018							2018	0.310			45	45	0.832	78	42
6	1	3.30	1	10		N	1945	109			109	1.00	1691							1691	0.064			9	45	0.173	12	24
2,3	2	3.50	1	18			2105	316	78		394	0.80	1973							1973	0.200	0.200		29	29	0.833	66	57
1,2	2	3.50	1	12		N	1965		301	81	382	0.21	1914							1914	0.200			29	29	0.833	66	57
7,8,9	3	6.00	1	12		N	2215	89	17	88	194	0.91	1988							1988	0.098	0.098		14	14	0.833	42	82
PED	4	(DEMAND DEPENDENT STAGE)																					26					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Aug-24
Checked By:	SLN	Aug-24
Reviewed By:	SLN	Aug-24

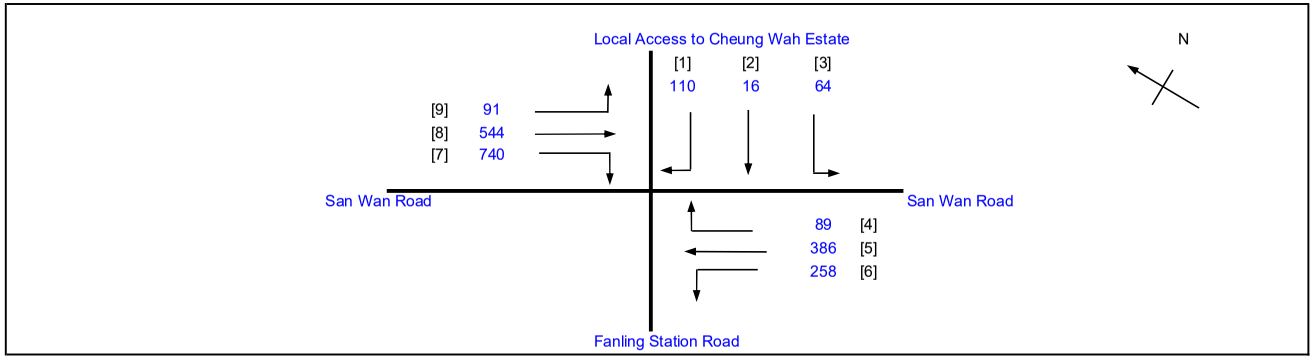
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

J10 San Wan Road / Fanling Station Road

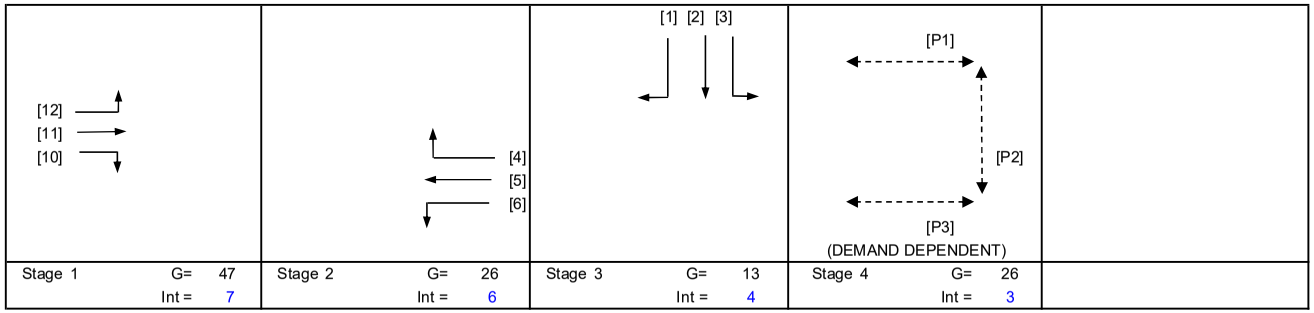
2035 Design AM

PROJECT NO.: 40876

FILENAME : J10_SWR_FSR.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	122 sec
Sum(y)		Y =	0.611
Loss time		L =	33 sec
Total Flow		=	2298 pcu
Co	= (1.5*L+5)/(1-Y)	=	140.1 sec
Cm	= L/(1-Y)	=	84.8 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	6.8 %
Cp	= 0.9*L/(0.9-Y)	=	102.8 sec
Ymax	= 1-L/C	=	0.730
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**7 %**



Stage 1	G= 47	Int = 7
Stage 2	G= 26	Int = 6
Stage 3	G= 13	Int = 4
Stage 4	G= 26	Int = 3

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		6	15	5	9	15
P2	4		6	15	5	9	15
P3	4		6	15	5	9	15

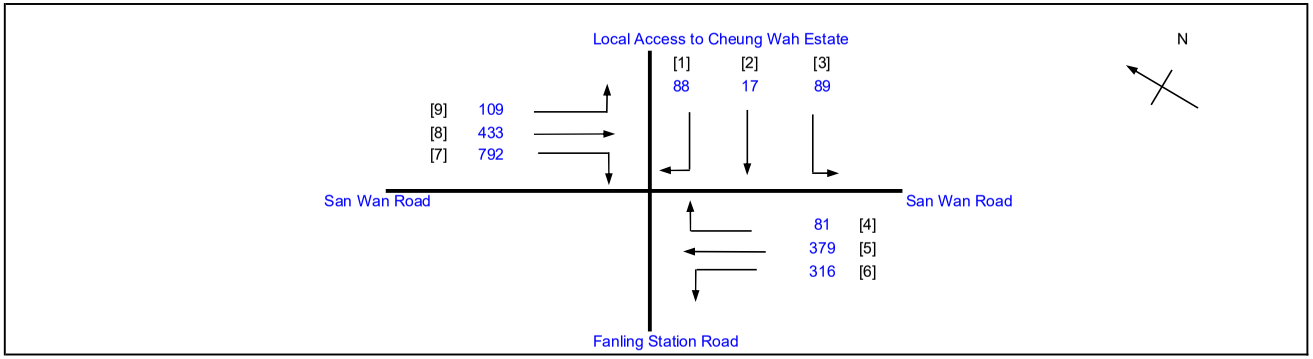
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							17					
4	1	3.30	1	14			2085			616	616	1.00	1883							1883	0.327	0.327		48	48	0.838	78	42
4,5	1	3.30	1	14			2085		544	124	668	0.19	2044							2044	0.327			48	48	0.837	84	41
6	1	3.30	1	10		N	1945	91			91	1.00	1691							1691	0.054			8	48	0.138	6	22
2,3	2	3.50	1	18			2105	258	116		374	0.69	1991							1991	0.188			27	27	0.836	66	59
1,2	2	3.50	1	12		N	1965		270	89	359	0.25	1906							1906	0.188	0.188		27	27	0.838	60	60
7,8,9	3	6.00	1	12		N	2215	64	16	110	190	0.92	1987							1987	0.096	0.096		14	14	0.838	42	84
PED	4	(DEMAND DEPENDENT STAGE)																					26					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

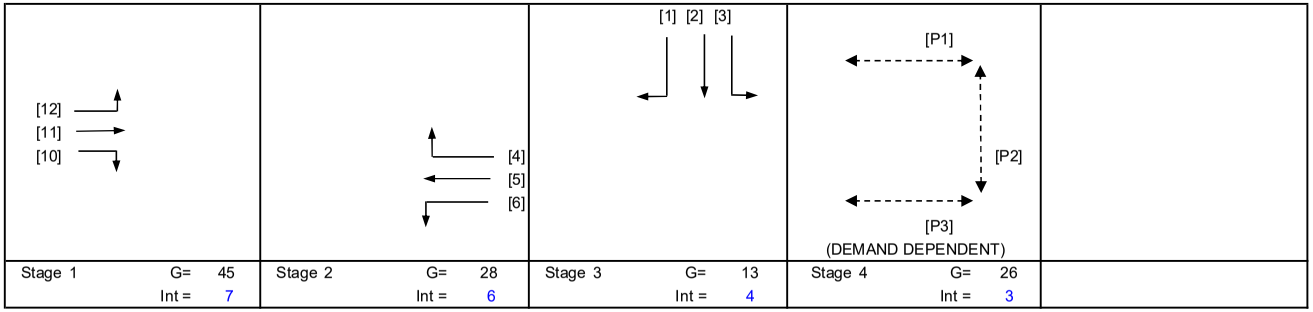
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lot 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories	PROJECT NO.: 40876	Prepared By:	SKL	Aug-24
2035 Design PM	FILENAME : J10_SWR_FSR.xlsx	Checked By:	SLN	Aug-24
J10 San Wan Road / Fanling Station Road		Reviewed By:	SLN	Aug-24



No. of stages per cycle		N =	4
Cycle time		C =	122 sec
Sum(y)		Y =	0.612
Loss time		L =	33 sec
Total Flow		=	2304 pcu
Co	= (1.5*L+5)/(1-Y)	=	140.3 sec
Cm	= L/(1-Y)	=	85.0 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	6.7 %
Cp	= 0.9*L/(0.9-Y)	=	103.0 sec
Ymax	= 1-L/C	=	0.730
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**7 %**



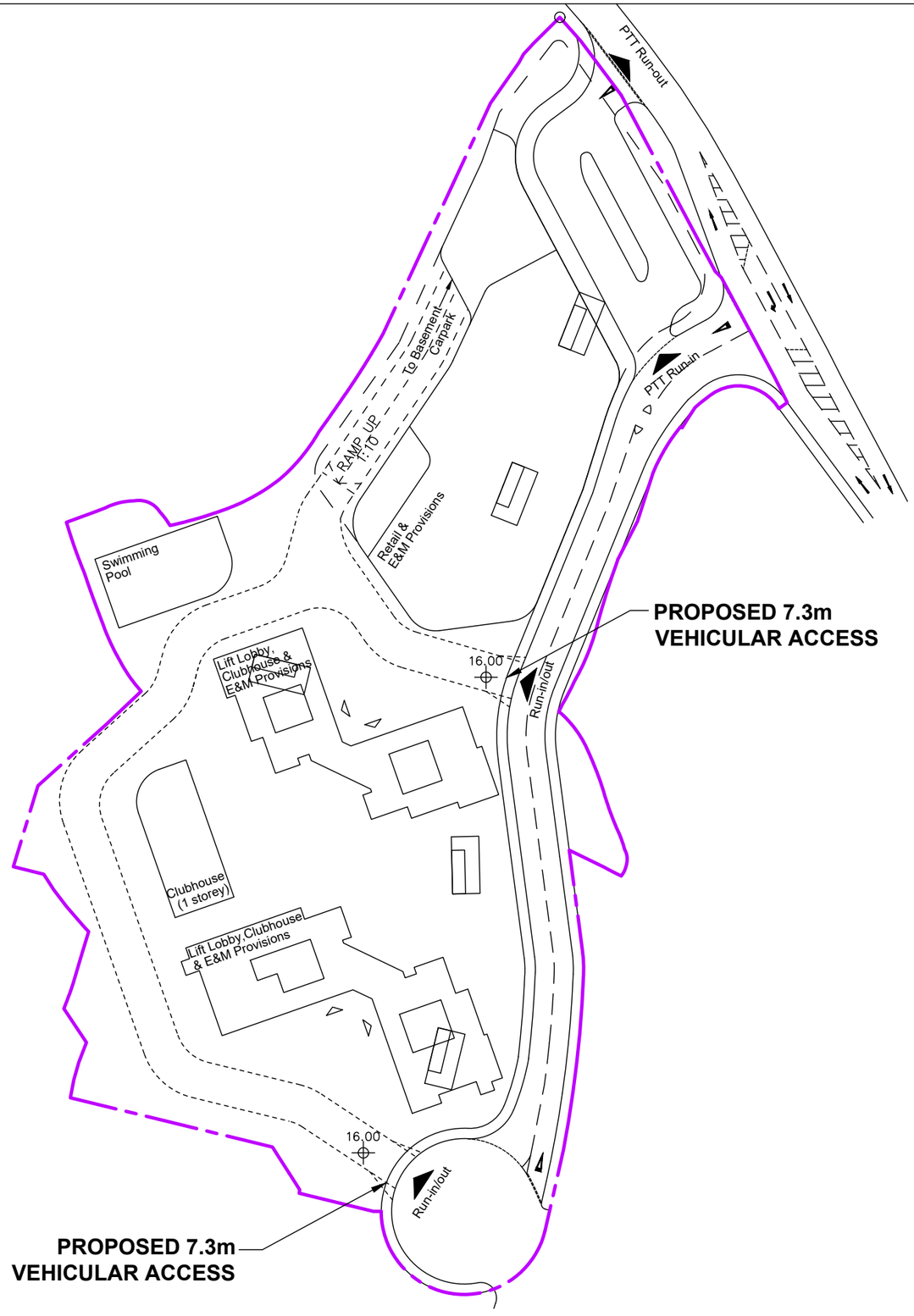
Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		6	15	5	9	15
P2	4		6	15	5	9	15
P3	4		6	15	5	9	15

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							17					
4	1	3.30	1	14			2085			592	592	1.00	1883							1883	0.314	0.314		46	46	0.838	78	43
4,5	1	3.30	1	14			2085		433	200	633	0.32	2017							2017	0.314			46	46	0.837	84	42
6	1	3.30	1	10		N	1945	109			109	1.00	1691							1691	0.064			9	46	0.172	12	23
2,3	2	3.50	1	18			2105	316	78		394	0.80	1973							1973	0.200	0.200		29	29	0.838	66	58
1,2	2	3.50	1	12		N	1965		301	81	382	0.21	1914							1914	0.200			29	29	0.838	66	58
7,8,9	3	6.00	1	12		N	2215	89	17	88	194	0.91	1988							1988	0.098	0.098		14	14	0.838	42	84
PED	4	(DEMAND DEPENDENT STAGE)																					26					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

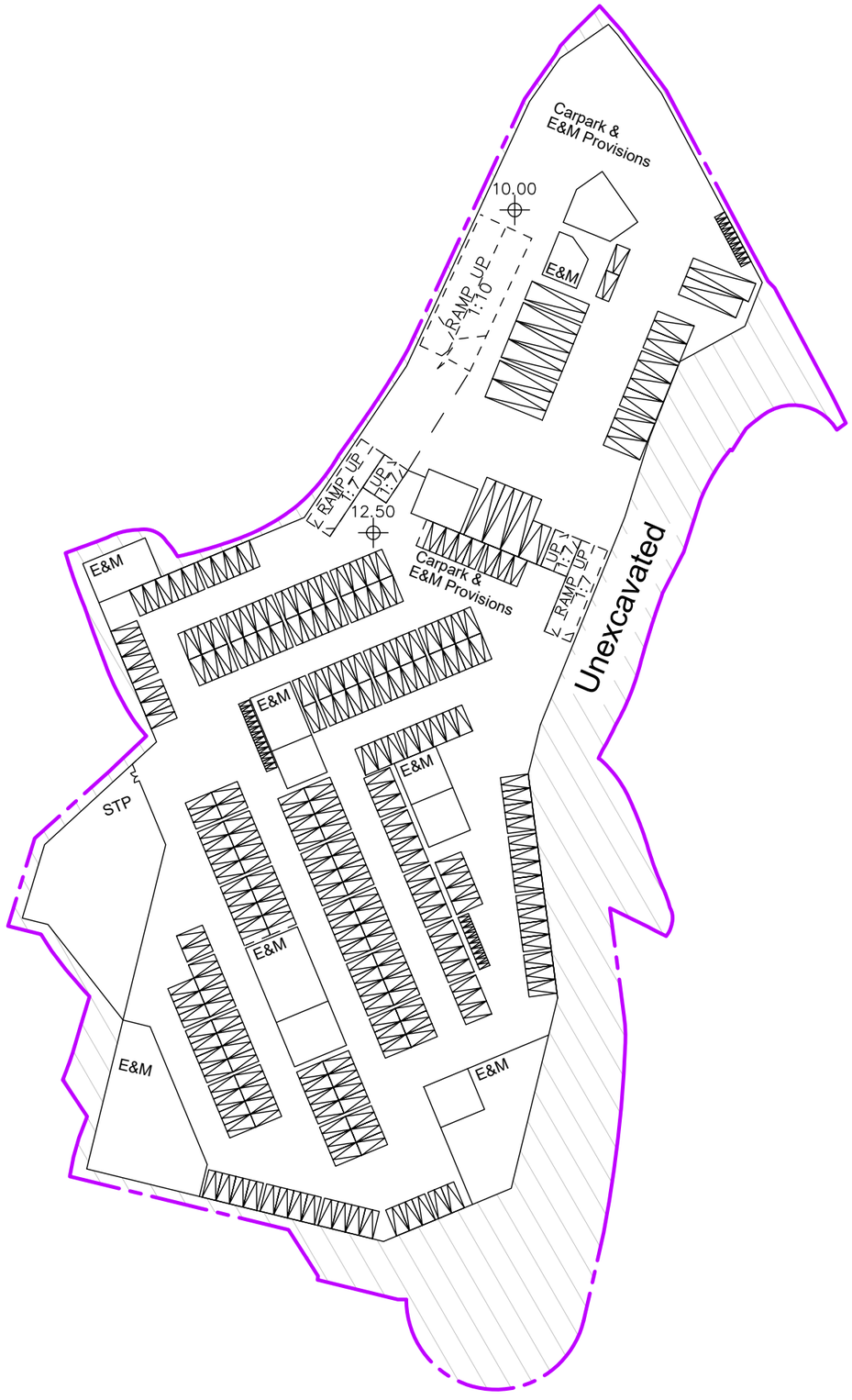
Appendix C

Preliminary Car Park Layout Plan and Swept Path Analysis



GROUND FLOOR

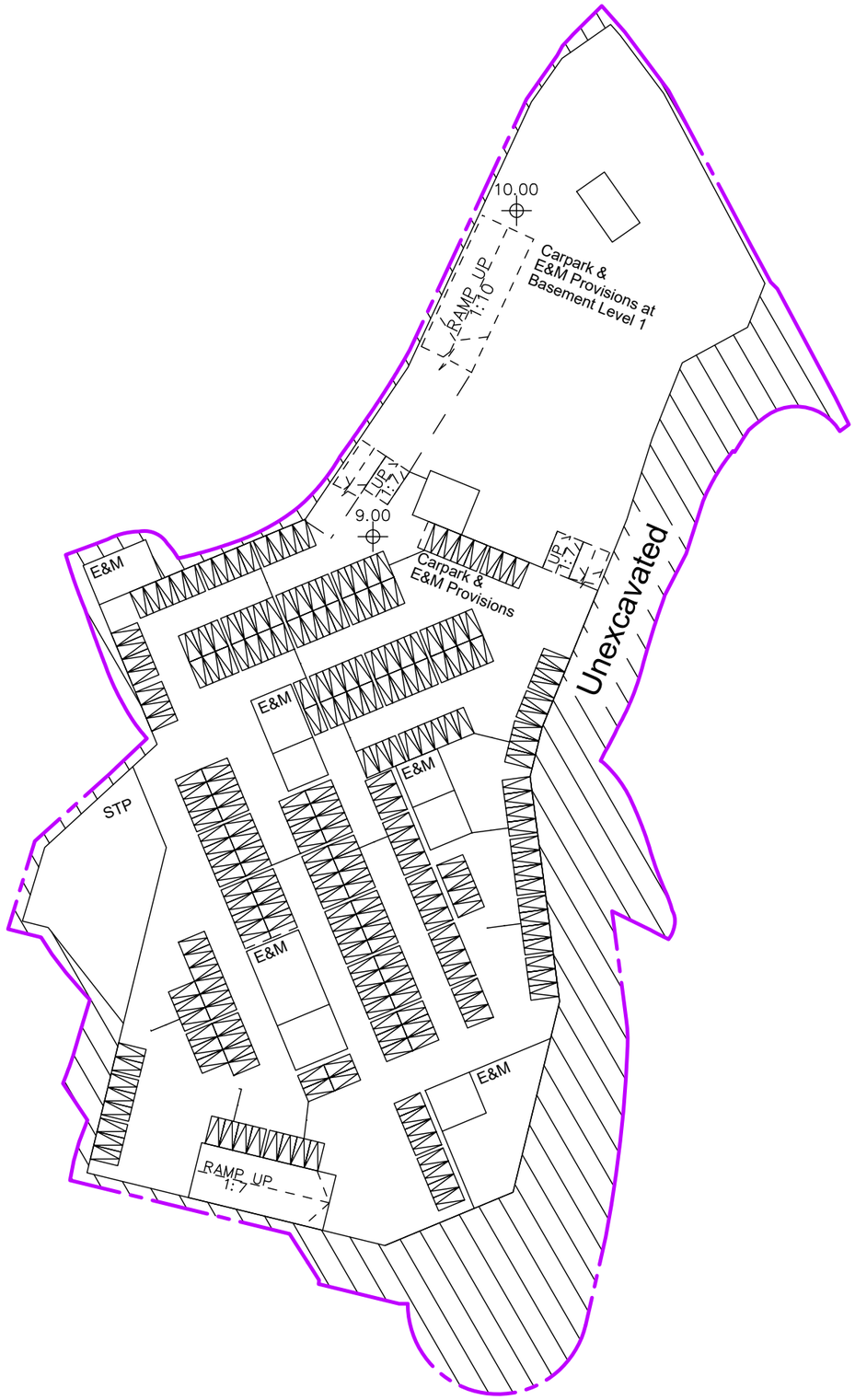
(SCALE 1:1000 @ A3)



PC: 238
LGV:8
HGV: 10
Tour Bus: 1
Motorcycle: 11
Lay-by PC : 2

BASEMENT 1 FLOOR

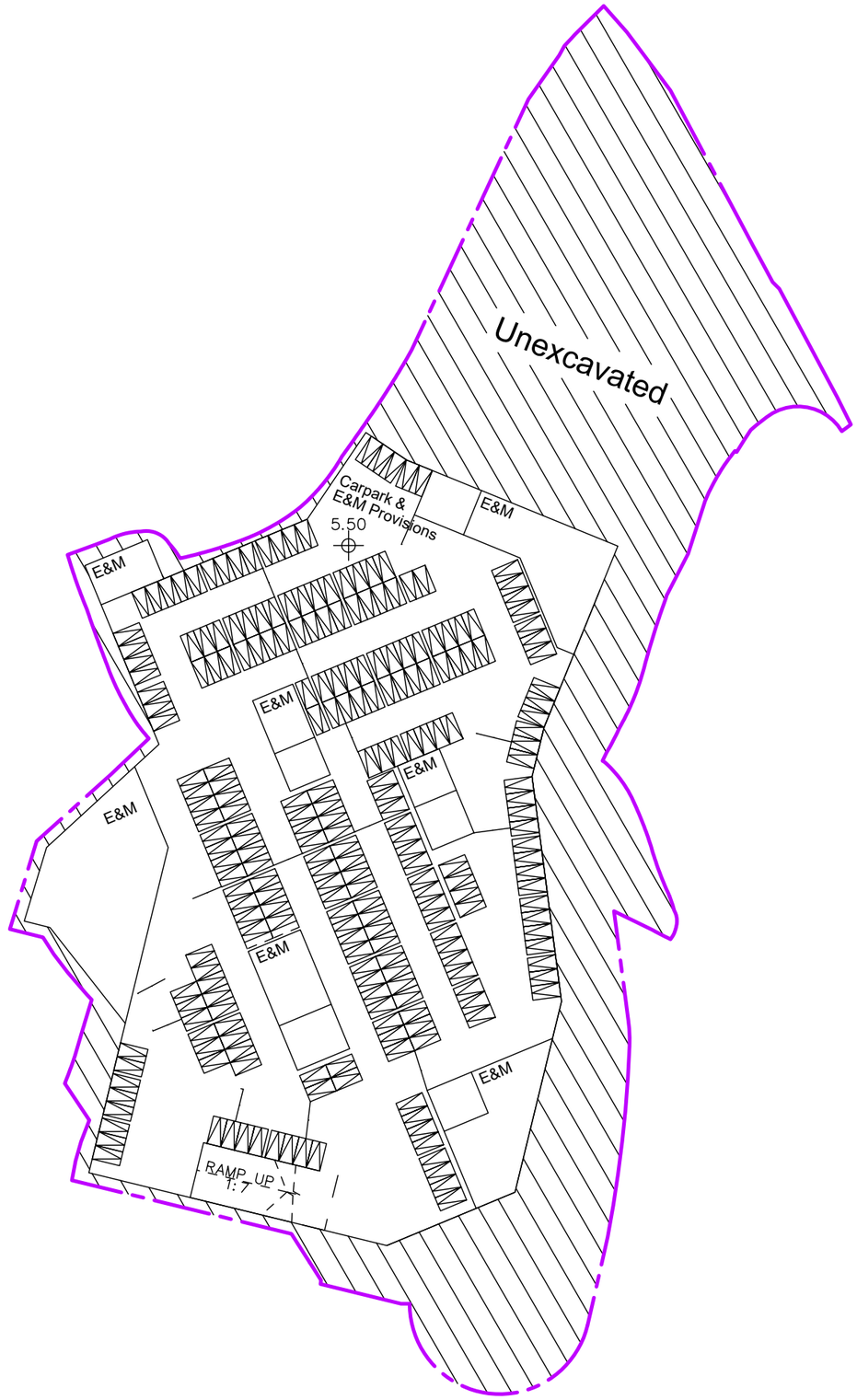
(SCALE 1:1000 @ A3)



PC: 242
Motorcycle: 11

BASEMENT 2 FLOOR

(SCALE 1:1000 @ A3)

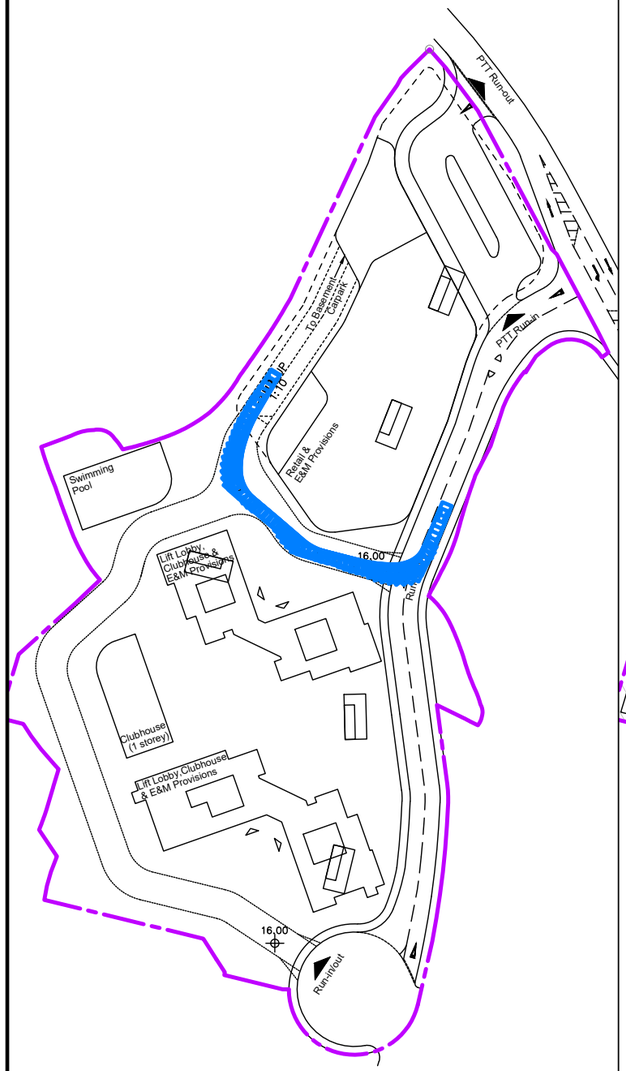


PC: 245
Motorcycle: 11

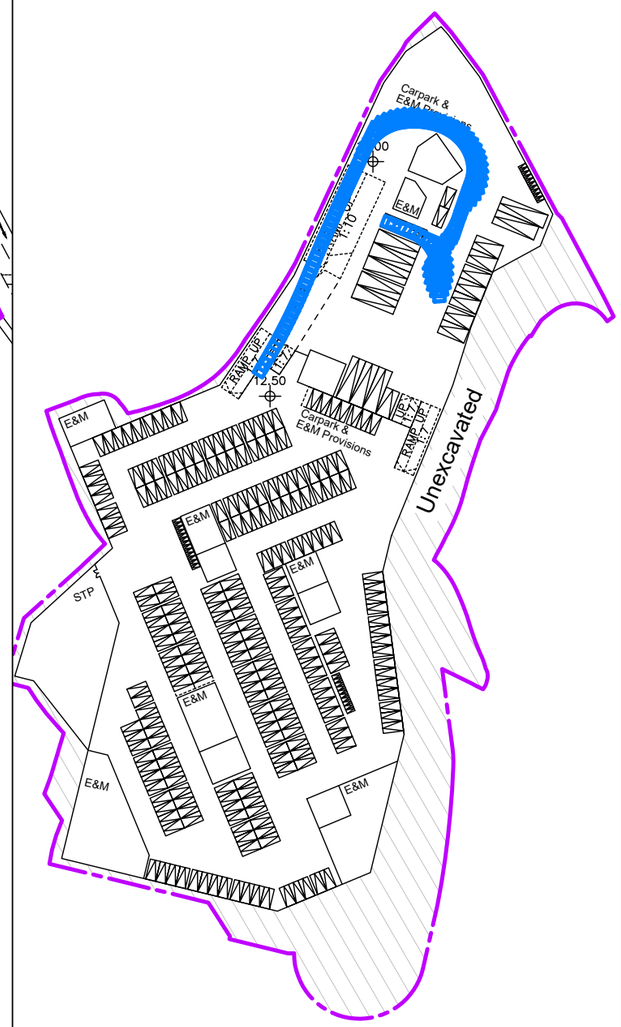
BASEMENT 3 FLOOR

(SCALE 1:1000 @ A3)

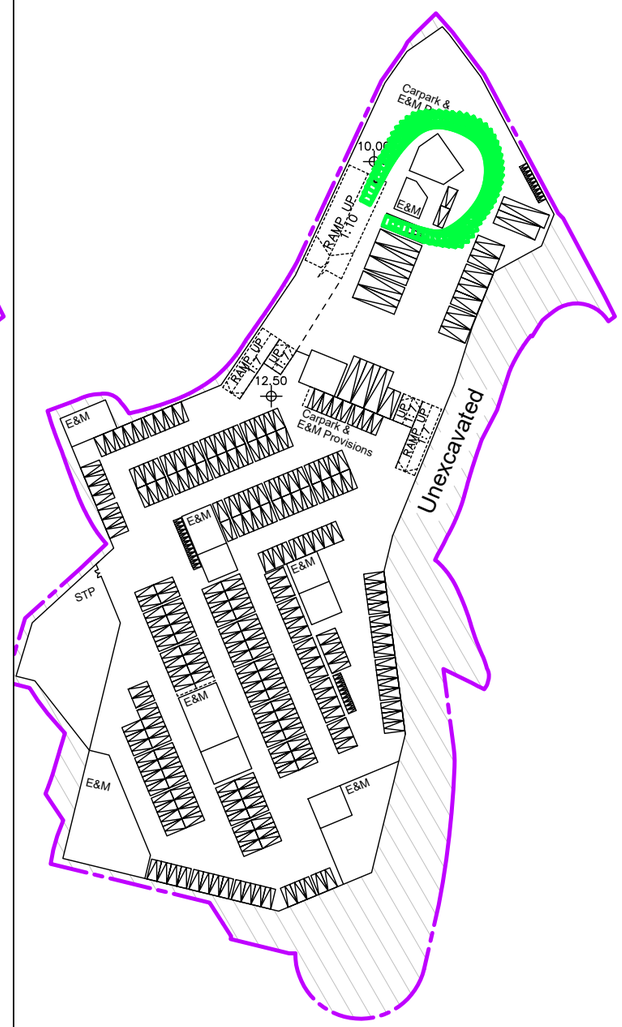
STEP 1



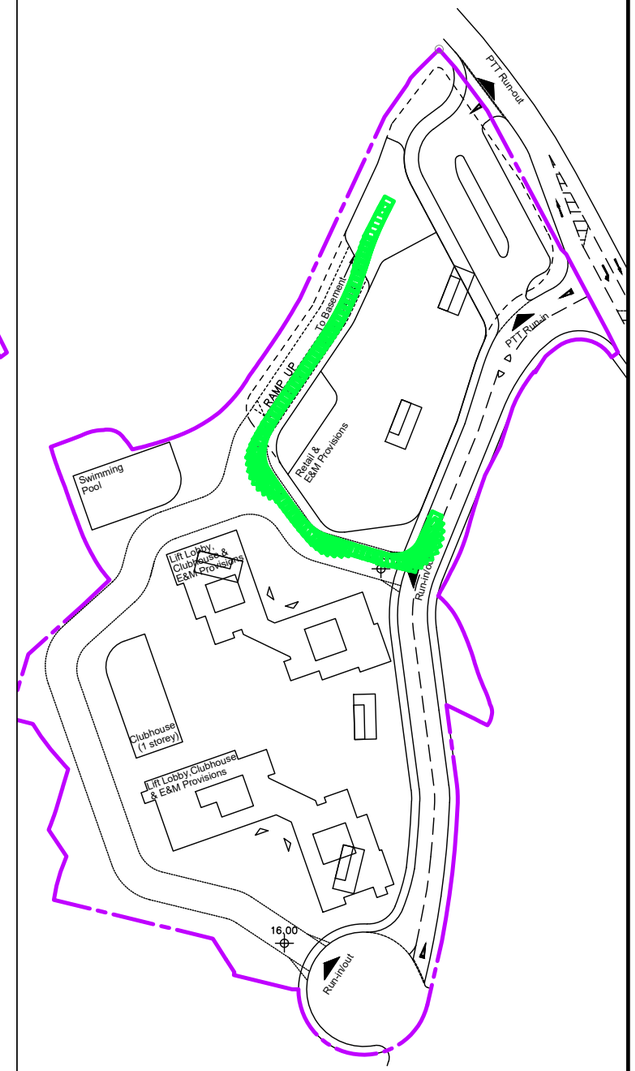
STEP 2



STEP 3



STEP 4



ENTERING FROM GF TO B1

PARKING AT B1

LEAVEING FROM PARKING SPACE AT B1

LEAVGING FROM B1 TO GF

PROJECT NO. 40876	PROJECT TITLE: RESIDENTIAL DEVELOPMENT AT PING CHE D.D.77 LOT 796 & 1008 RP - TIA STUDY FOR S12A REZONING APPLICATION		DRAWING NO. SP-01 / REV. ·
DESIGNED SKL / DATE MAR 2024	DRAWING TITLE: **SWEPT PATH ANALYSIS - HGV**		LLA 顧問有限公司 Consultancy Limited
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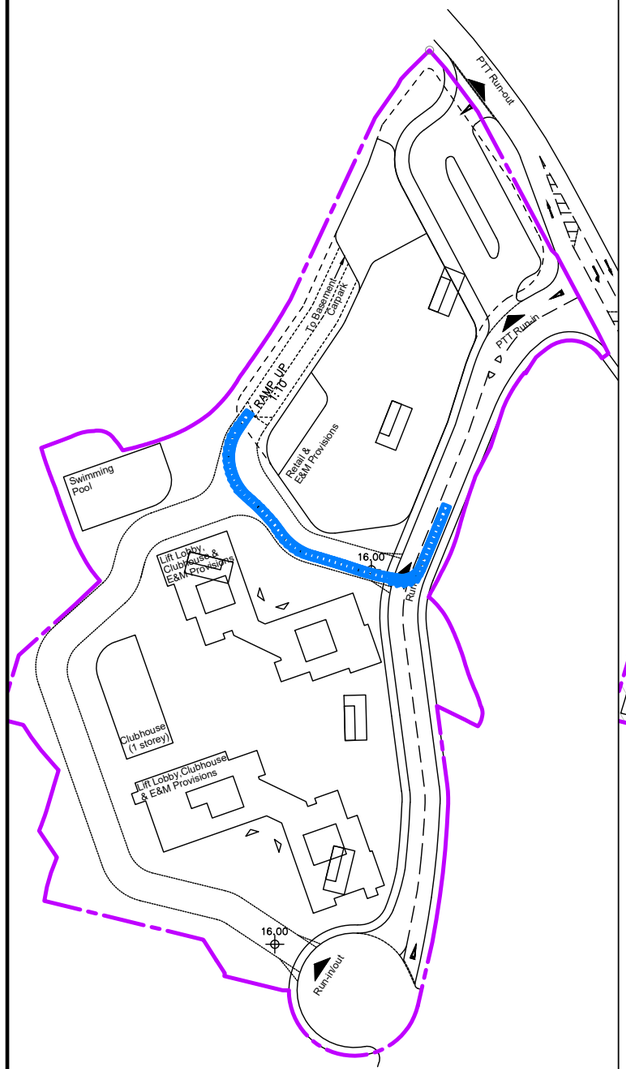

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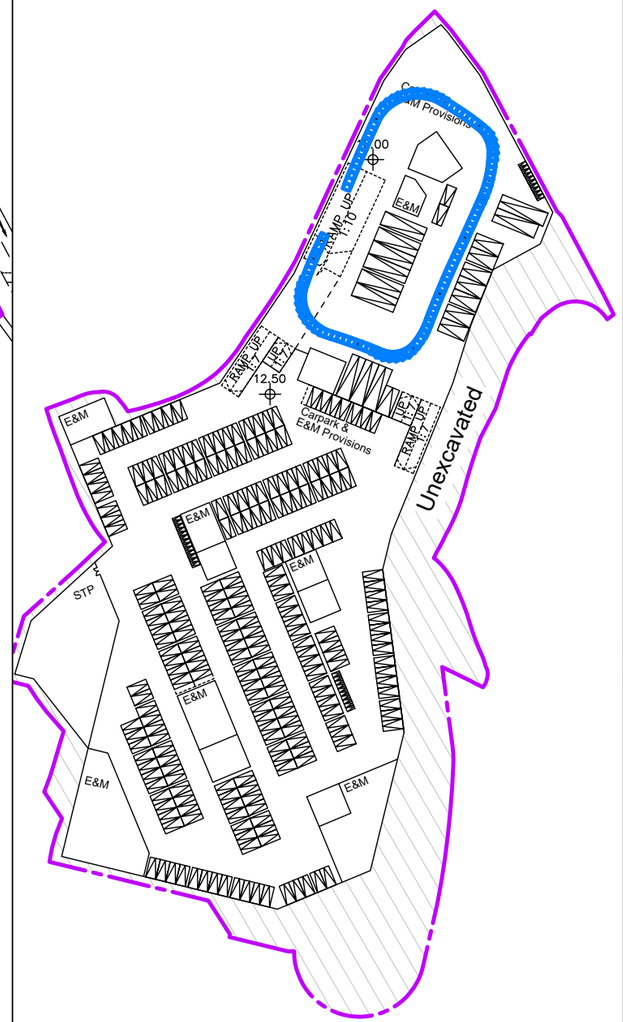

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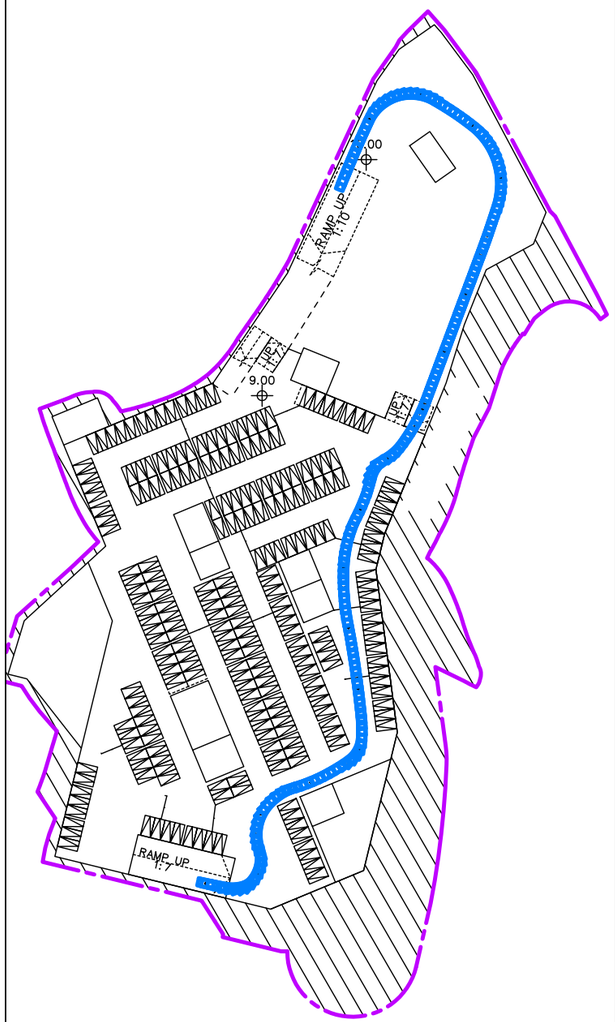

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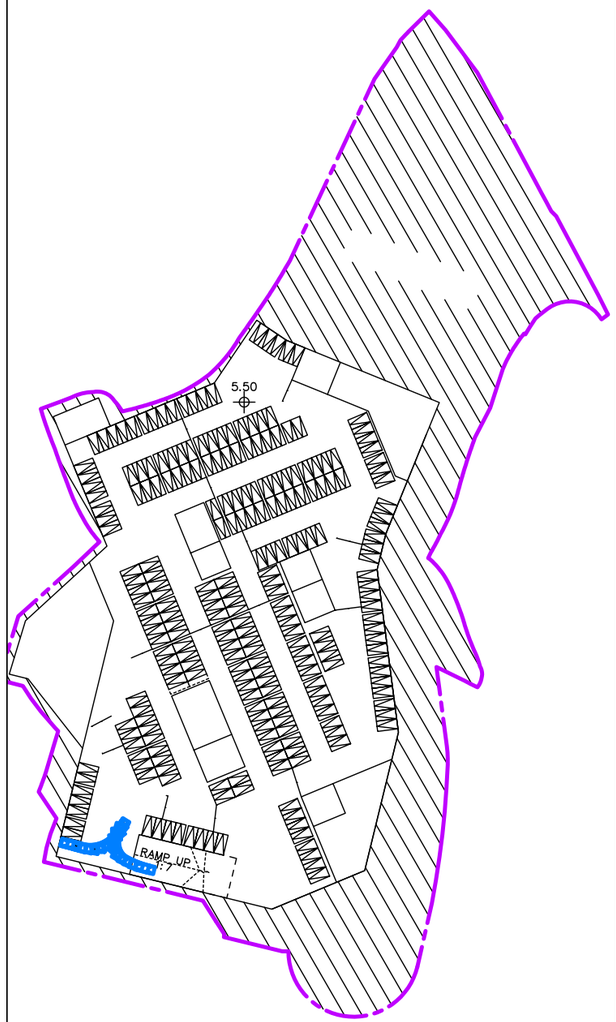

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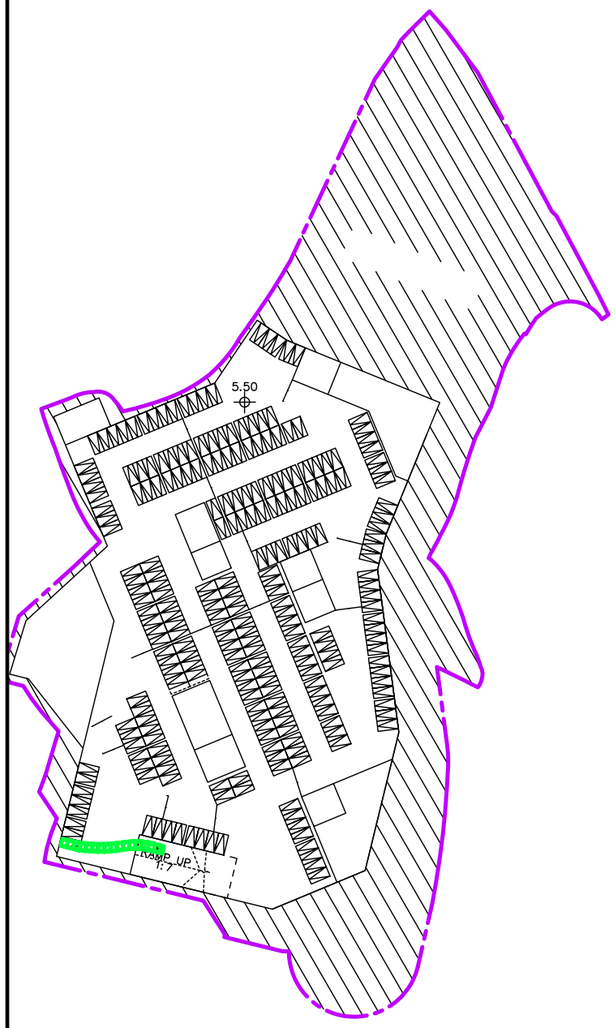

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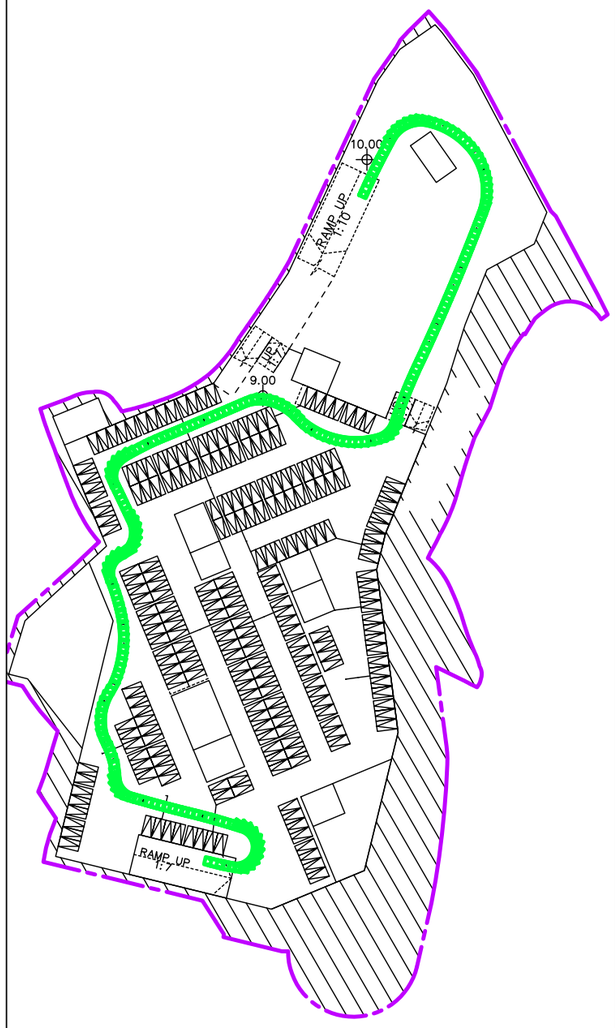

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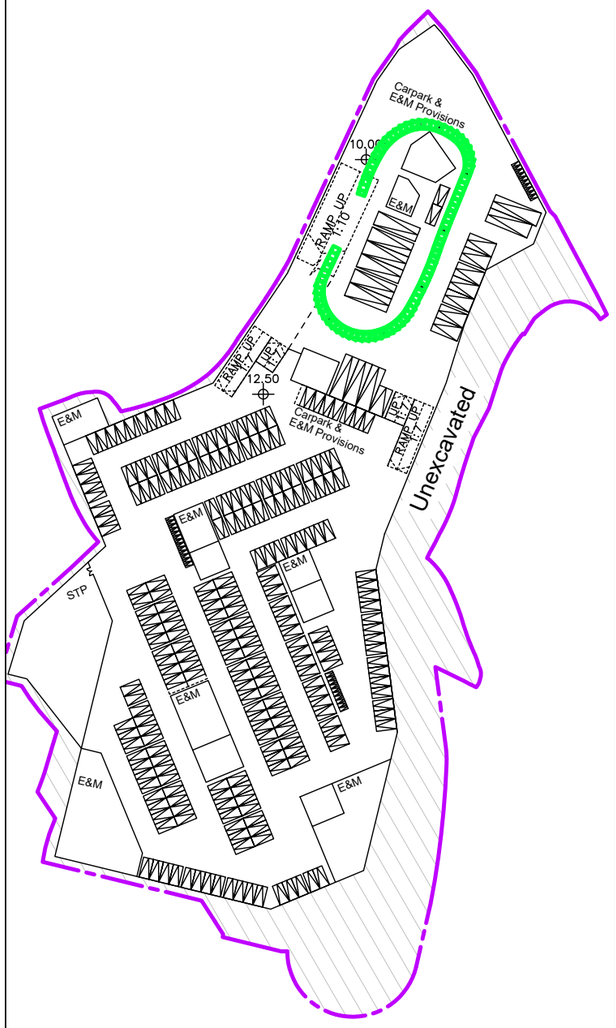

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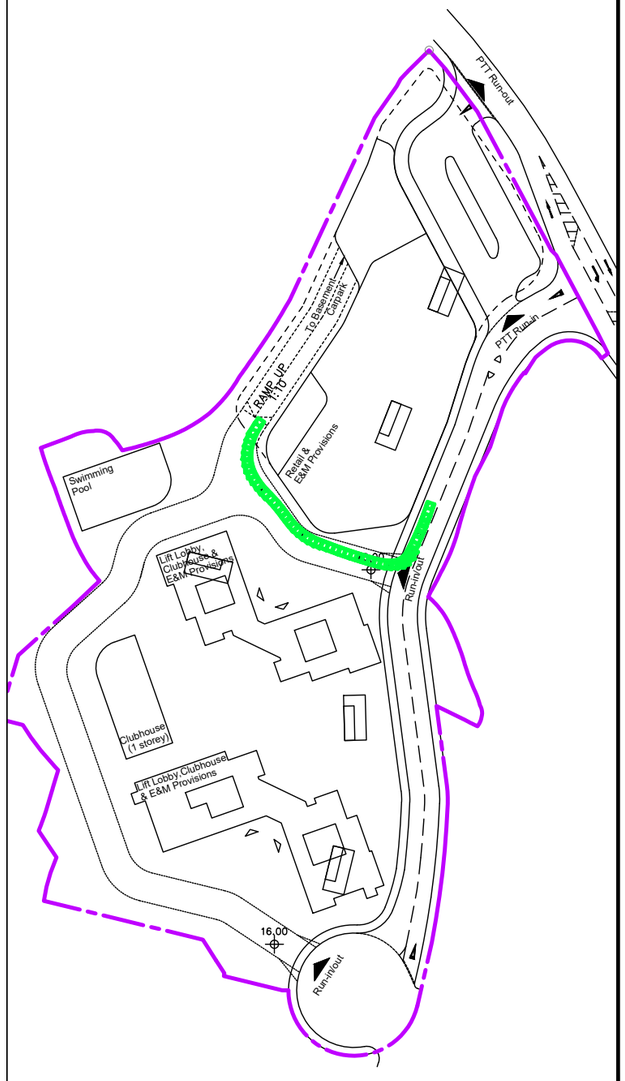

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DESIGNED SKL / DATE MAR 2024	DRAWING TITLE: **SWEPT PATH ANALYSIS - PC**		
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Appendix E Air Ventilation Assessment – Expert Evaluation

Issue No. : 4

Issue Date : May 2024

Project No. : 2127

AIR VENTILATION ASSESSMENT - EXPERT EVALUATION

FOR

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOTS 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Prepared by

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Document Verification

Project Title	APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOTS 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES	**Project No.**	2127
Document Title	AIR VENTILATION ASSESSMENT - EXPERT EVALUATION		

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
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3	Feb 2024	3rd Submission	Various	Cathy Man	Grace Kwok
4	May 2024	4th Submission	Various	Cathy Man	Grace Kwok

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Appendix A MLP of the Proposed Development
Appendix B Broad Land Use Concept for TKLPDA
Appendix C Supplementary Drawing for Visual and Air Ventilation Mitigation Measures

1. INTRODUCTION

1.1.1. Allied Environmental Consultants ("AEC") has been appointed to conduct an Air Ventilation Assessment – Expert Evaluation ("AVA-EE") to support of a Section 12A application for the mixed use development at LOT 796 & 1008RP at D.D. 77 and adjoining government land in Ping Che, Ta Kwu Ling, New Territories (hereinafter referred to as "Application Site").

2. OBJECTIVES

2.1.1. The main objectives of the study are to conduct a qualitative review and to evaluate potential air ventilation impact on the pedestrian wind environment within and in the vicinity of the Application Site using the methodology framework set out by relevant environmental standards, guidelines and technical circulars.

2.1.2. The methodology framework of this study is set out in the Technical Circular No. 1/06 and its Annex A - Technical Guide for Air Ventilation Assessment for Development in Hong Kong. The Technical Circular is jointly issued by Housing, Planning and Lands Bureau (HPLB) and Environment, Transport and Work Bureau (ETWB) in July 2006 (Technical Guide).

2.1.3. The scope of this study shall cover the following:

- To identify any potentially affected areas due to the proposed building design including building heights, layout and deposition;
- To provide recommendations for alleviating the potential air ventilation impact identified;
- To identify any major wind corridors which should be preserved or reserved; and
- To identify good design features.

3. ASSESSMENT METHODOLOGY

3.1. WIND AVAILABILITY DATA

Hong Kong Observatory

3.1.1. The Hong Kong Observatory records the metrological data in Hong Kong. Among all the weather stations in Hong Kong, the nearest weather station to the Application Site is Ta Kwu Ling Weather Station. Thus, the wind data from Ta Kwu Ling Weather Station shall be used for the discussion on overall wind environment in the region.

3.1.2. According to the wind availability data from Ta Kwu Ling Weather Station from 1986-2020, the annual wind rose revealed winds flowing from N, E and ESE while summer wind rose revealed winds flowing from E, ESE and SSW.

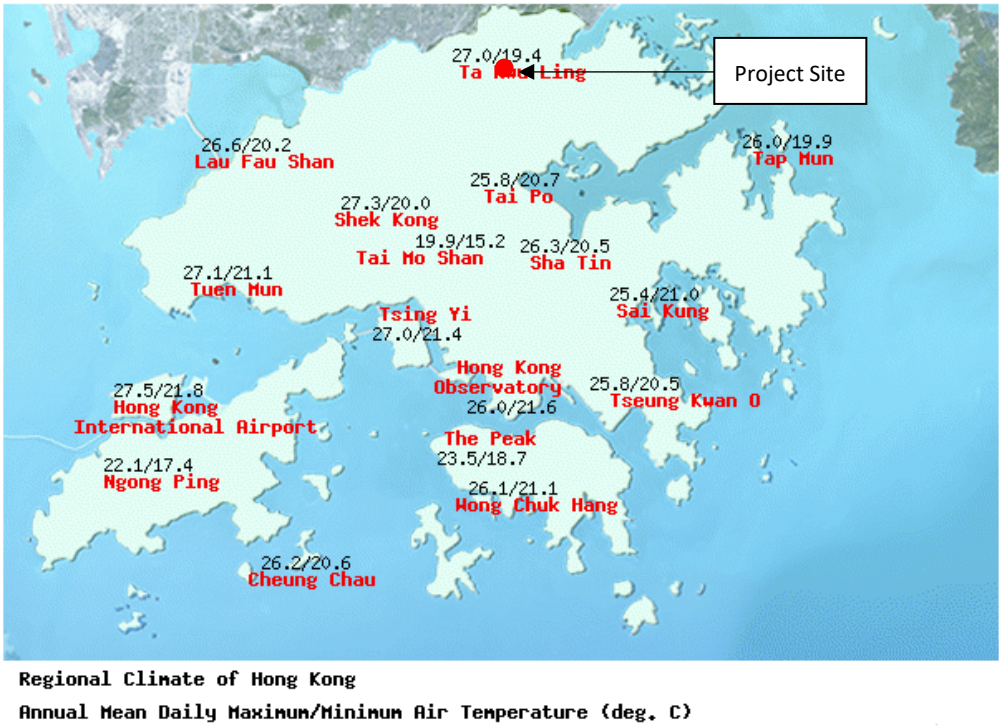
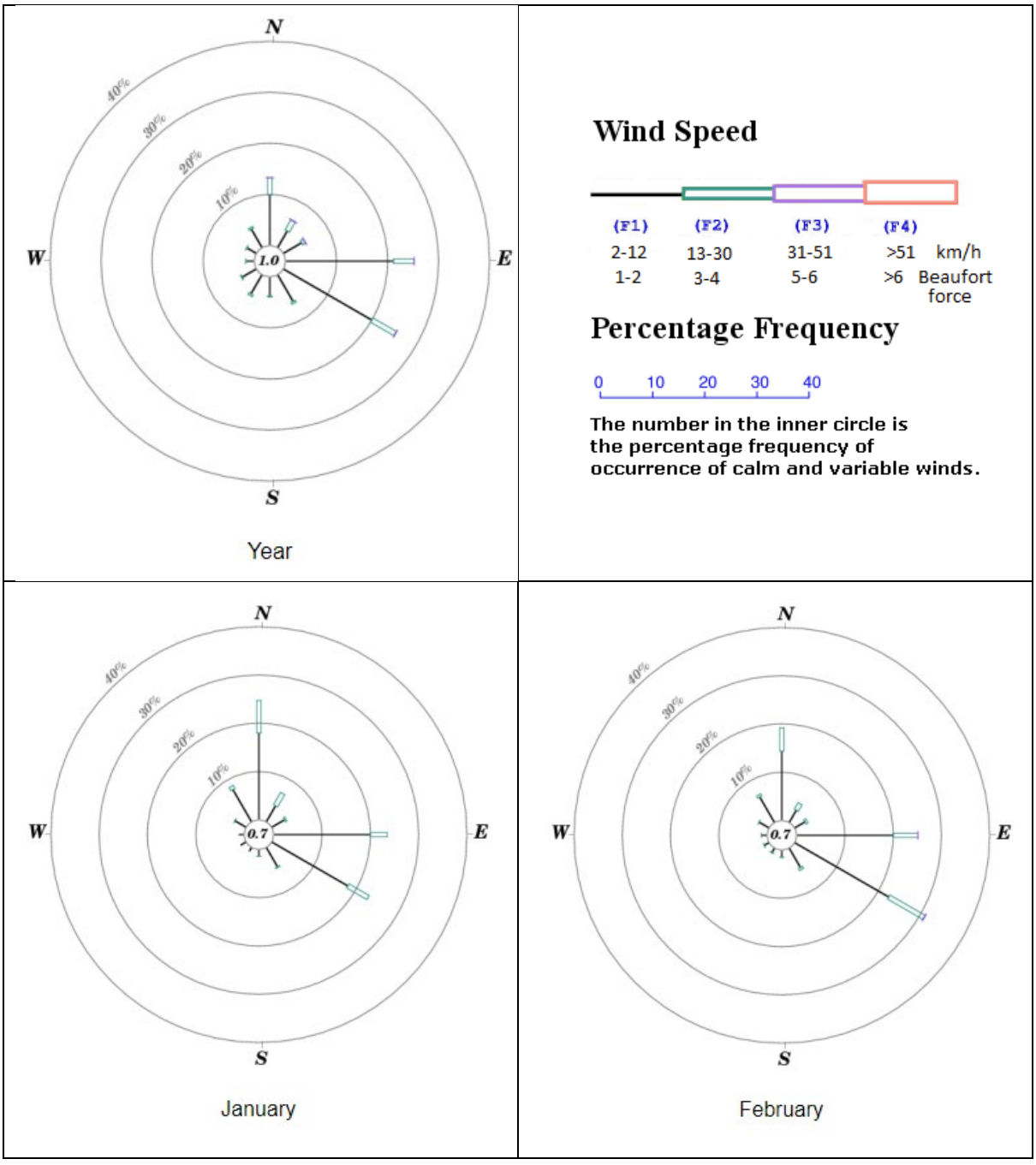
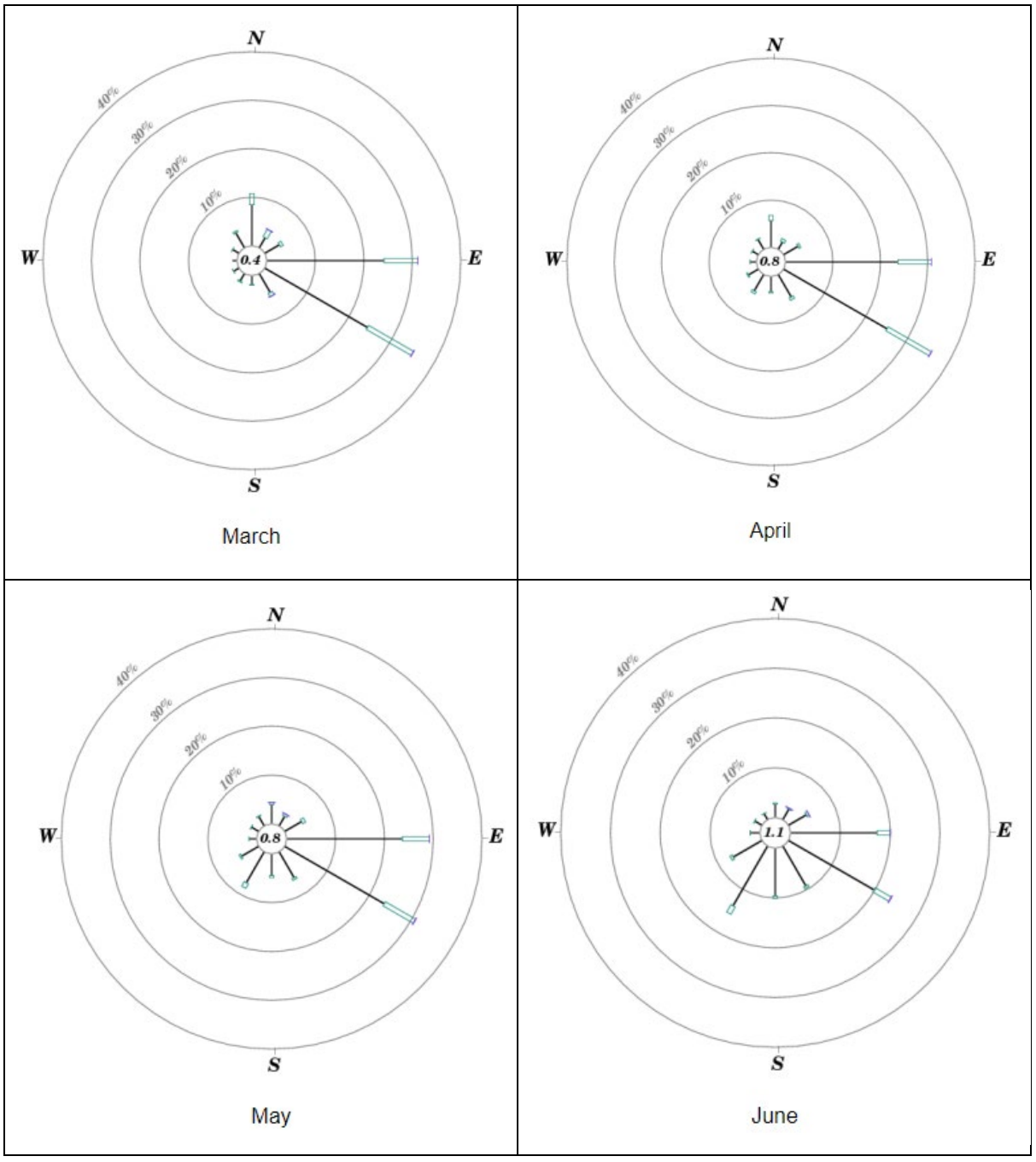


Figure 3-1 Location of Hong Kong Observatory Weather Station


N
W
E
S
40%
30%
20%
10%
1.0
Year
Wind Speed
(F1) (F2) (F3) (F4)
2-12 13-30 31-51 >51 km/h
1-2 3-4 5-6 >6 Beaufort force
Percentage Frequency
0 10 20 30 40
The number in the inner circle is the percentage frequency of occurrence of calm and variable winds.
0.7
January
February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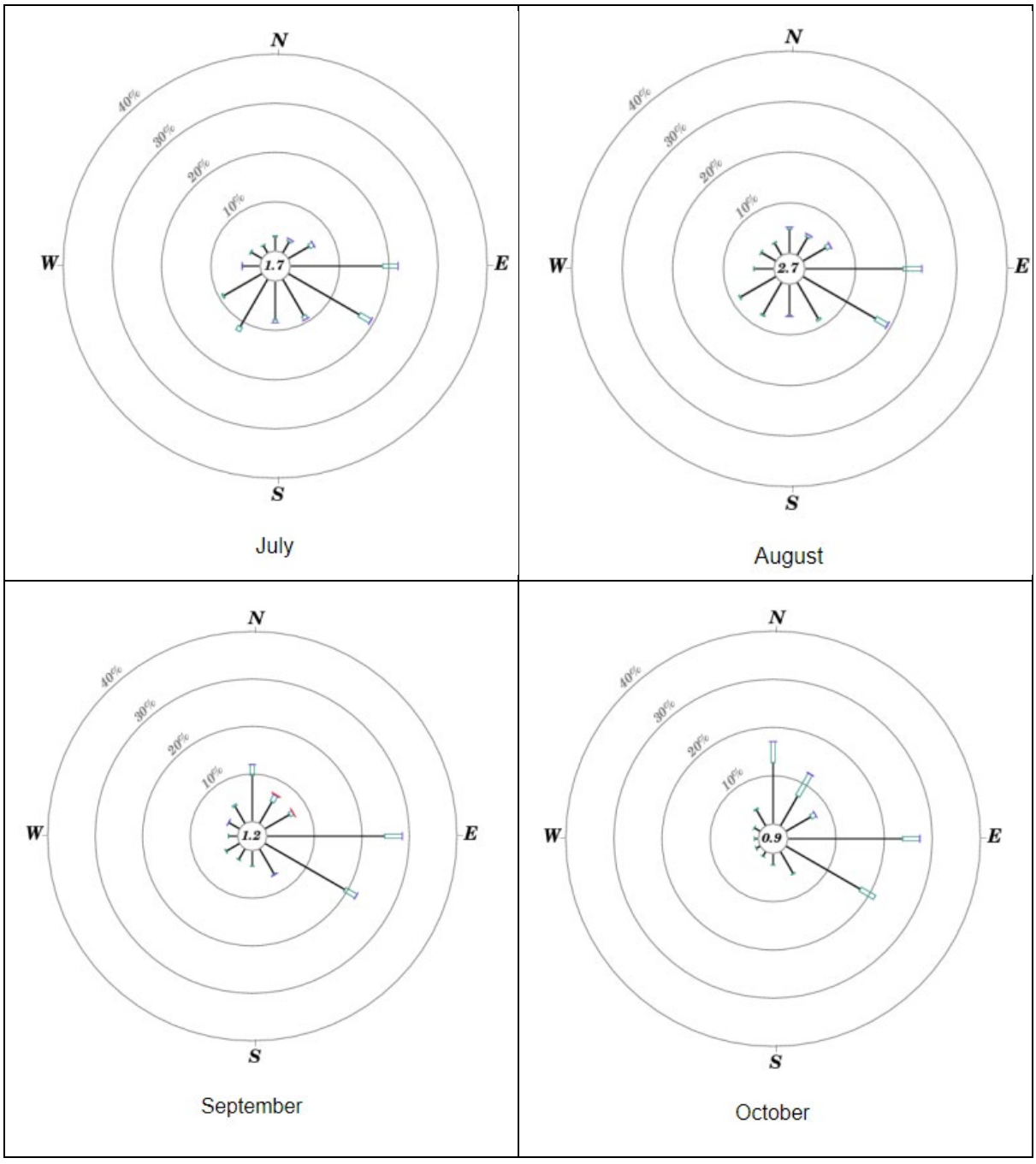
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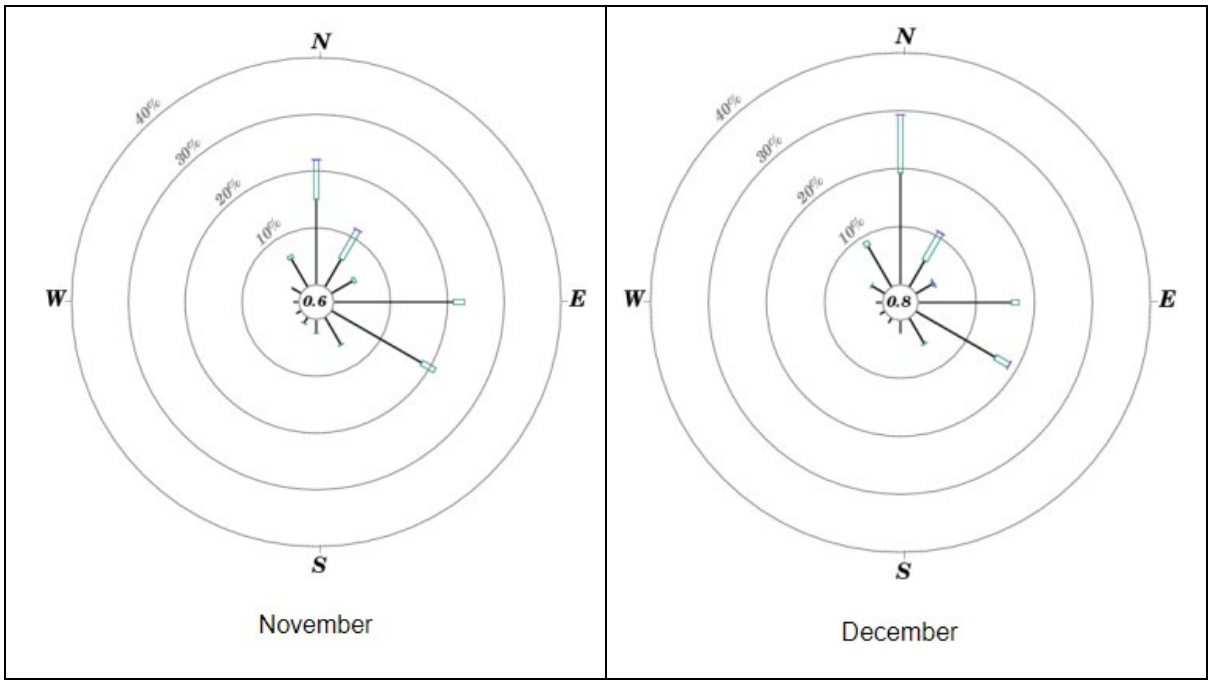


Figure 3-2 Annual Wind Rose of Ta Kwu Ling Weather Station between 1986-2020

Regional Atmospheric Modelling System (RAMS)

3.1.3. Wind availability to the Application Site is evaluated with reference to the "Consultancy Study on Establishment of Simulated Site Wind Availability Data for Air Ventilation Assessments in Hong Kong" simulated by the meso-scale model of Regional Atmospheric Modelling System (RAMS) Version 6.0 at the horizontal resolution of 0.5km * 0.5km.

3.1.4. The Application Site is located within grid (077, 087) and grid (078, 087) in DD77 lot 796 and 1008RP, Ping Che. Wind availability data at 200m was adopted in this assessment. According to Planning Department's simulated data, wind roses, wind direction and wind probability data are provided in ***Figure 3-3*** and ***Figure 3-4.*** The simulated windroses show that the annual prevailing is coming from ENE direction (10.3% from grid 077,087 and 11.7% from grid 078,087), E direction (26.3% from grid 077,087 and 28.3% from grid 078,087) and ESE (14.4% from gird 077,087 and 13.4% form gird 078,087); while the summer prevailing is coming from E direction (13.3% from grid 077,087 and 13.9% from grid 078,087), SE direction (11.1% from grid 077,087 and 10.7% from grid 078,087) and SSE direction (10.6% from grid 077,087 and 11.2% from grid 078,087).

3.1.5. ***Table 3-1*** summarized the simulated wind availability data including probability of Occurrence.

Table 3-1 Summary of RAMS Data and Wind Direction

Wind Director	**Grid (077,087)**		**Grid (078,087)**	
	Probability for Annual Condition (%)	**Probability for Summer Condition (%)**	**Probability for Annual Condition (%)**	**Probability for Summer Condition (%)**
N	5.8	1.4	5.1	1.3
NNE	6.9	1.1	5.5	1.0
NE	4.5	1.1	5.0	1.1
ENE	10.3	3.2	11.7	3.6
E	26.3	13.3	28.3	13.9
ESE	14.4	10.2	13.4	10.4
SE	6.2	11.1	5.8	10.7
SSE	4.8	10.6	5.0	11.2
S	4.2	10.3	4.1	10.1
SSW	3.8	10.1	3.7	9.8
SW	3.1	8.4	3.1	8.4
WSW	2.8	7.7	2.7	7.4
W	3.0	7.2	2.9	6.9
WNW	1.1	1.8	1.1	1.8
NW	1.0	1.3	0.9	1.2
NNW	1.8	1.2	1.8	1.2

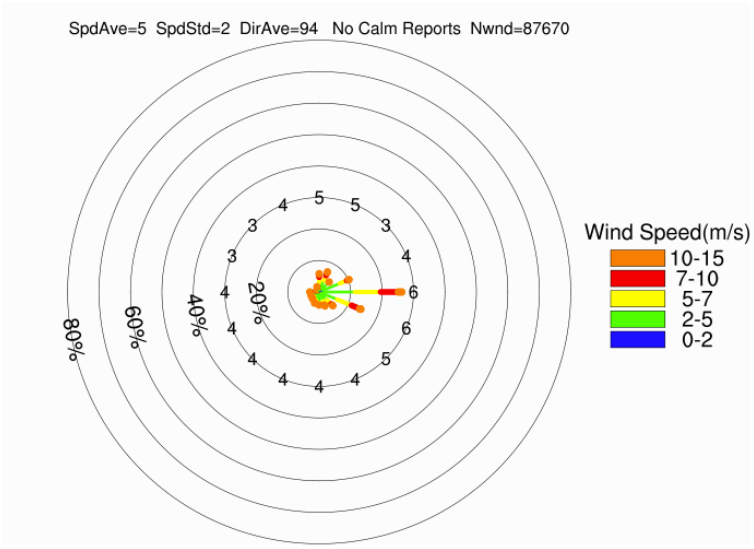
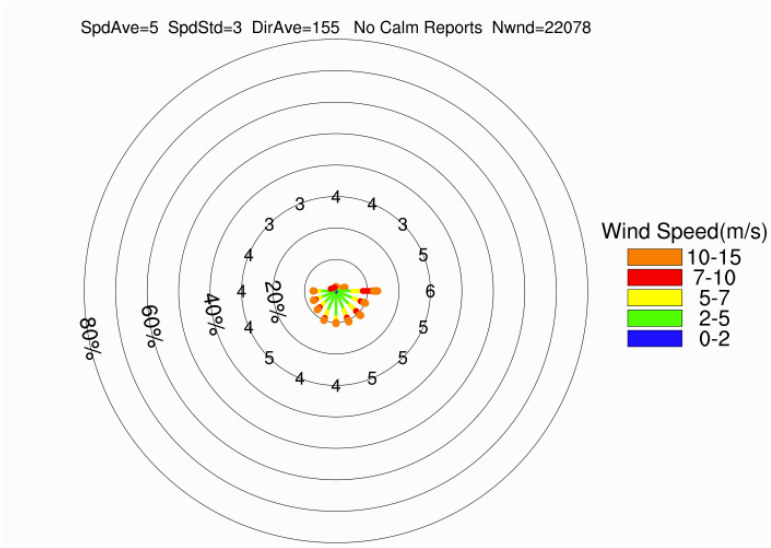
	Wind Rose – Annual
200m	
	Wind Rose – Summer
200m	

Figure 3-3 Wind Rose at Grid (077, 087)

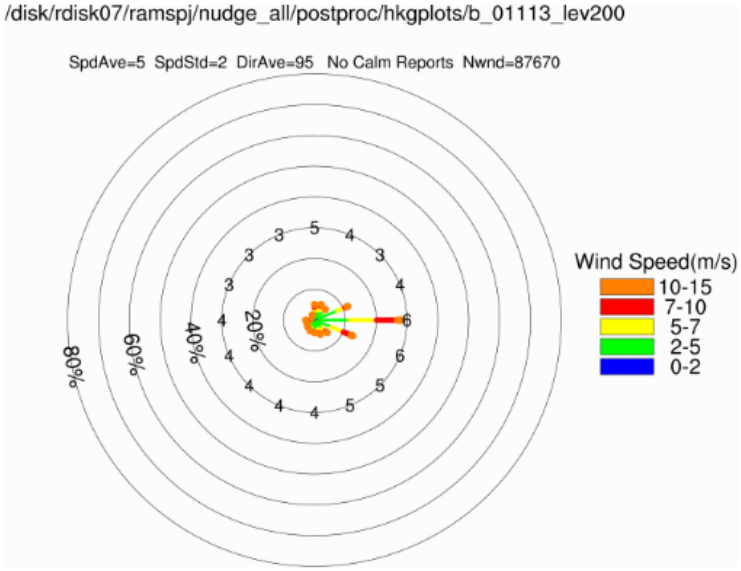
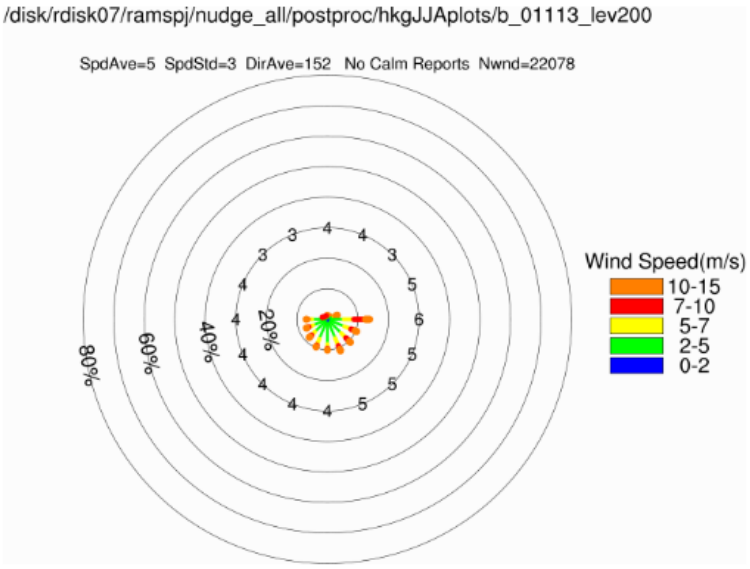
	Wind Rose – Annual
200m	
	Wind Rose – Summer
200m	

Figure 3-4 Wind Rose at Grid (078, 087)

3.1.6. According to RAMS wind data, annual prevailing winds are the incoming winds flowing from E and ESE, while summer prevailing winds are flowing from E, SE and SSE directions.

Wind Data from Previous Studies

3.1.7. There are several air ventilation assessments in Ta Kwu Ling area. Their wind availability are summarized in below:

- Liantang/Heung Yuen Wai Boundary Control Point and Associated Works (AVG/G/40); and
- Public Housing Development at Queen's Hill Site 1, Fanling (AVG/G/148)

3.1.8. The following air ventilation assessments do not cover the Application Site. The distance of site of assessment AVG/G/40 is 3km from Application Site, while the distance of site of assessment AVG/G/148 is 2km from Application Site. Therefore, the wind data from previous assessment around Application Site are considered not included as reference.

3.1.9. In summary, different wind data reference have been reviewed, ***Table 3-2*** summarises the identified prevailing wind conditions of Lot 796 and 1008RP, Ping Che. For a comprehensive discussion on air ventilation performance of the Application Site and the wind environment at pedestrian level, RAMS data is more appropriate as it is the most updated. In view of the close proximity of the HKO Ta Kwu Ling Weather Station to the ApplicationSite, the wind data from HKO Ta Kwu Ling Weather Station is also adopted in this AVA-EE.

Table 3-2 Wind Data Summary

Sources	Annual Wind	Summer Wind
HKO Ta Kwu Ling Weather Station (1986-2020)	N, E, ESE	E, ESE, SSW
RAMS data (grid 077, 087)	ENE, E, ESE	E, SE, SSE
Summary	**N, ENE, E, ESE**	**E, ESE, SE, SSE, SSW**

4. PROJECT DESCRIPTION

4.1. SITE LOCATION AND PROPOSED DEVELOPMENT

4.1.1. The Application Site area is approximately 17,822 m2. It is bounded by Ping Che Road from the north to northeast, the unnamed village road to the east, village, agricultural land and open storage area at the south and west. The ApplicationSite is currently used as an open storage area.

4.1.2. The proposed development will consist of 5 blocks of residential tower ranging from 47 to 48-storey (excluding basement) in height, provided 2,205 residential unit, and 1 block of commercial tower with 35-storey (excluding basement) in height. The plot ratio for domestic use is 5.9and for non-domestic use is 1.1. The total GFA for domestic use is 105,145 m2, and 19,603 m2 for non-domestic use. The non-domestic use consisted of retail, office, hotel or service apartment, clubhouse, day care centre for the elderly and child care centre.

4.1.3. The Application Site is zoned as “Open Storage” (“OS”) on the approved Ping Che and Ta Kwu Ling Outline Zoning Plan (“OZP”) No. S/NE-TKL/14. The southern part of the Application Site is zoned as “Agriculture” (“AGR”) and a minor portion of the Application Site is shown as “Road”. The surrounding areas are the Ping Che New Village and Ta Kwu Ling Rural Centre Government Offices (“G/IC” zone) to the north, the industrial area (Group D) (“I(D)”) zone) to the northeast, agriculture land (“AGR” zone) to the south, industrial area and open storage (“OS” zone) to the east. *Error! Reference source not found.* shows the location of the Application Site.

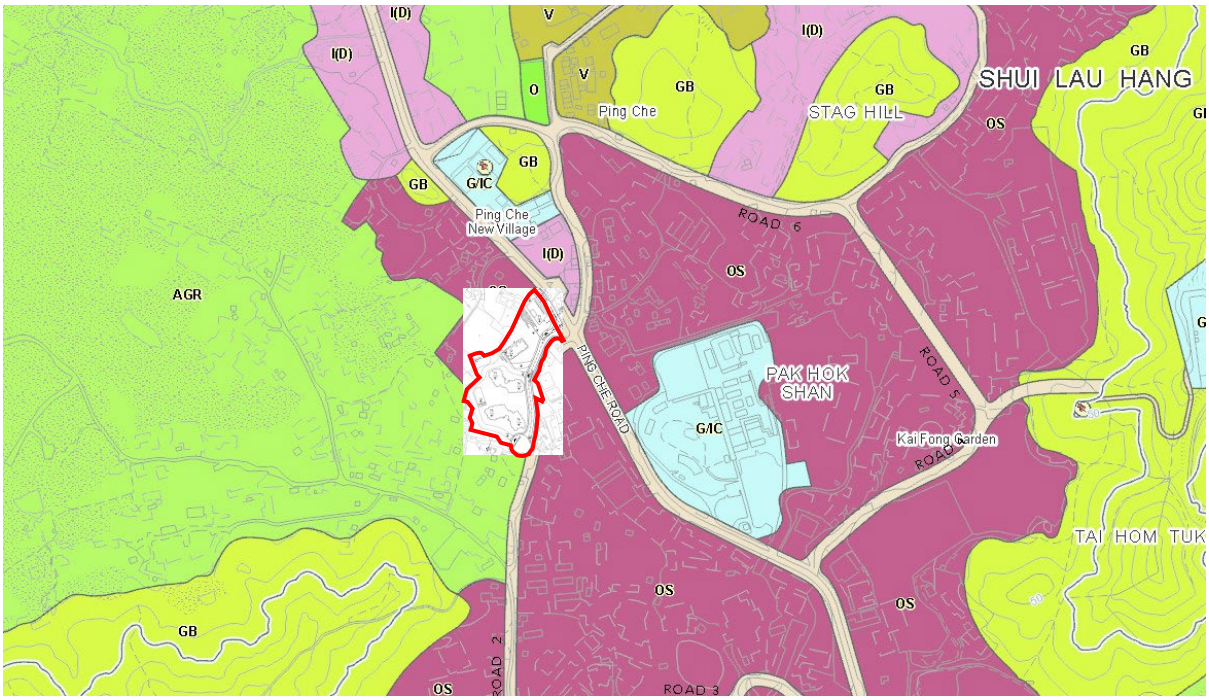


Figure 4-1 Application Site Location

4.1.4. The Application Site is largely open land currently where a minor portion is occupied by temporary structures.

4.1.5. In December 2017, Planning Department (PlanD) and Civil Engineering and Development Department (CEDD) completed Preliminary Feasibility Study on Developing the New Territories North (NTN) (the Preliminary NTN Study). The Preliminary NTN Study has formulated an overall Concept Plan (for the NTN as well as the respective Broad Land Use Concept Plans for the PDAs identified where their broad brushed land use and strategic infrastructure requirements were outlined and preliminary feasibilities were examined.

4.1.6. According to the Broad Land Use Concept Plan of TKLPDA extracted in Agreement No. CE 42/2013 (CE) Preliminary Feasibility Study on Developing the New Territories North as shown in ***Appendix B***, the area to the northeast of the Application Site is proposed as residential developments with plot ratio of 5 and maximum building height of 120 mPD. Further to the southeast and east of the Application Site will accommodate a concentration of high-rise commercial developments with plot ratio at 6.5 and building height ranging from 210- 234 mPD. Existing settlement and few parcel of G/IC Uses of 2-8 storeys high are found to the north and northeast of the Application Site. To the north of the Application Site, existing settlement and residential developments with maximum building height of 45 mPD are identified. The ***Figure 4-6*** shows the site incorporated in the broad land use concept of NTN

Development.

4.2. SURROUNDING ENVIRONMENT AND WIND CHARACTERISTICS

Topography

4.2.1. The Application Site is a relatively hilly area (with ground level of around 14 to 16 mPD) and surrounded by the mountains in its east, northeast and southwest. Tsung Shan is elevated around 90mPD to 99mPD located at the southwest to the Application Site, and Tai Hom Tuk elevated at around 52mPD to 93mPD is located at the east of Application Site, making the Application Site located at relatively low ground between two hills. Stag hill with height around 34mPD to 47mPD is located at northeast to the Application Site. The topography around the Application Site is illustrated in ***Figure 4-5.***

Urban Morphology

4.2.2. As mentioned in *Section 4.1* and shown in ***Figure 4-1*** and ***Table 4-1***, existing developments are focusing on the Application Site is surrounding by "OS", "G/IC", "I(D)" and "ARG" zone with different building height. The Application Site is located in rural area, the surrounding buildings are low rise with a relatively low in building height. As the building is scattered around and not densely surrounding the Application Site, it is mainly open area and open storage around. The morphology is mostly flat at the ground area. ***Figure 4-2*** and ***Table 4-1*** show the location of the surrounding developments and the relevant building height respectively.

Table 4-1 Building Heights of Major Development in the Surroundings

	Surrounding Buildings	**Existing/ Proposed Height (m)**	**OZP Building Height Restriction (m)**
Existing Buildings			
1	29 Ping Che New Village	7	19
2	Hong Kong Baptist Assembly	3	19
3	13 Ng Chau Road	3	13
4	Ta Kwu Ling Rural Centre Government Offices	5	19
5	Ping Che Commercial Centre	10	19
6	50C Ping Che	8	3 Storey (8.23m)
7	246 PING CHE	8	3 Storey (8.23m)

Committed/ Planned Developments			
8	Tai Kwu Ling Ping Che Tsuen	8.23m	-
Remarks: [1] The higher building height among existing building height and OZP building height restrictions is adopted in the AVA. * Planning Application No. A/NE-TKL/529			

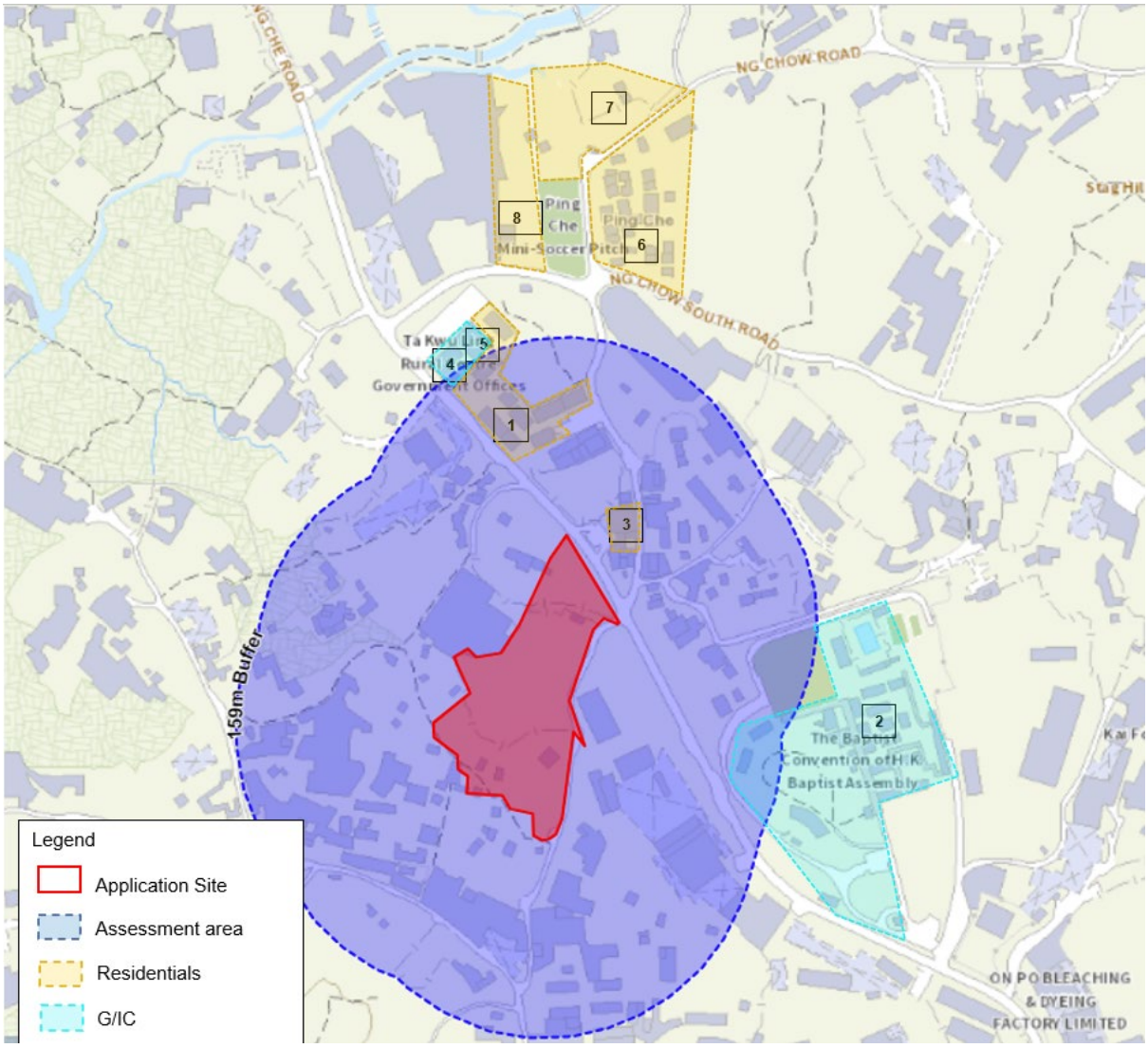


Figure 4-2 Existing and Proposed Surrounding Developments

4.2.3. Noted that the Application Site is located within the proposed tentative boundary of New Territories North New Town which the EIA study for such is under preparation during the course of the study for this application. However, the exact programme and development

details for its implementation is yet to be confirmed.

4.2.4. Based on the EIA Project Profile and Study brief for Development of New Territories North New Town and Man Kam To (NTN Development) (ESB-341/2021), the NTN remaining phase development is proposed for housing, economic and employment-generating developments. As refer to the Project Profile, the broad land use concepts identified for the NTN development would be further review, such as commercial, residential, industrial estate, science park, logistic industries, etc.

4.2.5. Since the implementation details of NTN Development is yet to be confirmed, the urban morphology cannot be identified at this stage. The assessment will evaluate the scenario of existing OZP compliance scheme and the scenario with NTN development and aims to demonstrate that there is feasible solution to meet relevant standards.

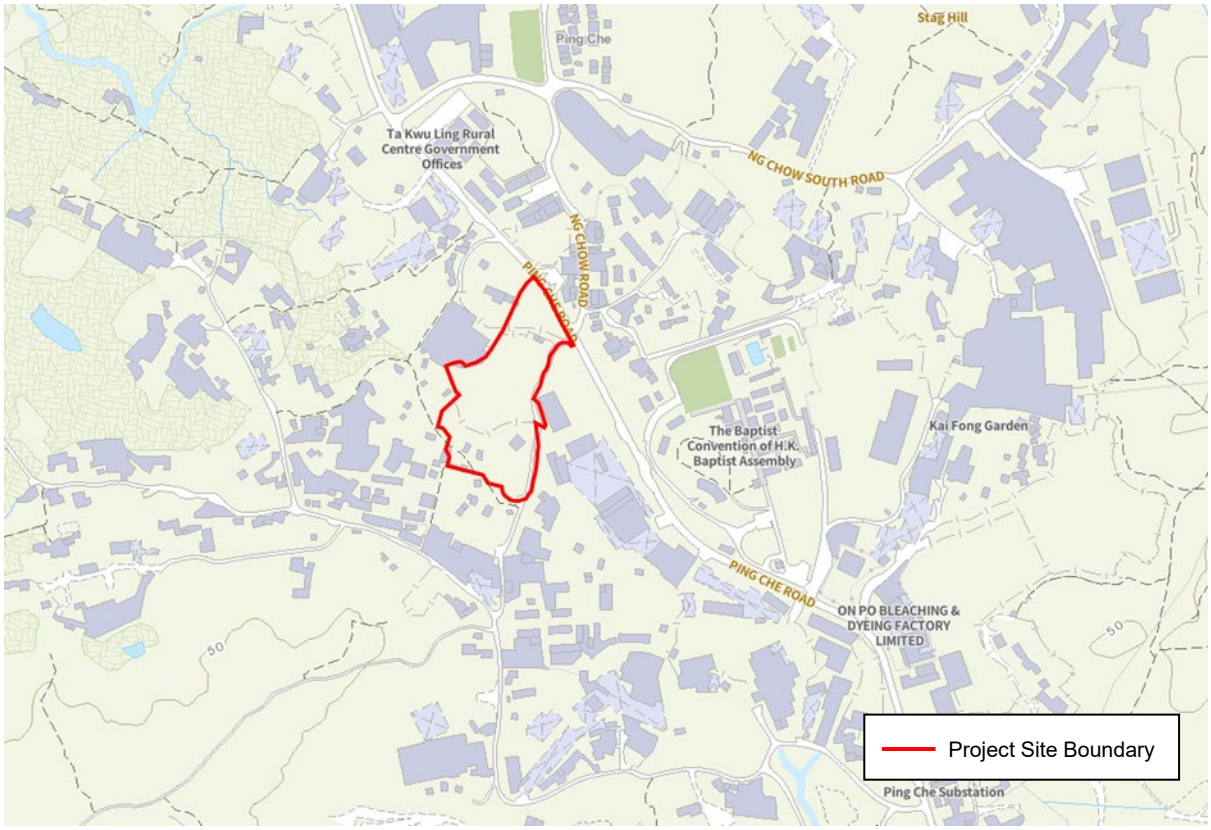


Figure 4-3 Existing Surrounding Developments

Current Site Wind Environment

4.2.6. Refer to *Section 3.1.9* and ***Table 3-2***, the wind availability in the Application Site mainly come from NNE, ENE, E, ESE and SE in annual condition while winds from E, ESE, SE, SSE and S are available in summer condition.

4.2.7. The Application Site is currently used as open storage area at the ground level, the major wind path will be the Ping Che Road along the northeast side and the unnamed village road along the southeast area of the Application Site. The ESE and SE wind flow through the Application Site and further to the downwind area such as Ping Che New Village located at the north side of the Application Site, the prevailing wind environment is shown in ***Figure 4-4***. The ENE wind also flow through the Application Site and reaching the agriculture land and open space at downwind area.

Road/ Street Pattern

4.2.8. Road network facilitates wind penetration to the Application Site and the surrounding areas. The summer SSE/SE wind would be facilitated by the major air path of Ping Che Road. The annual NNE wind would be facilitated by the village road and penetrate surrounding the site. The major air paths around the Application Site are illustrated in ***Figure 4-4.***

Open Space

4.2.9. There is an open storage area and an open greenery located at the north of the Application Site. Locating at the downwind area of the Application Site under ESE and SE wind. The open areas are expected to receive sufficient downwind wind.

4.2.10. The open space located at the west of the Application Site are mostly greenery and open storage. These areas located at the downwind area and expected to receive sufficient downwind wind under E wind.

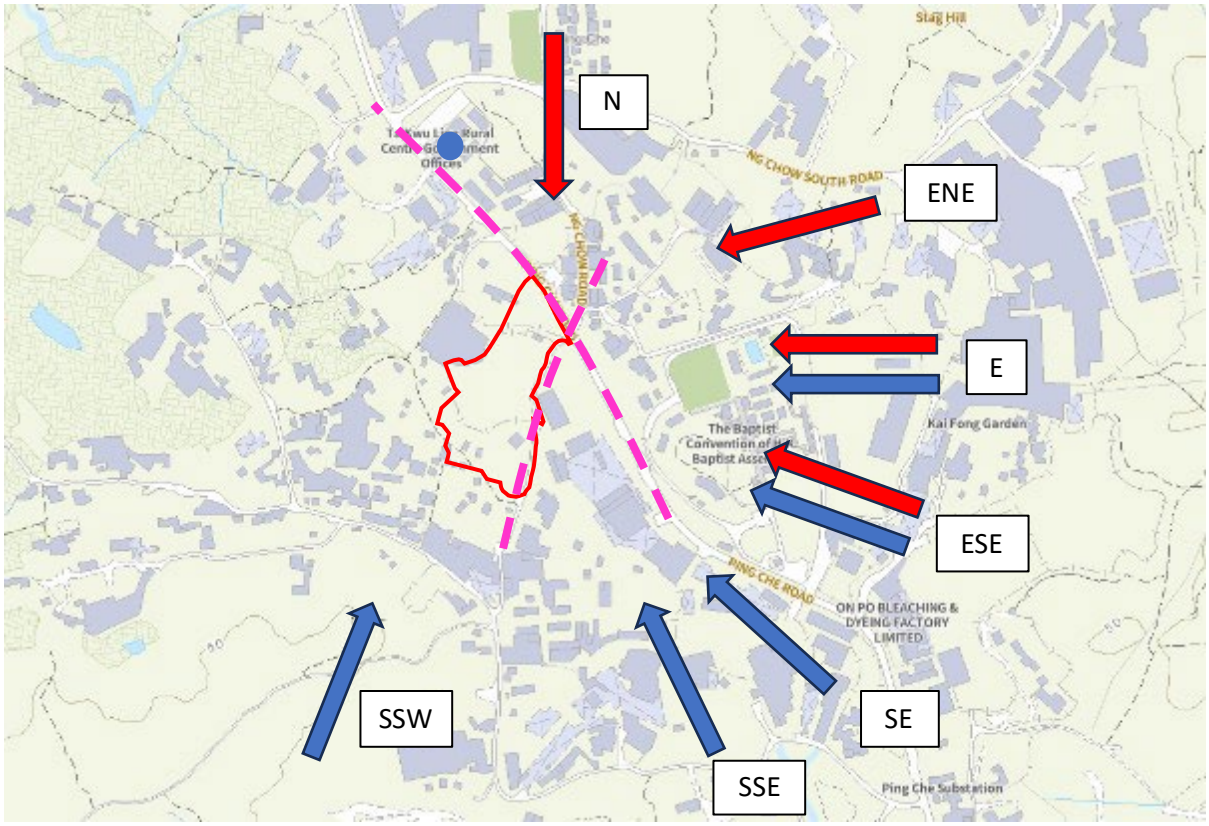


Figure 4-4 Prevailing Wind Environment in the Application Site

5. EVALUATION OF AIR VENTILATION PERFORMANCE

5.1. Assessment Area

5.1.1. The Proposed Development comprised of 1 block of 48-storey residential tower with the maximum height of approximately 175mPD, another 4 blocks of 47-storey residential tower with the maximum height of approximately 172mPD, 1 commercial block with the maximum height of approximately 170mPD located near Ping Che Road. It also consists of a one-storey clubhouse, and a swimming pool is provided.

5.1.2. The highest building height of the Proposed Development is 159m above ground level. An assessment area of 1H (159m) is therefore adopted for the purpose of the assessment. The sensitive areas that frequently assessed by public within the 159m assessment area from the Application Site are identified as following:

- Ping Che Village to the North
- Ta Kwu Ling Rural Government Office to the North
- Hong Kong Baptist Assembly to the East
- Planned Residential Area to the Northwest
- Planned Commercial Site to the South and Southeast

5.1.3. The location of the listed areas is shown in ***Figure 5-1***.

5.2. Assessment Methodology

5.2.1. *Section 3* and ***Table 3-2*** describes the wind availability at the Application Site and the prevailing wind flows during annual and summer conditions. It is noted that the annual prevailing wind directions for the site are from N, ENE, E and ESE. The summer prevailing wind directions would be from E, ESE, SE, SSE and SSW.

5.2.2. The ventilation performance of the proposed development at Application Site on the nearby areas frequently assessed by public will be evaluated by comparing the OZP compliance scheme of the area before and after the proposed development, with respect to the identified dominant wind directions stated in ***Table 3-1***, i.e. N, ENE, E, ESE, SE, SSE and SSW.

5.2.3. In order to portray a more realistic and accurate scenario in the future, the ventilation performance will also be evaluated with consideration of TKLPDA of the NTN Development

Scheme within the assessment area, respect to the dominant prevailing wind direction.

5.3. Wind Flow from N Direction

5.3.1. ***Figure 5-2*** illustrates the wind flow at the Application Site under OZP compliance scheme, while ***Figure 5-3*** illustrates the wind flow at the Application Site in consideration of NTN Development Scheme, under N direction.

OZP Compliance Scheme without Proposed Development

5.3.2. Before the development, the wind flows through the application site without obstruction. Under the OZP compliance scheme, the upwind area comprises mixed of industrial zone, G/IC zone and open space, the NNE wind flows towards downwind area which are agriculture land and open space.

5.3.3. Upon the N wind reaching the Application Site, it is expected to flow along the 2 paths: through the wind path along the local road at the east of the site, and the wind path at the west portion of the site. At the same time when the N wind reached Tower 2, the direction of the wind flow changed to SSE direction. After the diversion, the wind will merge again with the incoming N wind flow along the wind path, maintaining the overall flow pattern. Figure 5-4 illustrates the prevailing N wind flow pattern.



Figure 5-4 Zoom in plan for the N wind flow pattern

OZP Compliance Scheme with Proposed Development

5.3.4. Under the OZP compliance scheme, the upwind area comprises mixed of industrial zone, G/IC zone and open space. Since there are no mid-rise or high-rise buildings in the upwind area, the N wind is expected to reach Application Site without obstruction. The N wind will penetrate the site then continue to reach the downwind area, i.e. agriculture land and open space to the south. Additionally, the good design features such as the vast opening at ground level PTT and the reduction in clubhouse's building height and ground coverage area will facilitate smooth wind flow. Therefore, it is expected that the proposed development will not have significant impact in terms of air ventilation to the surrounding downwind area, which consist of agriculture land and open space.

NTN Development Scheme

5.3.5. With the consideration of NTN Development, the N wind is expected to flow through open space and G/IC zones, as well as across residential area located in the upwind direction, before finally reach the Application Site. The residential area planned with a PR5 and a height of 120mPD, is expected to partially block the incoming N wind. However, presence of the open space is expected to improving the wind environment in the downwind area. The wind will flow through the Proposed development and along the local road within the site, finally reach the downwind area, which is zoned as a commercial area under NTN Development.

5.3.6. With the good design features such as the vast opening at ground level PTT and the reduction in clubhouse's building height and ground coverage area will facilitate smooth wind flow. Nevertheless, the permeable design elements in the sky garden allow high level wind to pass through the building.

5.3.7. Therefore, it is believed that the Proposed Development would not contribute to any significant air ventilation impact towards the downwind area.

5.4. Wind Flow from ENE and E Direction

5.4.1. ***Figure 5-5*** illustrates the wind flow at the Application Site under OZP compliance scheme, while ***Figure 5-6*** illustrates the wind flow at the Application Site in consideration of NTN Development Scheme, under ENE and E direction.

OZP Compliance Scheme without Proposed Development

5.4.2. Before the development, the wind flows through the application site without obstruction. Under the OZP compliance scheme, the upwind area is mostly open space and G/IC zone, the ENE and E wind flows towards downwind area which are agriculture land and green belt.

5.4.3. Upon the ENE wind reaching the Application Site, it is expected to flow along the path in between Tower 1 and Tower 2. At the same time the ENE wind is also expected to flow along the SSE of the site, where the building setback is implemented. The ENE wind is also expected to flow along the path in between Tower 2 and Tower 3/4, then the wind flow will experience the change in direction towards NW direction, then merge again with the incoming ENE wind and maintaining the overall flow pattern.

5.4.4. There are 4 paths that E wind is expected to penetrate through the site, which are: the flow path in between Tower 1 and Tower 2, in between Tower 3/4 and Tower 5/6, and the flow path along the north and south portion of the Application Site, where the building setback is implemented. ***Figure 5-7*** illustrates the prevailing ENE wind flow pattern and ***Figure 5-8*** illustrates the prevailing E wind flow pattern.

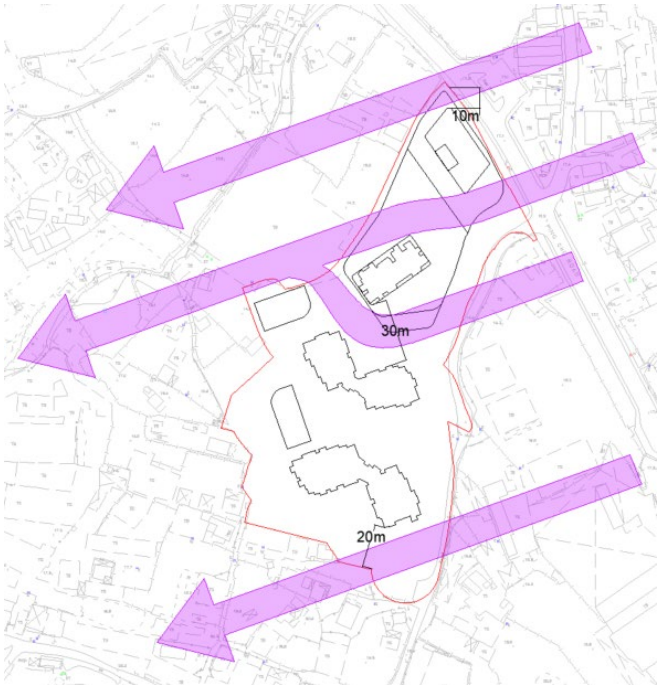


Figure 5-7 Zoom in plan for the ENE wind flow pattern

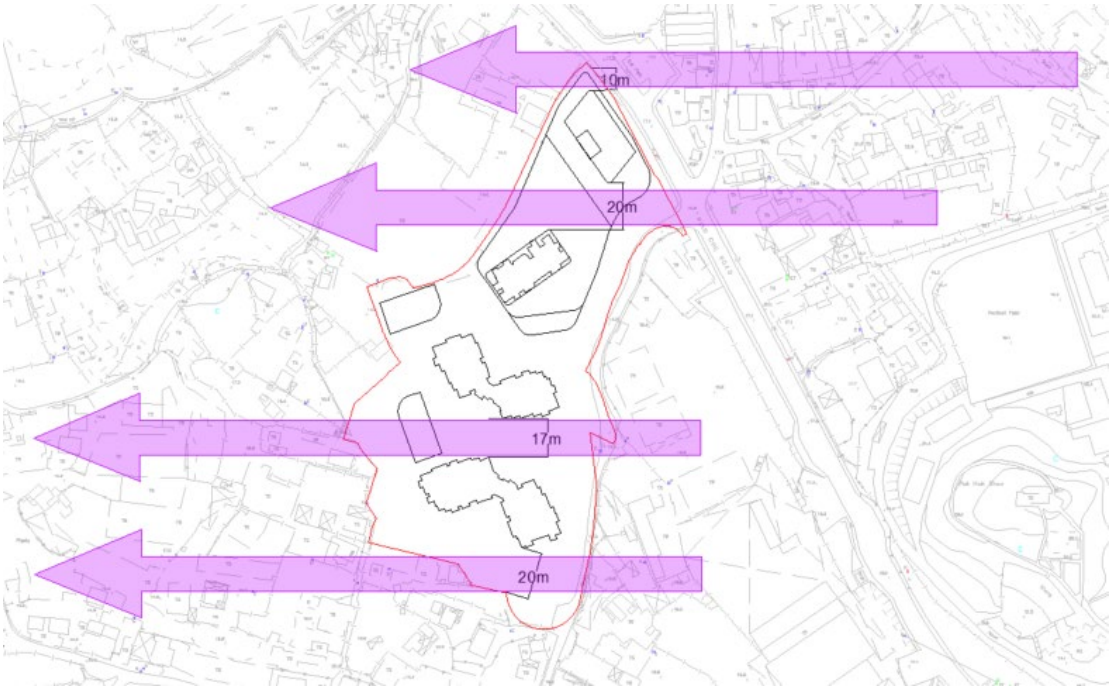


Figure 5-8 Zoom in plan for the E wind flow pattern

OZP Compliance Scheme with Proposed Development

5.4.5. Under the OZP compliance scheme, the ENE and E wind flow through the upwind area comprises open space and G/IC zone. Since there are no mid-rise or high-rise buildings in the upwind area, the ENE and E wind is expected to reach the Application Site without any obstruction. The wind flow is expected to pass through the Proposed Development then continue to the downwind area, which primarily consists of agriculture land and green belt. Additionally, the good design features such as the vast opening at ground level PTT, building separation and building setback in the Proposed Scheme facilitated the wind flow. As the downwind area is not an area frequently assessed by public, the air ventilation impact on the downwind area is not anticipated to be significant.

NTN Development Scheme

5.4.6. With the consideration of NTN Development, the upwind area is expected to have a G/IC area, a planned PR5 residential zone with a height of 130mPD and a planned PR6.5 commercial zone with expected height of 195mPD. The high rise buildings in the upwind location are anticipated to block the incoming ENE and E wind, resulting in limited wind reaching the Application Site and the downwind area. According to the preliminary feasibility

study of NTN Development, the commercial area will incorporate of sustainable building design, which expected to enhance the air ventilation.

5.4.7. Nevertheless, with the good design features adopted in the proposed development, including vast opening at ground level PPT, building orientation and separation, building setback, and reduction in clubhouse's building height and ground coverage area to allow low and mid-level wind to flow through the site, and a permeable design in the sky garden allows the high-level wind to flow through.

5.4.8. Therefore, the air ventilation impact on the downwind area is not anticipated to be significant.

5.5. Wind Flow from ESE and SE Direction

5.5.1. ***Figure 5-9*** illustrates the wind flow at the Application Site under OZP compliance scheme, while ***Figure 5-10*** illustrates the wind flow at the Application Site in consideration of NTN Development Scheme, under ESE and SE direction.

OZP Compliance Scheme without Proposed Development

5.5.2. Before the development, the wind flows through the application site without obstruction. Under the OZP compliance scheme, the upwind area are mostly open space and G/IC area, the ESE and SE wind flows towards downwind area which are mostly open space, agriculture land and green belt.

5.5.3. Upon the ESE wind reaching the Application Site, it is expected to flow along the 5 paths, which are in between Tower 1 and Tower 2, Tower 2 and Tower 3/4, Tower 3/4 and Tower 5, and the wind path along the north and south of the Application Site, where the building setback is implemented.

5.5.4. SE wind is expected to penetrate the site through 3 paths, which are the flow path in between Tower 1 and Tower 2, and the flow path along the northeast and southwest of the Application Site, where the building setback is implemented. At the same time, the SE wind is also expected to flow through in between the Tower 2 and 3/4, and in between Tower 3/4 and Tower 5/6. However, the wind flow is expected to have slight degree of change in direction and return to the original flow path after the diversion, maintaining the overall flow pattern. ***Figure 5-11*** illustrates the prevailing ESE wind flow pattern and ***Figure 5-12*** illustrates the prevailing SE wind flow pattern.

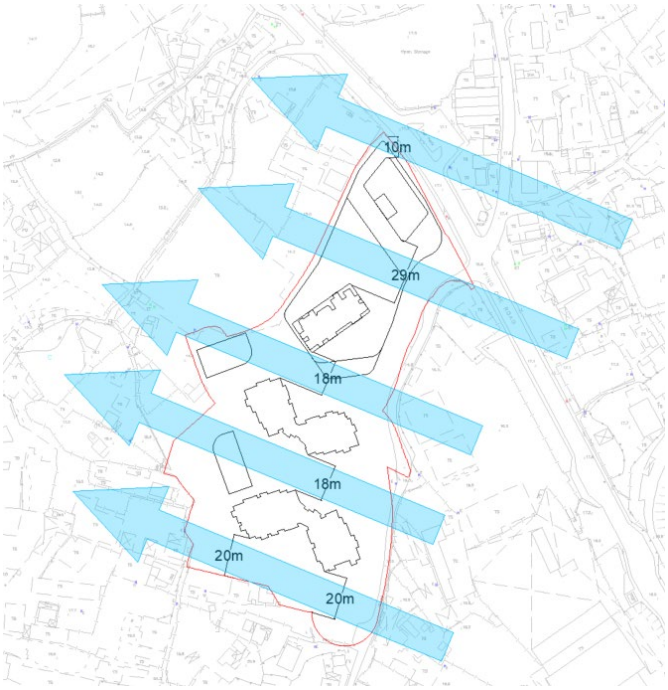


Figure 5-11 Zoom in plan for the ESE wind flow pattern

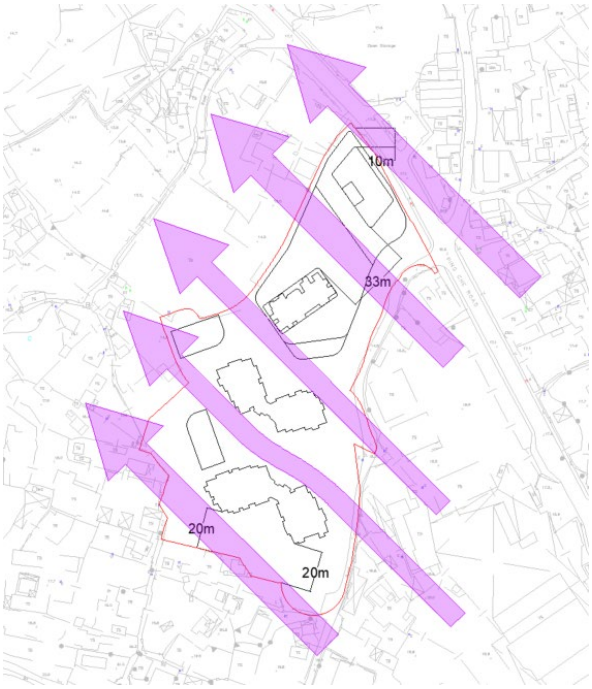


Figure 5-12 Zoom in plan for the SE wind flow pattern

OZP Compliance Scheme with Proposed Development

5.5.5. Under the OZP compliance scheme, the ESE and SE wind flow through the upwind area comprises open space and G/IC zone. Since there are no mid-rise or high-rise buildings in the upwind area, the ESE and SE wind is expected to reach the Application Site without any obstruction. The wind flow is expected to pass through the Proposed Development then continue to the downwind area, which primarily consists of open space, agriculture land and green belt, and partially of the industrial area. Additionally, the good design features such as the vast opening at ground level PTT, building separation and orientation, building setback and the reduction in clubhouse's building height and ground coverage area in the Proposed Scheme facilitated the smooth wind flow. As the downwind area is not an area frequently assessed by public, the air ventilation impact on the downwind area is not anticipated to be significant.

NTN Development Scheme

5.5.6. With the consideration of NTN Development, the upwind area is expected to have a planned PR6.5 commercial zone with expected height of 195mPD and a planned PR7.5 mixed use development with expected height of 235mPD. The high rise buildings in the upwind location are anticipated to block the incoming ESE and SE wind, resulting in limited wind reaching the Application Site and the downwind area. According to the preliminary feasibility study of NTN Development, the commercial area will incorporate of sustainable building design, which expected to enhance the air ventilation.

5.5.7. Nevertheless, with the good design features adopted in the proposed development, including vast opening at ground level PPT, building orientation and separation, building setback, and reduction in clubhouse's building height and ground coverage area to allow low and mid-level wind to flow through the site, and a permeable design in the sky garden allows the high-level wind to flow through.

5.5.8. Therefore, the air ventilation impact on the downwind area is not anticipated to be significant.

5.6. Wind Flow from SSE Direction

5.6.1. ***Figure 5-13*** illustrates the wind flow at the Application Site under OZP compliance scheme, while ***Figure 5-14*** illustrates the wind flow at the Application Site in consideration of NTN Development Scheme, under SSE direction.

OZP Compliance Scheme without Proposed Development

5.6.2. Before the development, the wind flows through the application site without obstruction. Under the OZP compliance scheme, the upwind area consists of open space, the SSE wind flows towards downwind area, such as G/IC zone with Ta Kwu Ling Government Office, Ping Che New Village and open space.

5.6.3. Upon the SSE wind reaching the Application Site, it is expected to flow along the 2 paths: through the wind path in between Tower 1 and Tower 2, and the wind path along the southwest portion of the site. At the same time when the SSE wind reached Tower 3/4, the direction of the wind flow changed to WNW direction. After the diversion, the wind will merge again with the incoming SSE wind flow along the wind path, maintaining the overall flow pattern. ***Figure 5-15*** illustrates the prevailing N wind flow pattern.

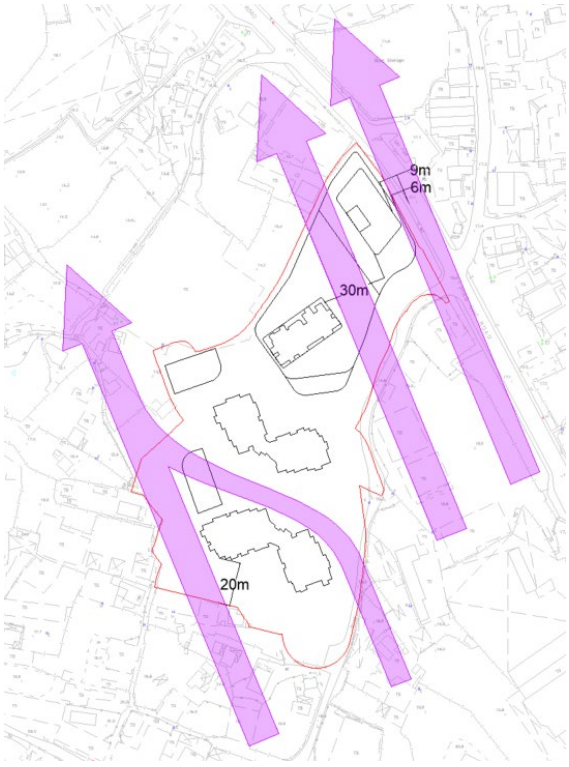


Figure 5-15 Zoom in plan for the SSE wind flow pattern

OZP Compliance Scheme with Proposed Development

5.6.4. Under the OZP compliance scheme, since there are no mid-rise or high-rise buildings at the upwind area, the SSE wind is expected to pass through the Proposed Development to reach the downwind area, i.e. G/IC zone with Ta Kwu Ling Rural Government Office, Ping Che New

Village and open space.

5.6.5. The good design features such as the vast opening at ground level PTT, reduce in clubhouse's building height and ground coverage area and building separation allow wind flow to pass through smoothly. As such, it is expected the proposed development would not have significant impact in terms of air ventilation to the downwind area.

NTN Development Scheme

5.6.6. With the consideration of NTN Development, the upwind area is expected to have a planned PR6.5 commercial zone with height of 195mPD, a planned PR6.5 commercial zone with height of 210mPD and a planned PR7.5 mixed use zone expected height of 235mPD. The planned high rise building at upwind location is expected to block the upcoming SSE wind. Therefore, limited wind is reaching the Application Site and the downwind area. According to the preliminary feasibility study of NTN Development, the commercial and mixed-use area will adapt of sustainable building design, which expected to facilitate the air ventilation.

5.6.7. Nevertheless, the Proposed Development is adopted with good design features, such as the vast opening at ground level PTT, reduce in clubhouse's building height and ground coverage area and building separation allow low and mid-level wind flow to pass through smoothly. The permeable design at sky garden allows the high-level wind to flow through.

5.6.8. Therefore, the air ventilation impact towards the downwind area is not anticipated.

5.7. Wind Flow from SSW Direction

5.7.1. ***Figure 5-16*** illustrates the wind flow at the Application Site under OZP compliance scheme, while ***Figure 5-17*** illustrates the wind flow at the Application Site in consideration of NTN Development Scheme, under SSW direction.

OZP Compliance Scheme without Proposed Development

5.7.2. Before the development, the wind flows through the application site without obstruction. Under the OZP compliance scheme, the upwind area consists of open space, agriculture land and green belt, the SSW wind flows towards downwind area, such as industrial zone, Ping Che New Village and open space.

5.7.3. Upon the SSW wind reaching the Application Site, it is expected to flow along the 2 paths: through the wind path along the local road at the east of the site, and the wind path at the

west portion of the site. ***Figure 5-18*** illustrates the prevailing N wind flow pattern.

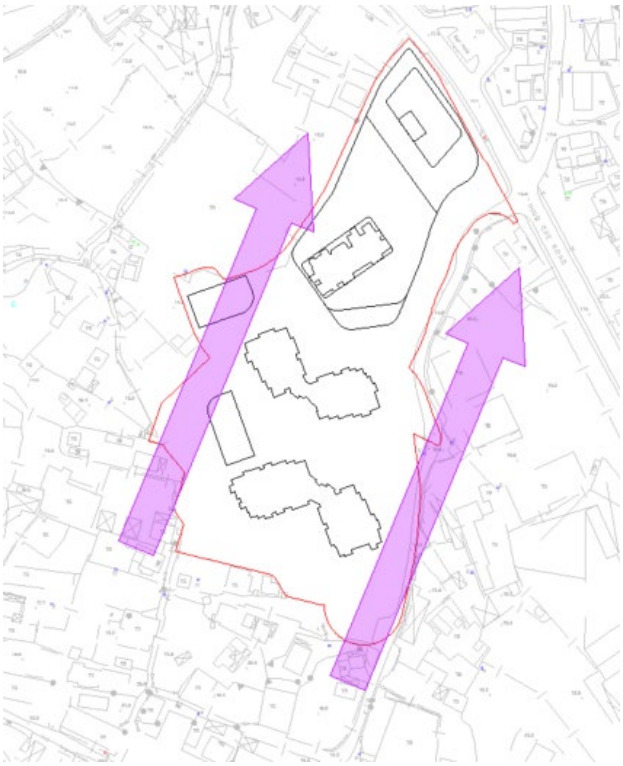


Figure 5-18 Zoom in plan for the SSW wind flow pattern

OZP Compliance Scheme with Proposed Development

5.7.4. Under the OZP compliance scheme, since there are no mid-rise or high-rise buildings at the upwind area, the SSW wind is expected to pass through the Proposed Development to reach the downwind area, i.e. industrial zone, Ping Che New Village and open space. The good design features such as the vast opening at ground level PTT, reduce in clubhouse's building height and ground coverage area allow wind flow to pass through smoothly. As such, it is expected the proposed development would not have significant impact in terms of air ventilation to the downwind area.

NTN Development Scheme

5.7.5. With the consideration of NTN Development, the upwind area is expected to have a planned PR6.5 commercial zone with expected height of 210mPD. The planned high rise building at upwind location is expected to block the upcoming SSW wind. Therefore, limited wind is reaching the Application Site and the downwind area. According to the preliminary feasibility study of NTN Development, the commercial and mixed-use area will adapt of sustainable

building design, which expected to facilitate the air ventilation.

5.7.6. Nevertheless, the Proposed Development is adopted with good design features, such as the vast opening at ground level PTT and reduce in clubhouse's building height and ground coverage area allow low and mid-level wind flow to pass through smoothly. The permeable design at sky garden allows the high-level wind to flow through.

5.7.7. Therefore, the air ventilation impact towards the downwind area is not anticipated.

6. MITIGATION MEASURES

6.1. GOOD DESIGN FEATURES

Permeable Design at Ground Floor

6.1.1. The permeable design of PTT which is 7.5m tall with opening on 3 sides is adopted. The not enclosed ground level is expected to facilitate the east and southeast wind systems towards the downwind regions. ***Figure 6-1*** and ***Figure 6-2*** shows the layout of ground level PTT and the opening.

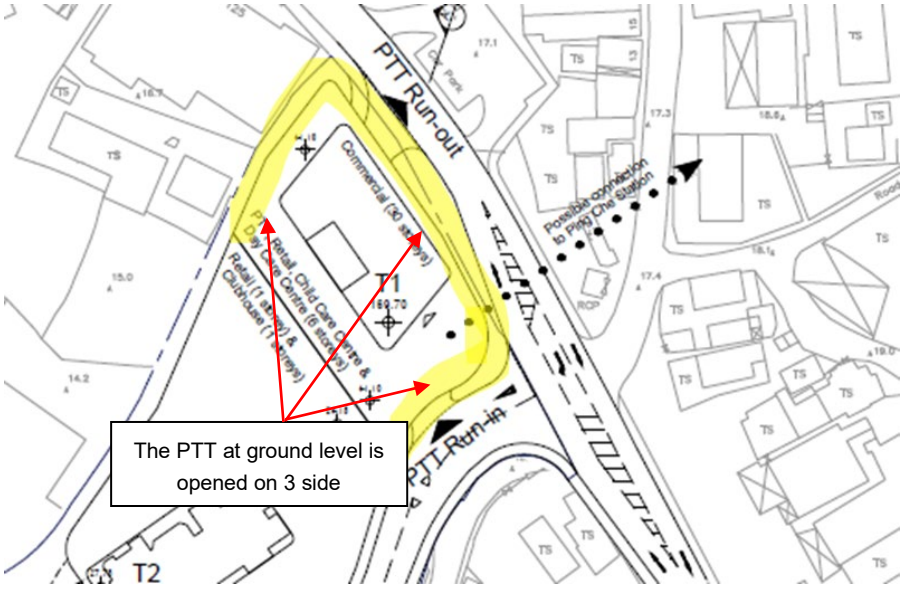


Figure 6-1 Ground Floor Layout Plan

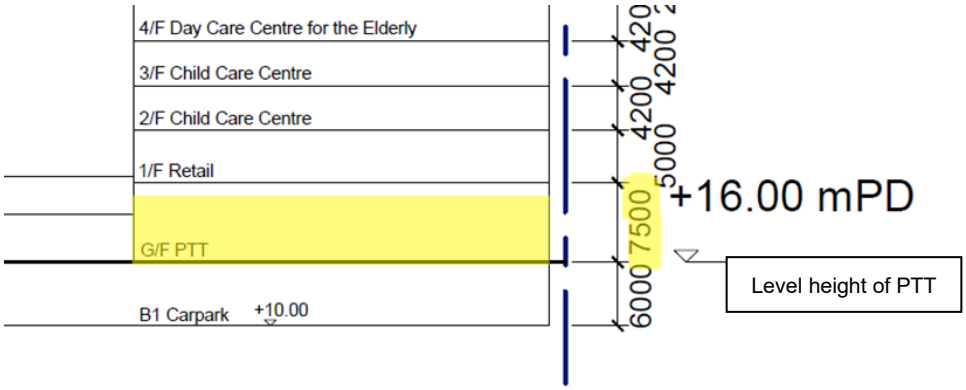


Figure 6-2 Cross section of Layout

Chamfered Design at Building Corner

6.1.2. Chamfered building corners would be adopted for the commercial building block and the podium, allowing smoother wind flow around the building structure. There is an air path between the commercial building and residential building, between podium and residential building, and air path at Ping Che Road, which the wind flows from the E, ESE, SE and SSE direction penetrate the building groups flow to the downwind area of northwest side of the Application Site. Chamfered building corners allows the building group to attract incoming east and southeast wind into the air path.

6.1.3. The design of the chamfered design are illustrated in ***Figure 6-3***.

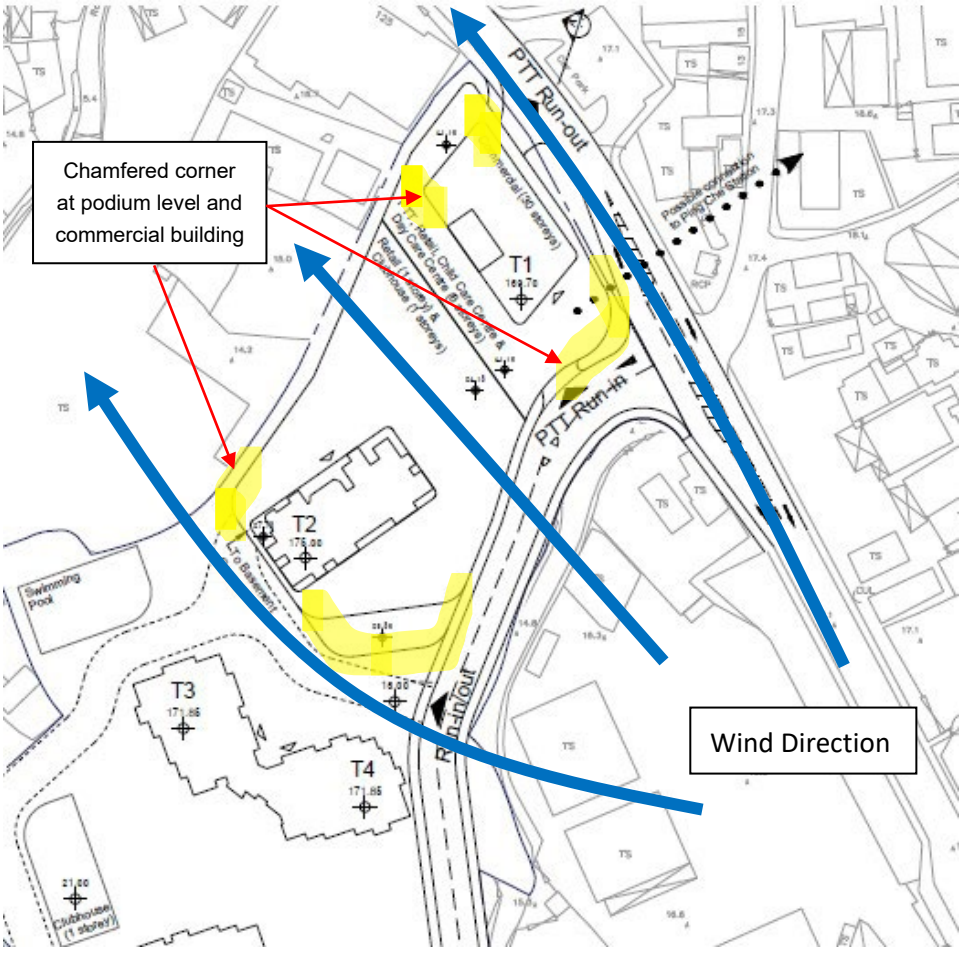


Figure 6-3 Layout Plan of Chamfered Building Corner

Building Orientation Align with Wind Direction

6.1.4. Under the Proposed Development, T3 and T4 are aligned together, and the orientation of the towers are position in line from southeast to northwest, same goes to T5 and T6. The axis of tower blocks is aligned parallelly with the prevailing wind direction from E, ESE, SE and SSE. There is not more than one turning point of the wind flow direction after implemented this orientation parallel to wind flow. The building orientation provides air path to enhance the wind penetration through the gap between blocks. The layout design is illustrated in Figure 6-4.

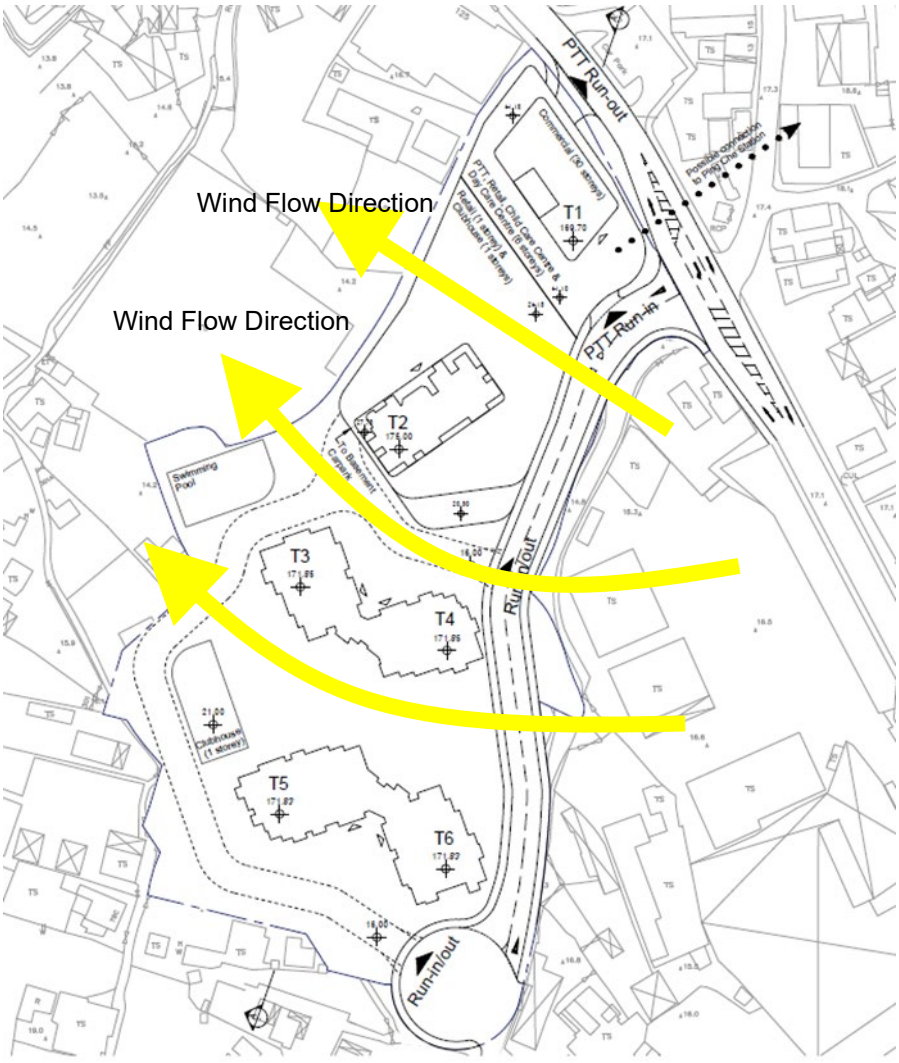


Figure 6-4 Layout of Building Orientation

Building Separation

6.1.5. The gap between commercial building and residence tower T2, gap between tower T2 and tower T3 & T4, and the gap between tower T3 & T4 and tower T5 & T6 is indicated to improve the air ventilation. The gap distance from range of 18m to 30m in MLP which facilitates more E, ESE, SE and SSE wind flow between the buildings towards the downwind area.

6.1.6. The example of layout and the gap distance for ESE direction are illustrated in ***Figure 6-5*** and ***Appendix C***. The layout of building separation for each wind flow of E, SE and SSE are illustrated in ***Figure 5-8***, ***Figure 5-12*** and ***Figure 5-15*** respectively in *Section 5*.

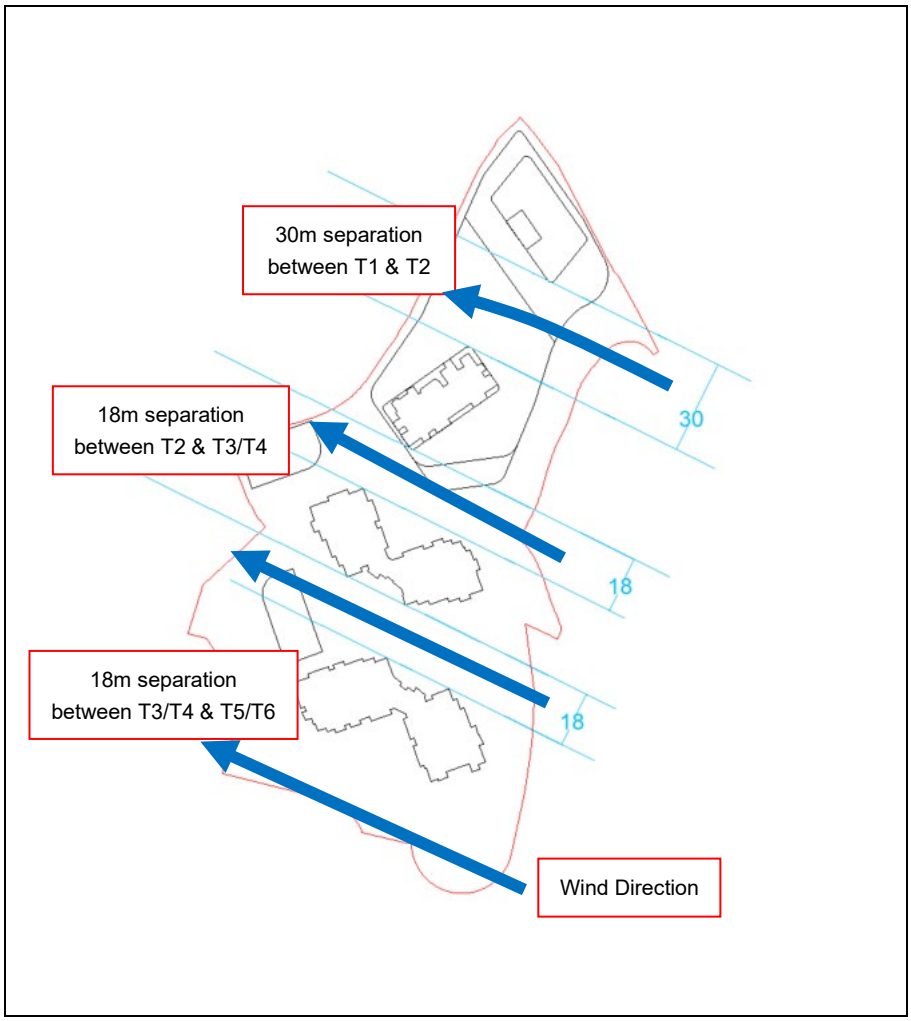


Figure 6-5 Building Gap Separation of Proposed Development

Reduced Ground Coverage of Clubhouse

6.1.7. The area of clubhouse building is reduced with a smaller ground coverage which is having lesser restriction to wind flow, thus allows more wind flow at ground level. The proposed

clubhouse also located at the downwind area of Block T5, allowed enough gap distance between clubhouse and Block T3, allowed the wind flow from east and northeast direction flow through and reach the downwind area. The design of clubhouse is illustrated in Figure 6-6.

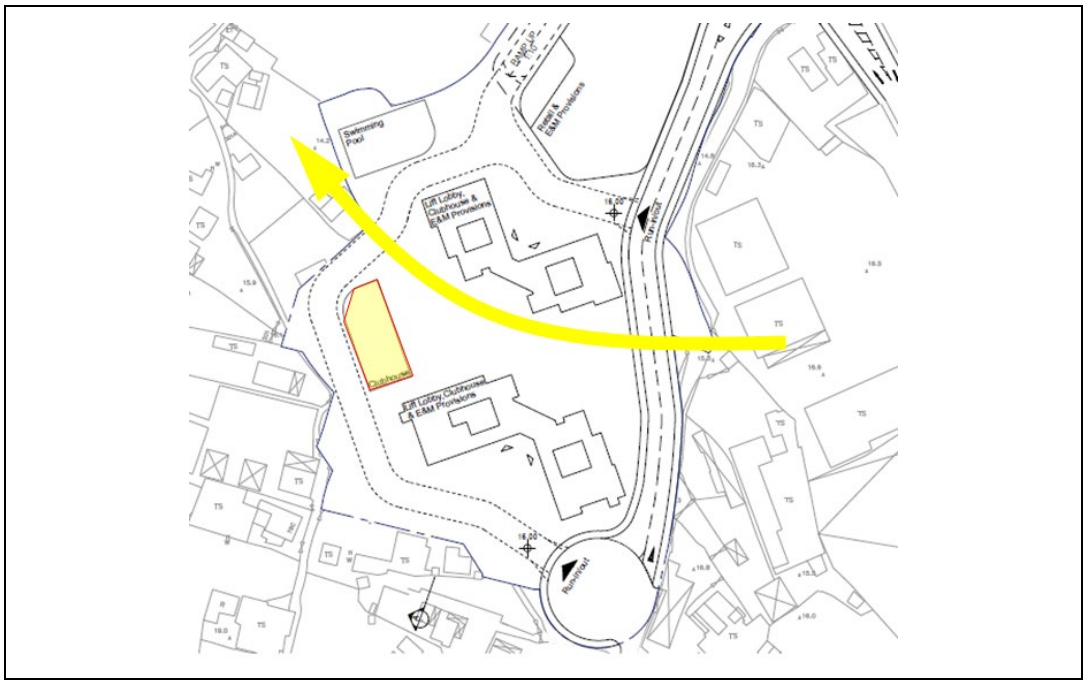


Figure 6-6 Comparison of Clubhouse Layout Plan

Permeable Design at Sky Garden

6.1.8. There are 3 sky garden design located at 21/F of T2, 20/F of T3 & T4, and 20/F of T5 & T6 respectively. The sky garden provided a vast opening at façade of the building, allows more wind flow through the building at the façade that facing east and southeast direction. Besides that, the sky garden is shaded by the building itself, allows the users of the building enjoy the thermally comfortable environment in the building.

6.1.9. The section layout of the sky garden is illustrated in Figure 6-7.

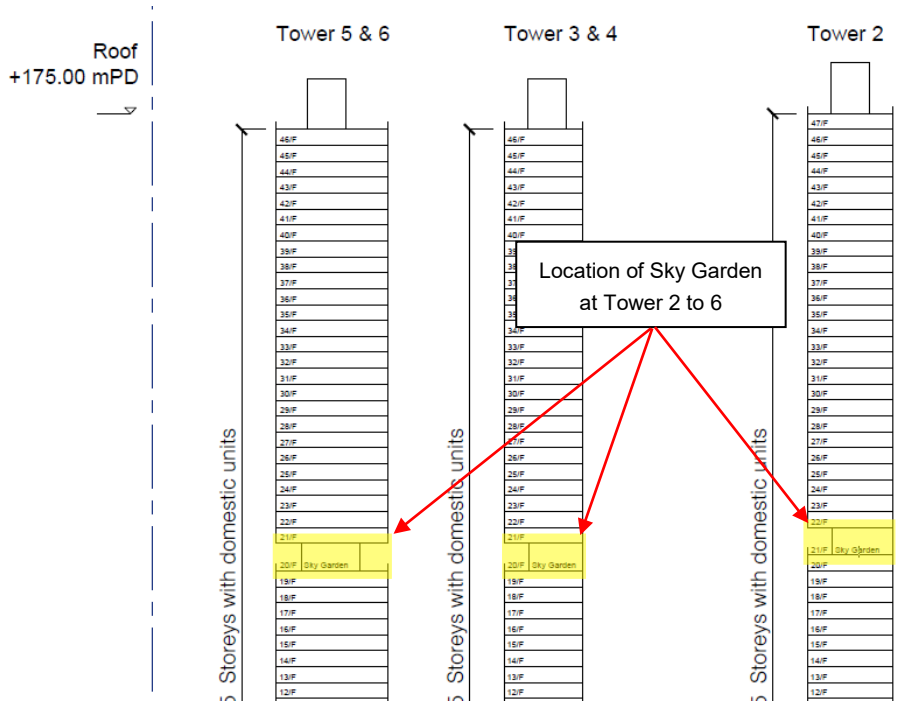


Figure 6-7 Section Layout of Sky Garden

Building Setback

6.1.10. Under proposed scheme, the distance of building setback at northeast, northern and southern side of the site boundary measuring from centreline of the street/site boundary to building structure are as below:

- Northeast (to podium) : 6m
- Northeast (to commercial tower T1) : 9m
- North (to podium) : 3m
- North (to commercial tower T1) : 10m
- South (to residential tower T6) : 20m

6.1.11. The building setback is providing along full frontage of Ping Che Road and the unnamed local road. The setback provided the stepping effect and enhanced the prevailing wind from ENE, E, ESE, SE and SSE direction, which the main air path is along Ping Che Road and the local road. It is expected to benefit the downwind area such as Ping Che new Village, existing settlement and open space. The layout is shown in ***Figure 6-8*** and ***Appendix C***. The wind flow facilitated by the building setback are illustrated in ***Figure 5-7***, ***Figure 5-8***, ***Figure 5-11***, ***Figure 5-12*** and ***Figure 5-15*** in *Section 5* respectively for each wind flow direction.

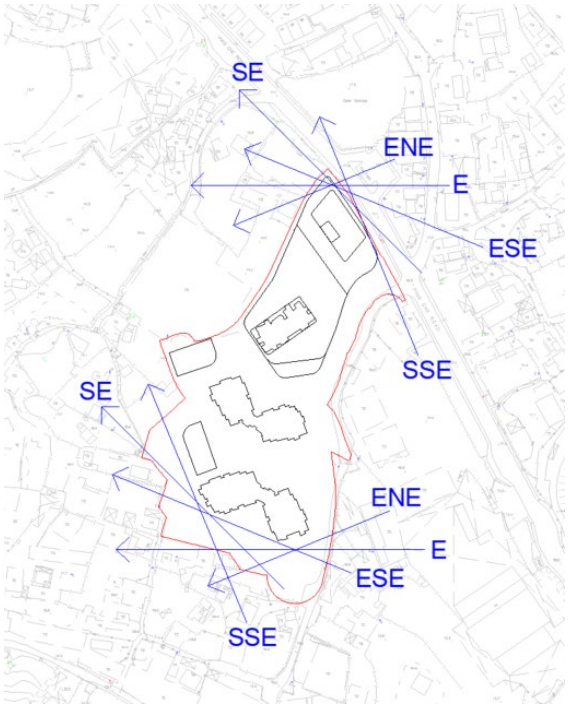


Figure 6-8 Layout of Building Setback with Wind Air Path

7. CONCLUSION

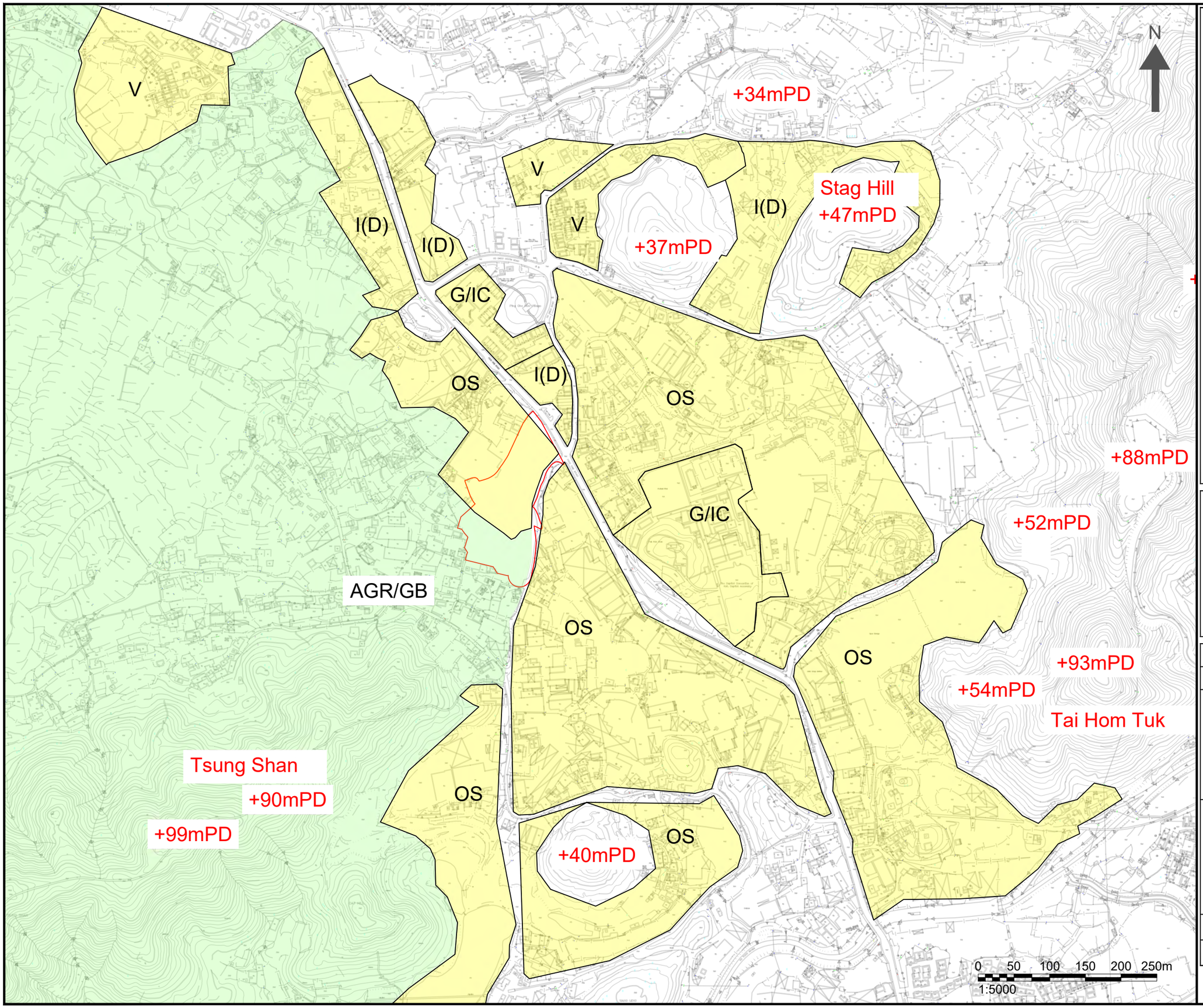
7.1.1. An AVA-EE study was conducted for the proposed mixed use development at Lot 796 & 1008 RP at D.D. 77 and adjoining government land in Ping Che, Ta Kwu Ling, New Territories to provide qualitative evaluation of wind performance of the proposed development under the OZP compliance scheme and the NTN Development scheme.

7.1.2. There are some good design features are provided in the proposed development, such as the permeable design of the ground level PTT at direction northeast and southeast facing the wind flow direction, and chamfered corner design of the building structure, allows the wind flow through the building unrestricted.

7.1.3. The layout under the Proposed scheme would keep the major air path along Ping Che Road and incorporate several good design measures mentioned in the *Section 5* of report to facilitate the wind flow and keep it unblock. It includes the orientation of the building blocks align with the direction of the wind flow allows wind to skim through the building, maintained the separation distance between the building is more than 15m and design of sky garden to provide the vast opening on the façade to allow the wind flow unrestricted. The incorporated club house design such as reduced in ground coverage of the clubhouse also lower the blockage to the wind flow. The building setback of from the centreline of the road and site boundary to building structure also enhanced the wind flow especially at Air Path of Ping Che Road, towards the downwind area of northwest site of Application Site such as Ping Che New Village and open space.

7.1.4. In conclusion, the proposed development has implemented the strategies and good design optimization as recommended. As significant wind deterioration on district level after the construction of proposed development is not anticipated.

Figure



NOTES :

APPLICATION SITE

EXISTING ZONING

Consultant

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Project No. :	2127
Drawing By :	SC

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Drawing Title :

EXISTING ZONING AND APPLICATION SITE

Drawing No :	Revision :
FIGURE 4.5	1
Scale :	Date :
AS SHOWN	FEB 2024

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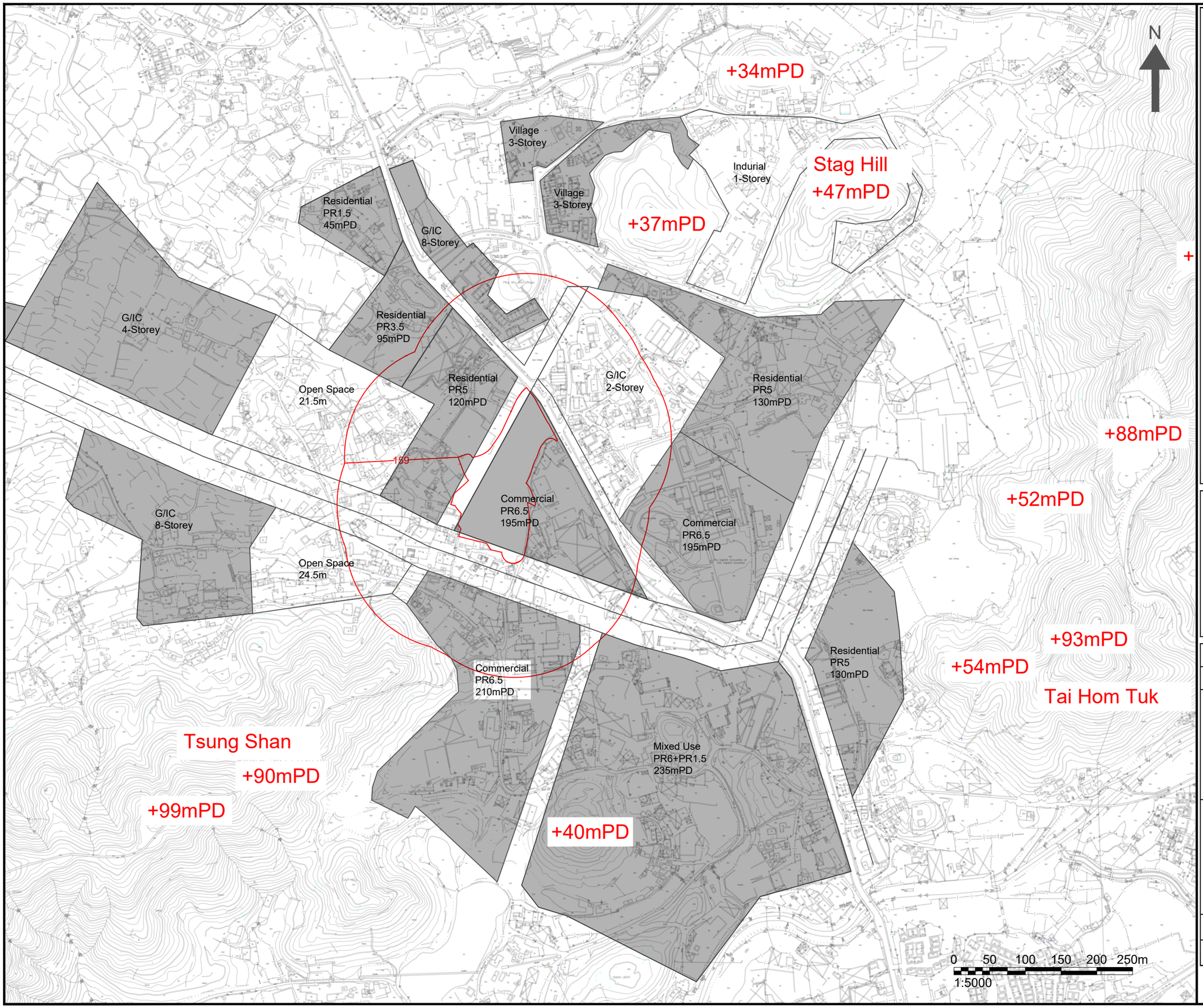
A3 420 x 297

G:\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\04 AVA\ISSUE 3\FIGURE\EXISTING ZONING.DWG



NOTES :

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NTN DEVELOPMENT

ASSESSMENT AREA

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Drawing Title :

NTN DEVELOPMENT AND APPLICATION SITE

Drawing No :	Revision :
FIGURE 4.6	1
Scale : AS SHOWN	Date : FEB 2024

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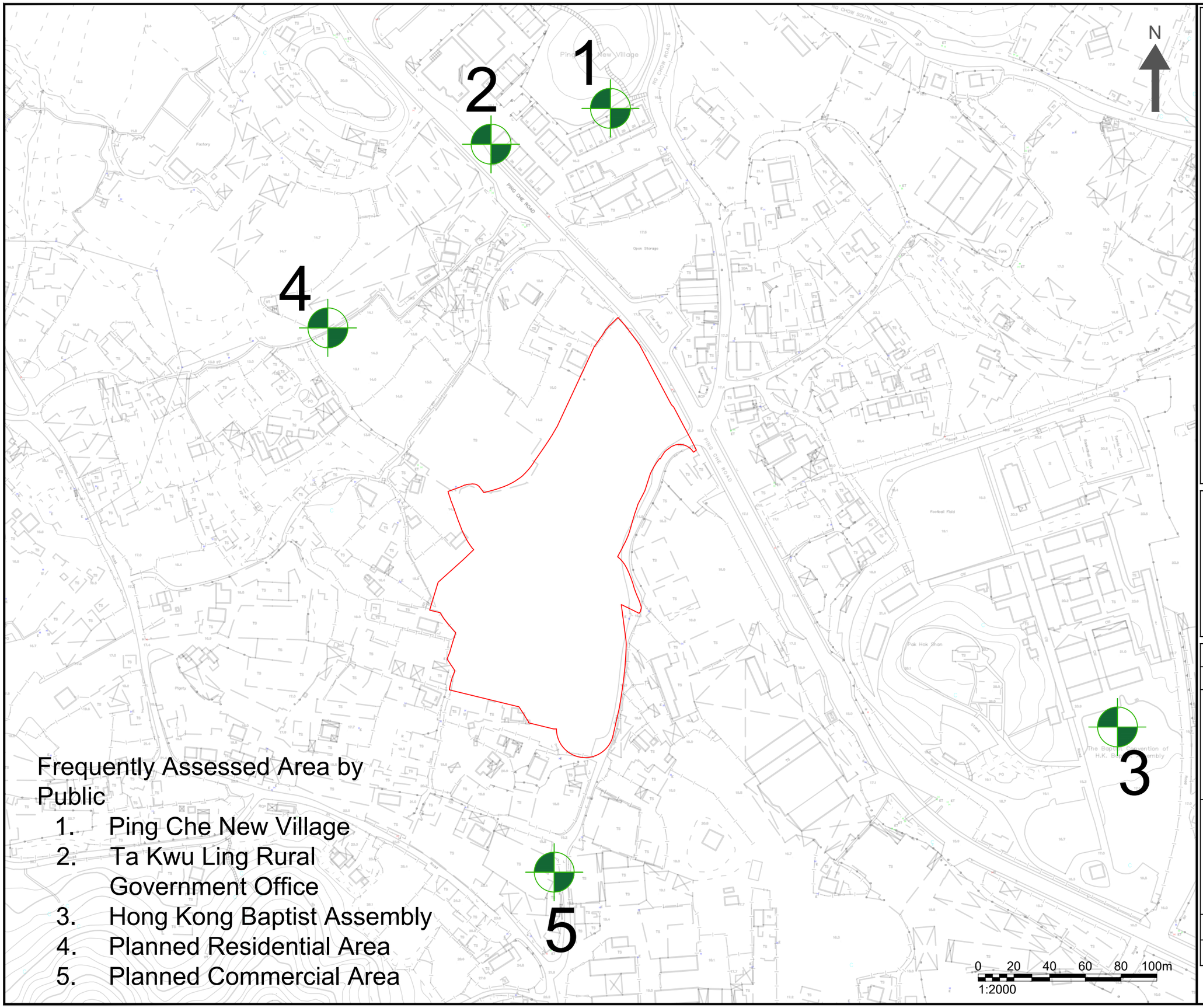
A3 420 x 297

G:\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\04 AVA\ISSUE 3\FIGURE\EXISTING ZONING.DWG



NOTES :

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FREQUENTLY ASSESSED AREA BY PUBLIC

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Project No. : 2127	
Drawing By : CS	
Project : APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES	
Drawing Title : FREQUENTLY ASSESSED AREA BY PUBLIC	
Drawing No : FIGURE 5.1	Revision : 1
Scale : AS SHOWN	Date : FEB 2024

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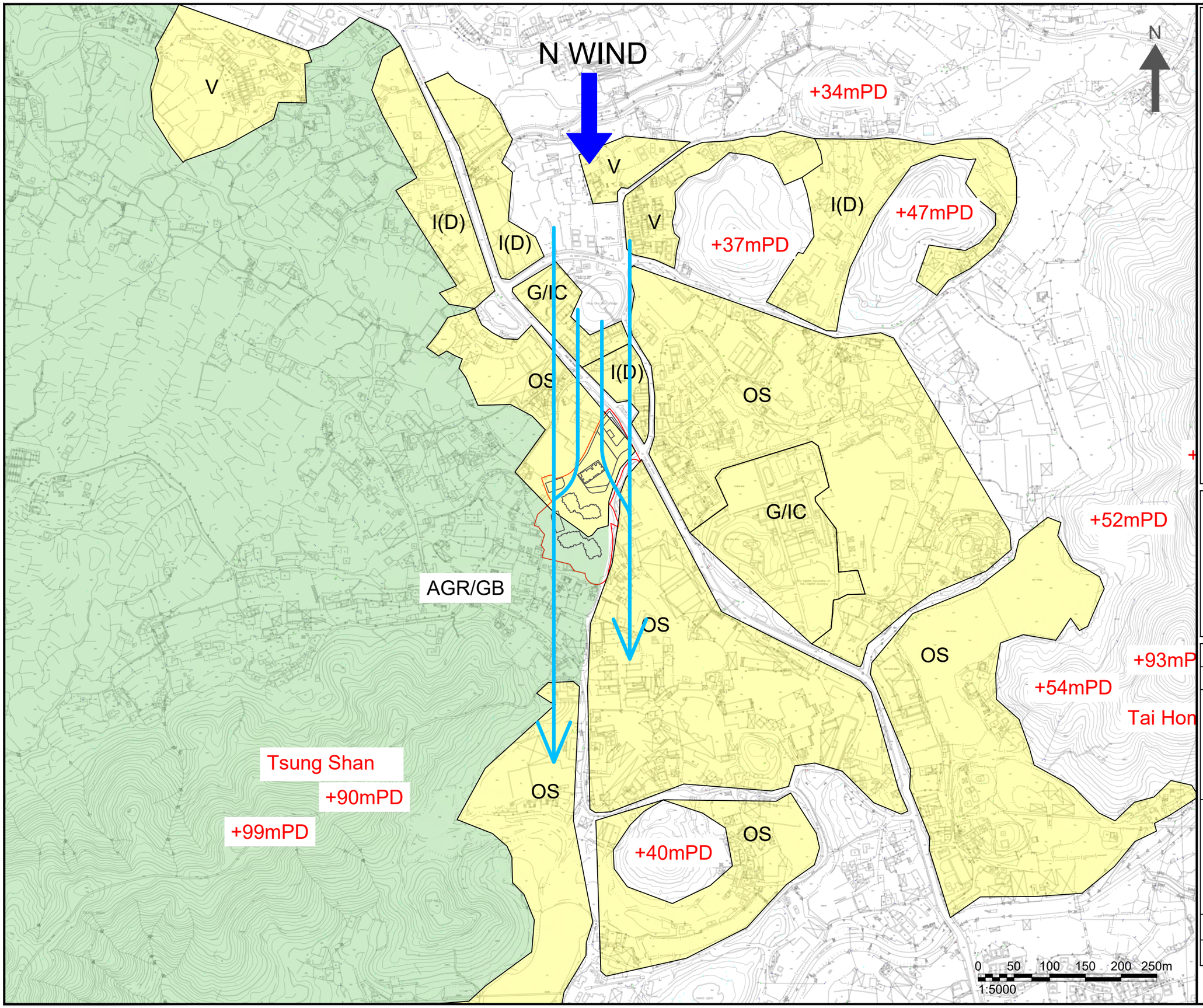
C:\USERS\NGANCHUNSANG\SYNOLOGYDRIVE\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\04 AVA\ISSUE 3\FIGURE\FIG 5.1 FREQUENTLY ASSESSED AREA.DWG



NOTES :

APPLICATION SITE

EXISTING ZONING

N WIND FLOW

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Drawing By :	CS

Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

WIND FLOW FROM N DIRECTION IN OZP COMPLIANCE SCHEME

Drawing No : FIGURE 5.2	Revision : 3
Scale : AS SHOWN	Date : JUN 2024

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A3 420 x 297

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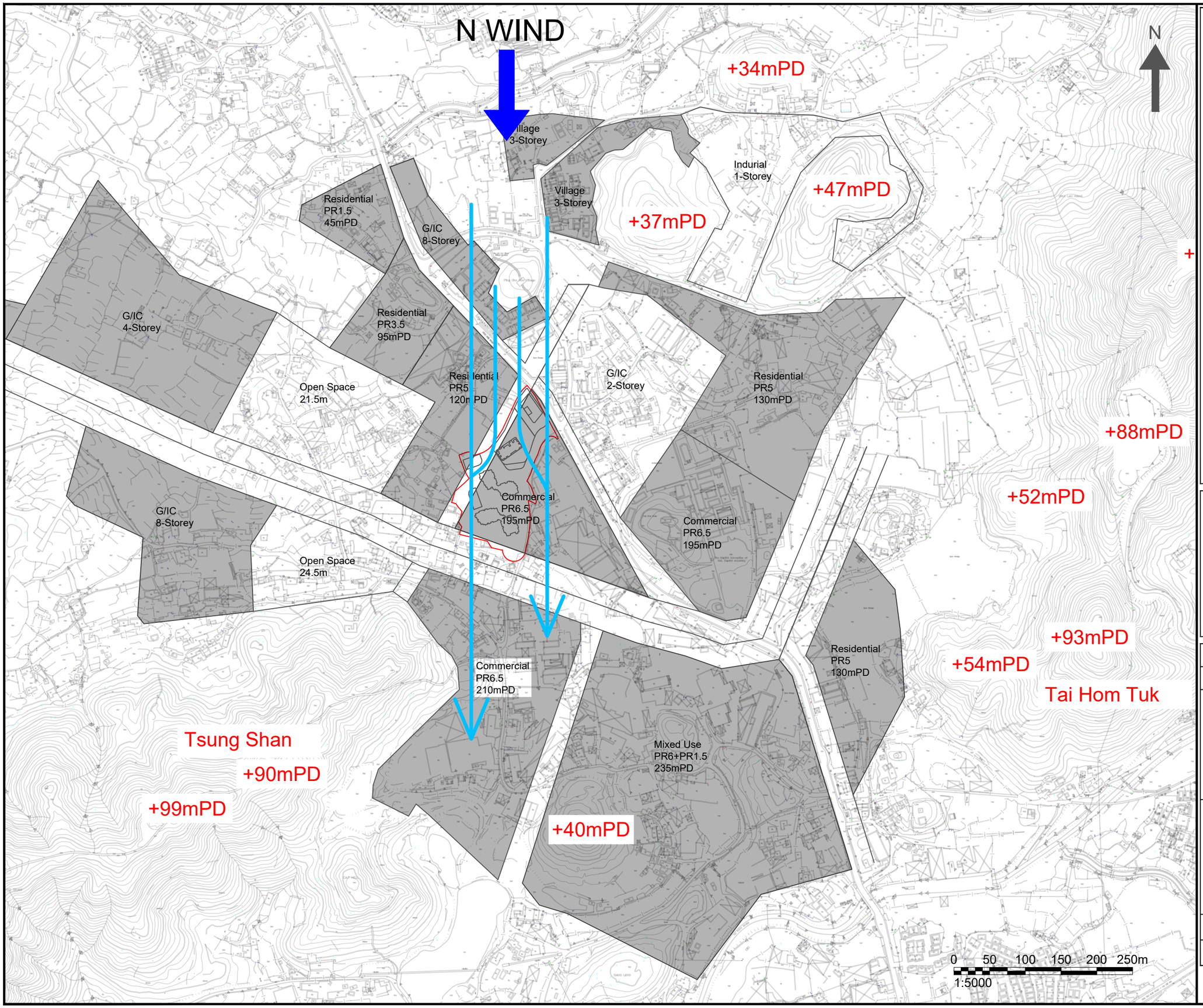

NOTES :

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NTN DEVELOPMENT

N WIND FLOW

Consultant

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Project No. :	2127
Drawing By :	CS

Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

WIND FLOW FROM NNE DIRECTION IN NTN DEVELOPMENT SCHEME

Drawing No :	Revision :
FIGURE 5.3	3
Scale : AS SHOWN	Date : JUN 2024

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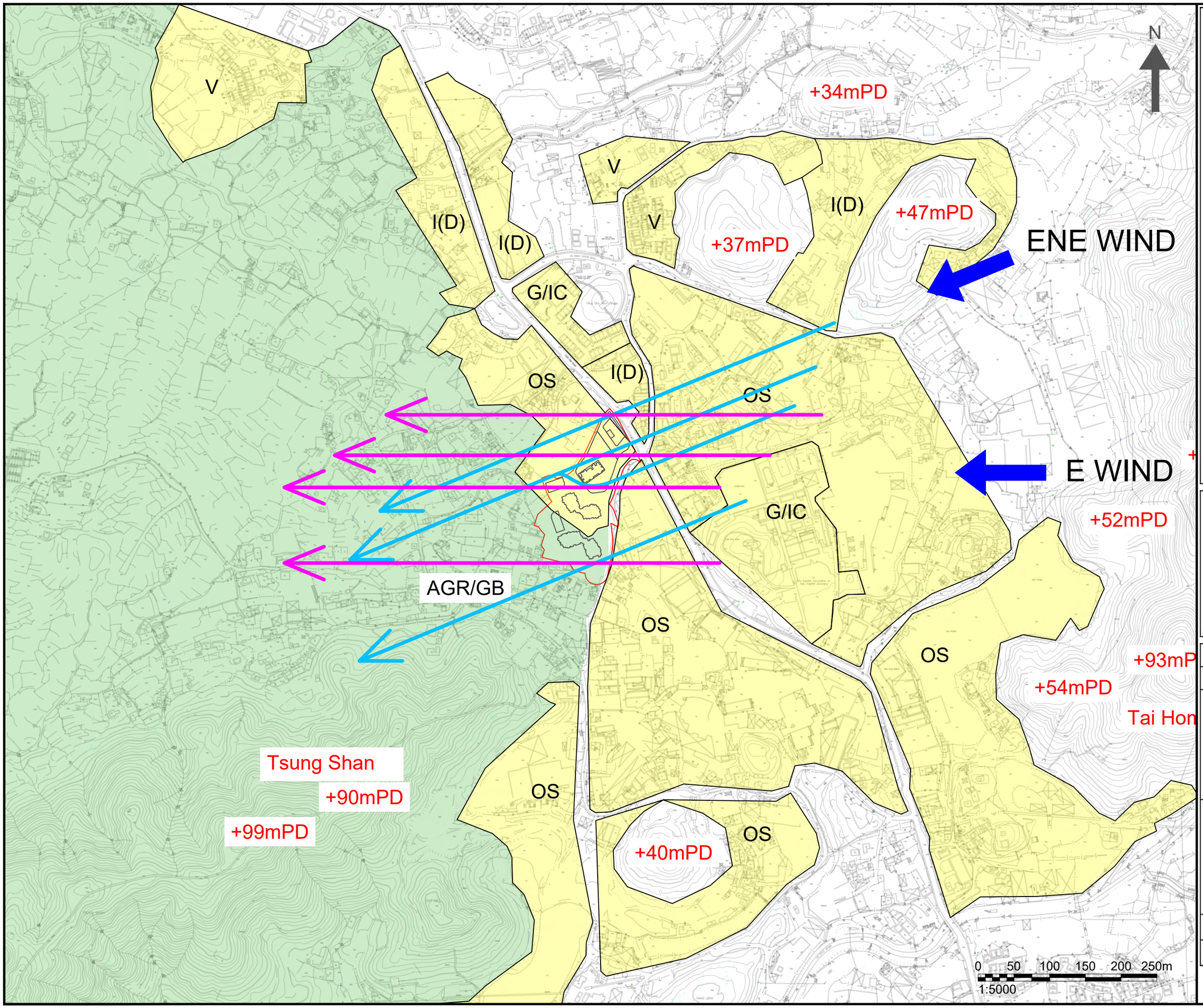

NOTES :

APPLICATION SITE

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E WIND FLOW

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Drawing Title :

WIND FLOW FROM ENE & E DIRECTION IN OZP COMPLIANCE SCHEME

Drawing No :	Revision :
FIGURE 5.5	3
Scale :	Date :
AS SHOWN	JUN 2024

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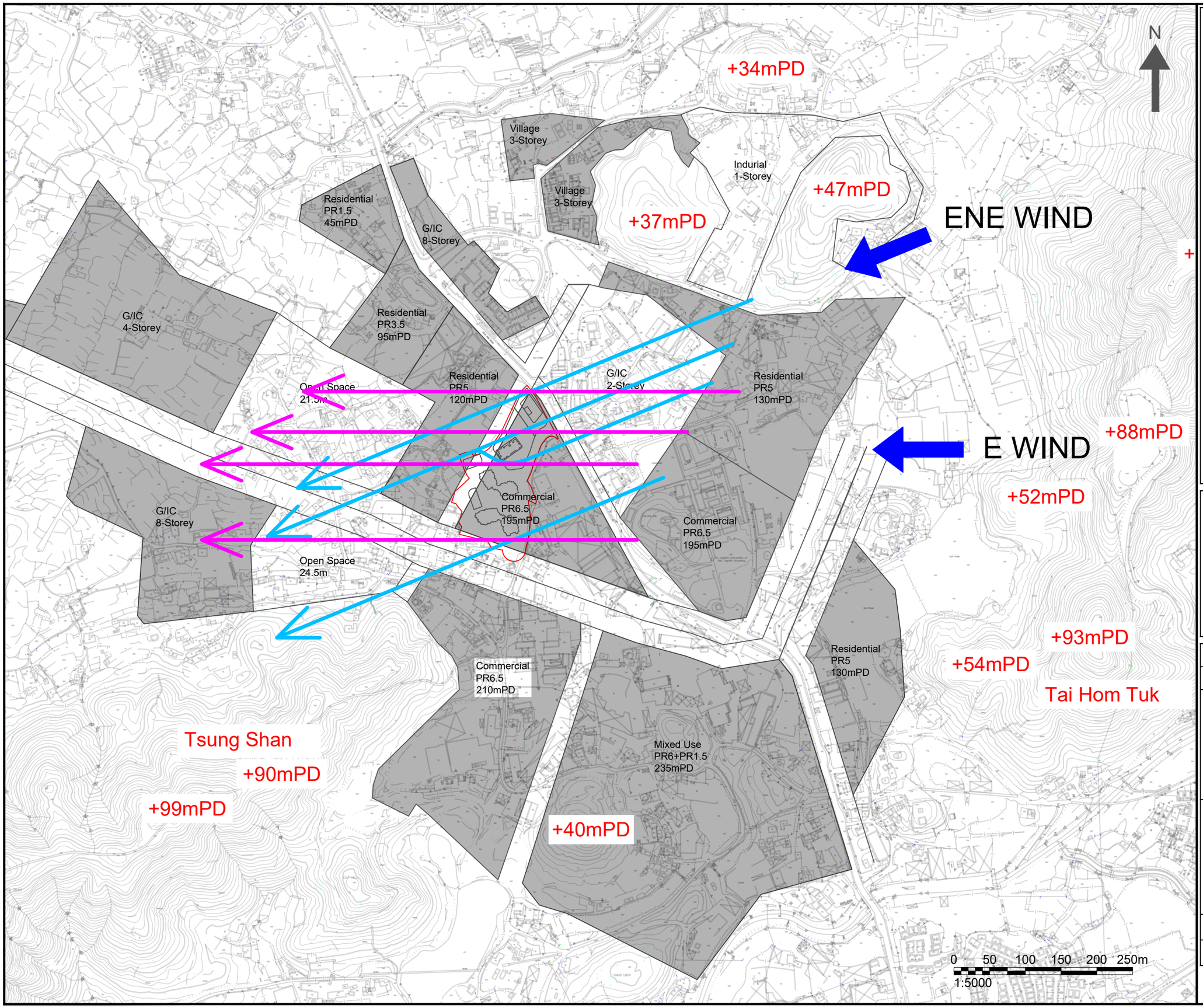

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Drawing Title :

WIND FLOW FROM ENE & E DIRECTION IN NTN DEVELOPMENT SCHEME

Drawing No :	Revision :
FIGURE 5.6	3
Scale : AS SHOWN	Date : JUN 2024

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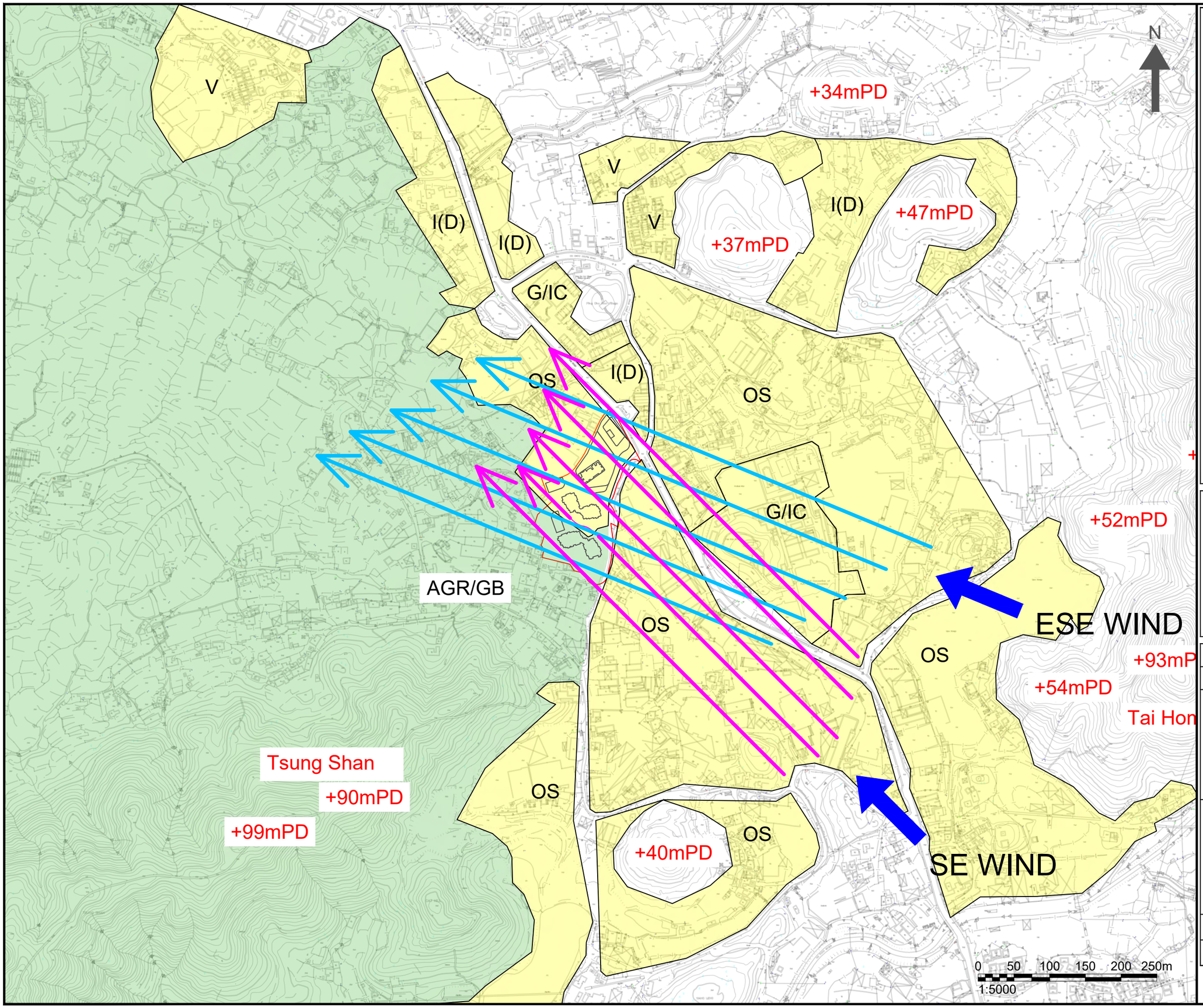

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Drawing Title :

WIND FLOW FROM ESE & SE DIRECTION IN OZP COMPLIANCE SCHEME

Drawing No : FIGURE 5.9	Revision : 3
Scale : AS SHOWN	Date : JUN 2024

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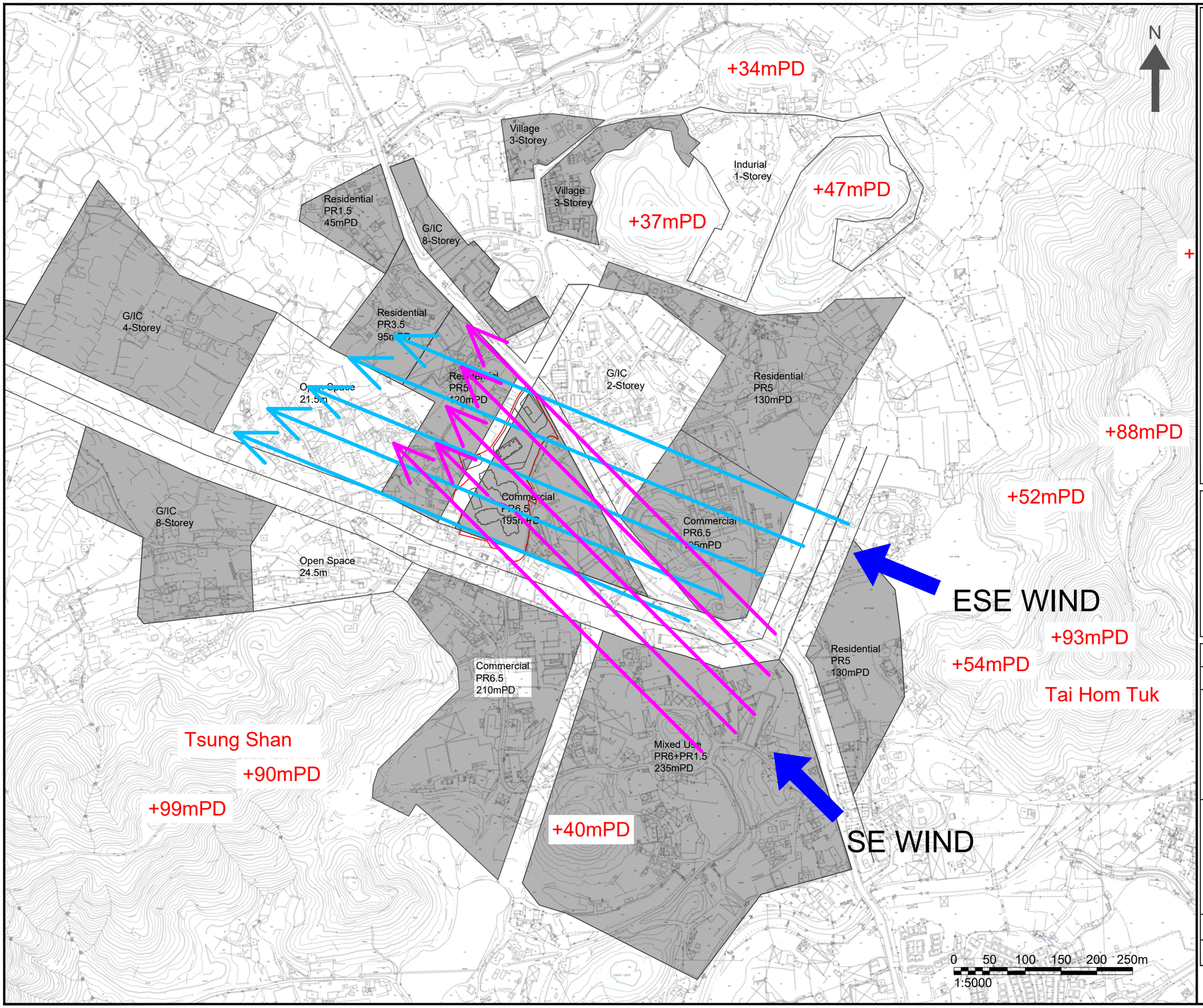

NOTES :

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NTN DEVELOPMENT

ENE WIND FLOW

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Drawing By :	CS

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Drawing Title :

WIND FLOW FROM ESE & SE DIRECTION IN NTN DEVELOPMENT SCHEME

Drawing No :	Revision :
FIGURE 5.10	3
Scale : AS SHOWN	Date : JUN 2024

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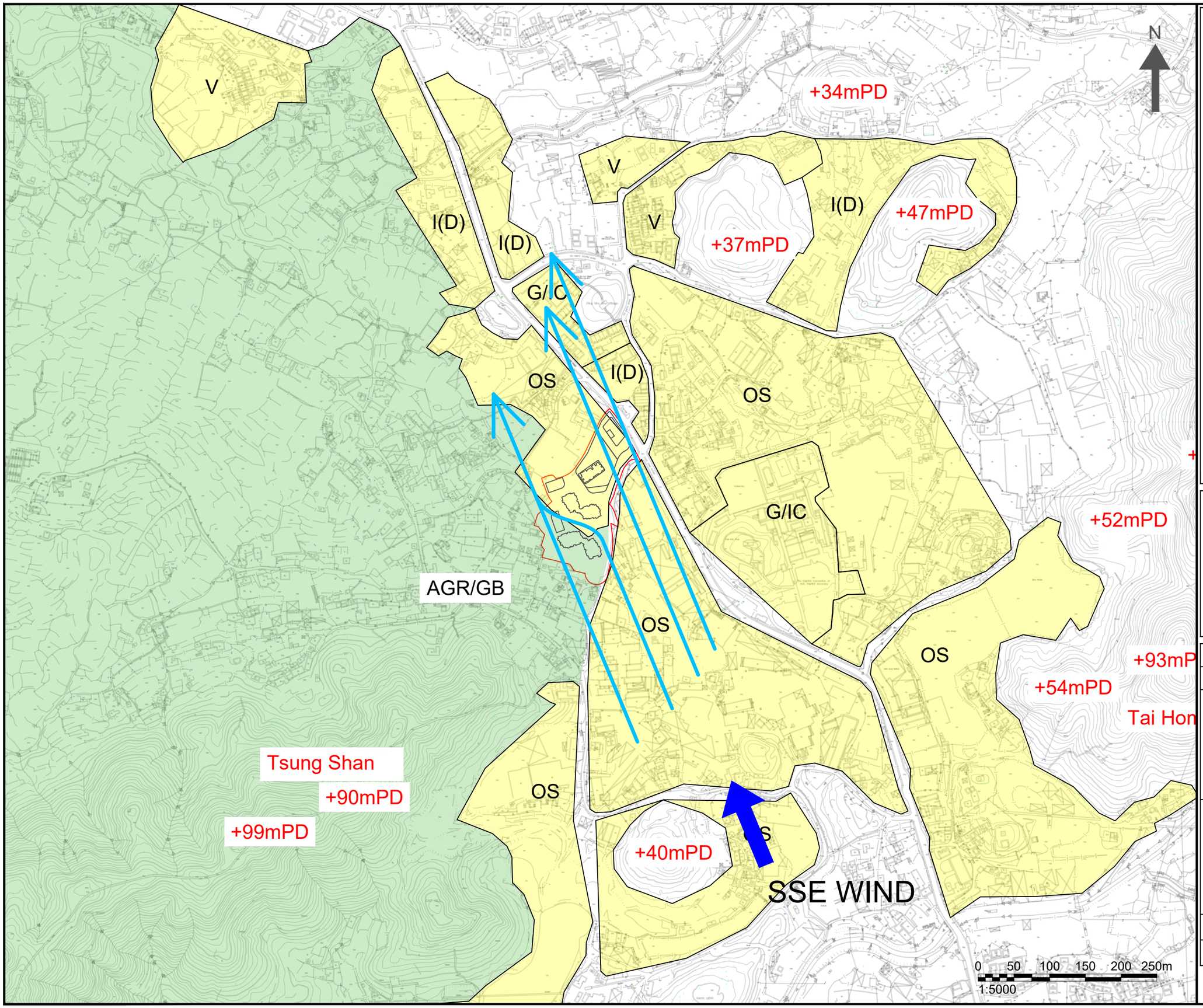

NOTES :

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SSE WIND FLOW

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Project No. : 2127

Drawing By : CS

Project :

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Drawing Title :

WIND FLOW FROM SSE DIRECTION IN OZP COMPLIANCE SCHEME

Drawing No :	Revision :
FIGURE 5.13	3
Scale :	Date :
AS SHOWN	JUN 2024

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A3 420 x 297

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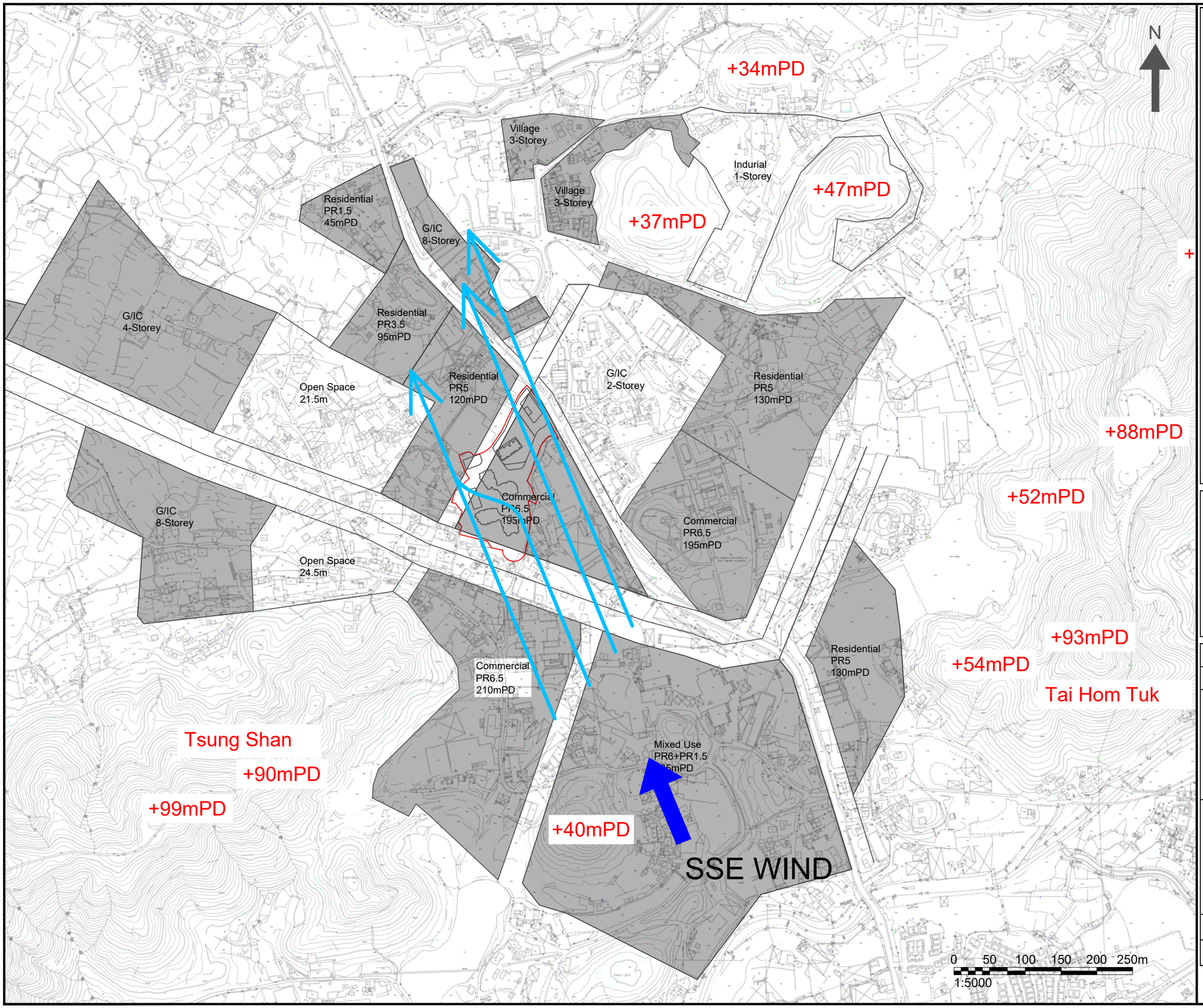

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SSE WIND FLOW

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Drawing Title :

WIND FLOW FROM SSE DIRECTION IN NTN DEVELOPMENT SCHEME

Drawing No :	Revision :
FIGURE 5.14	3
Scale : AS SHOWN	Date : JUN 2024

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A3 420 x 297

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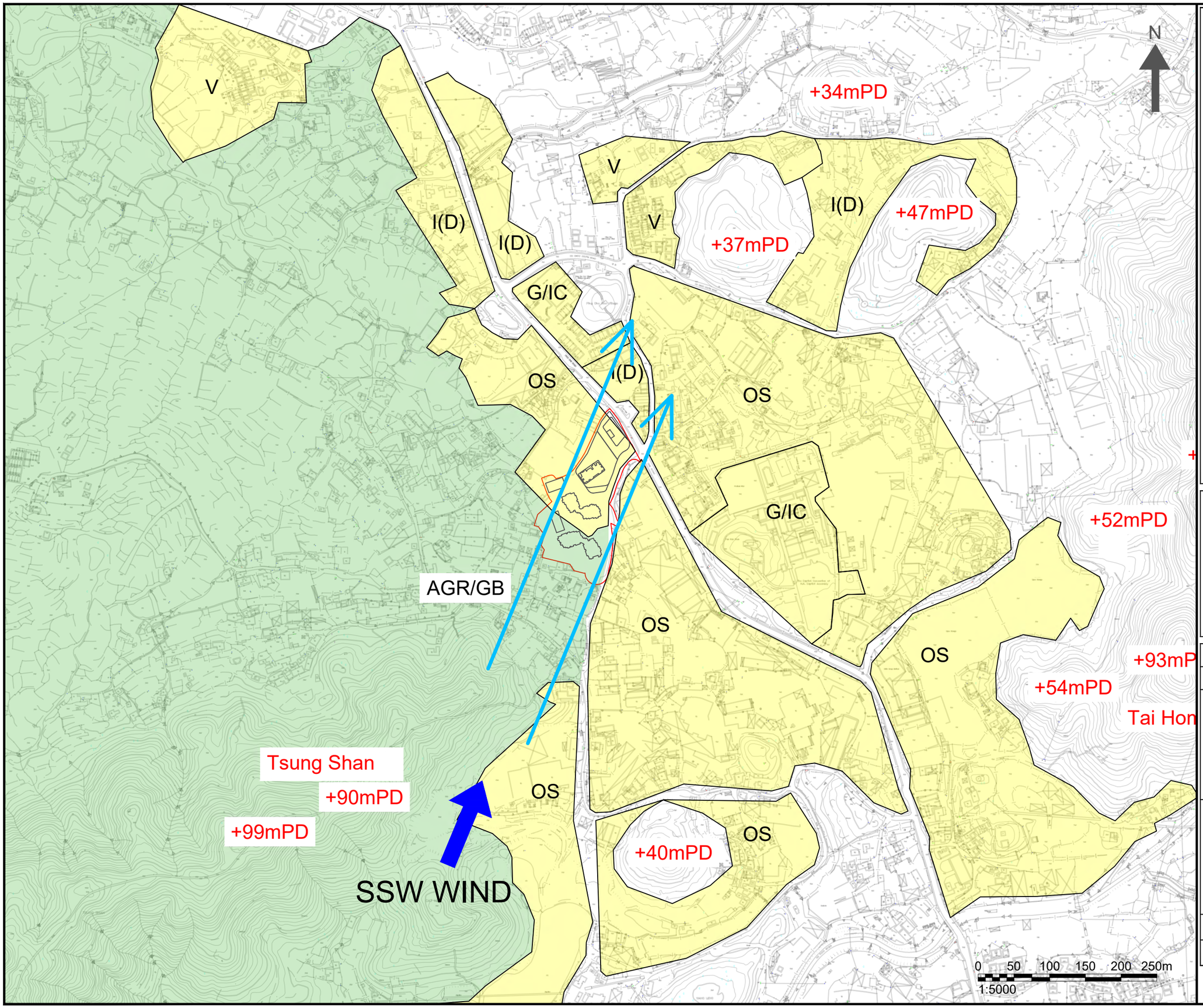

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SSW WIND FLOW

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Drawing By :	CS

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Drawing Title :

WIND FLOW FROM SSW DIRECTION IN OZP COMPLIANCE SCHEME

Drawing No :	Revision :
FIGURE 5.16	3
Scale : AS SHOWN	Date : JUN 2024

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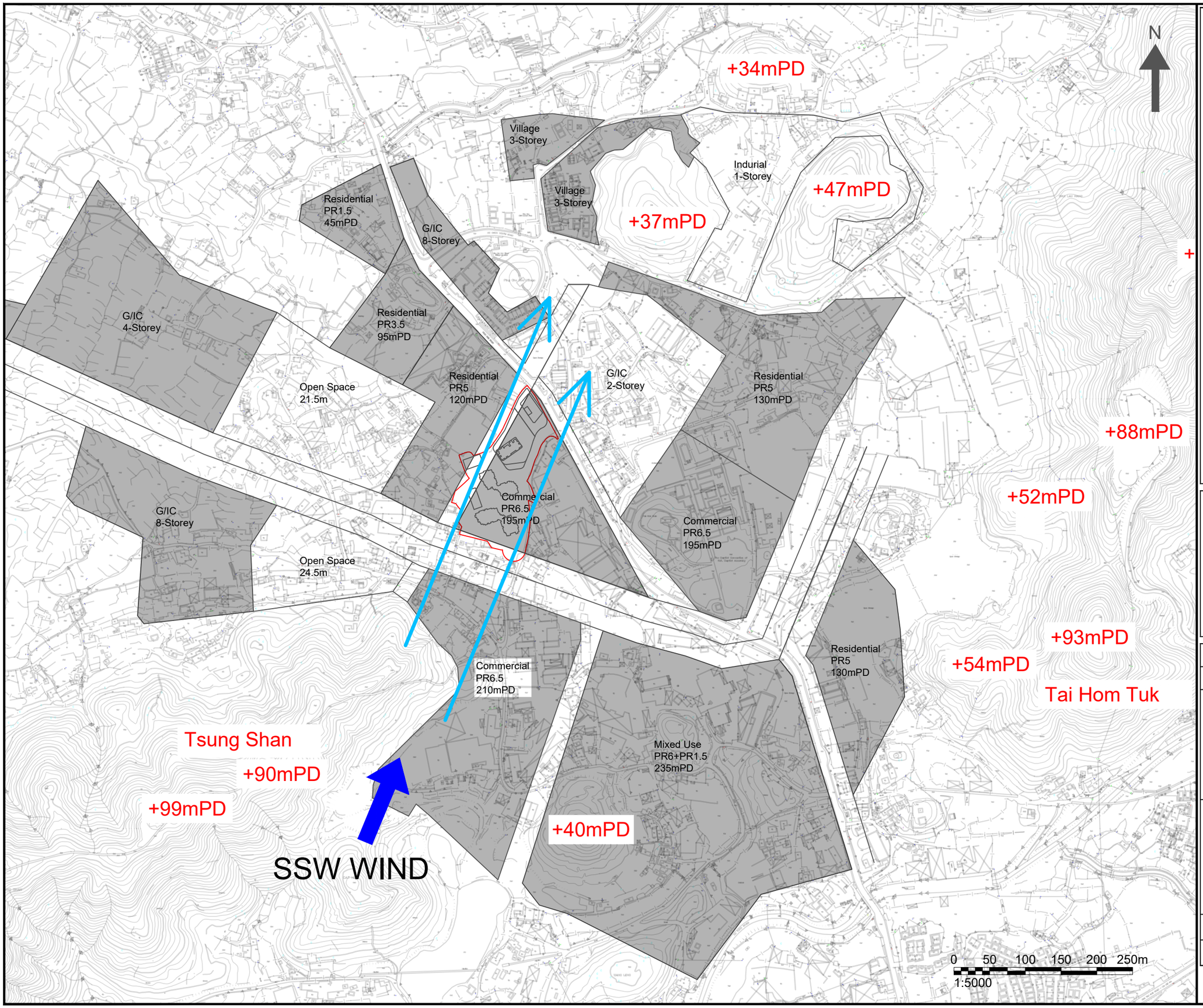

NOTES :

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NTN DEVELOPMENT

SSW WIND FLOW

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Project :

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Drawing Title :

WIND FLOW FROM SSW DIRECTION IN NTN DEVELOPMENT SCHEME

Drawing No :	Revision :
FIGURE 5.17	3
Scale : AS SHOWN	Date : JUN 2024

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Appendix A

MLP of the Proposed Development



BLOCK PLAN SK-1
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

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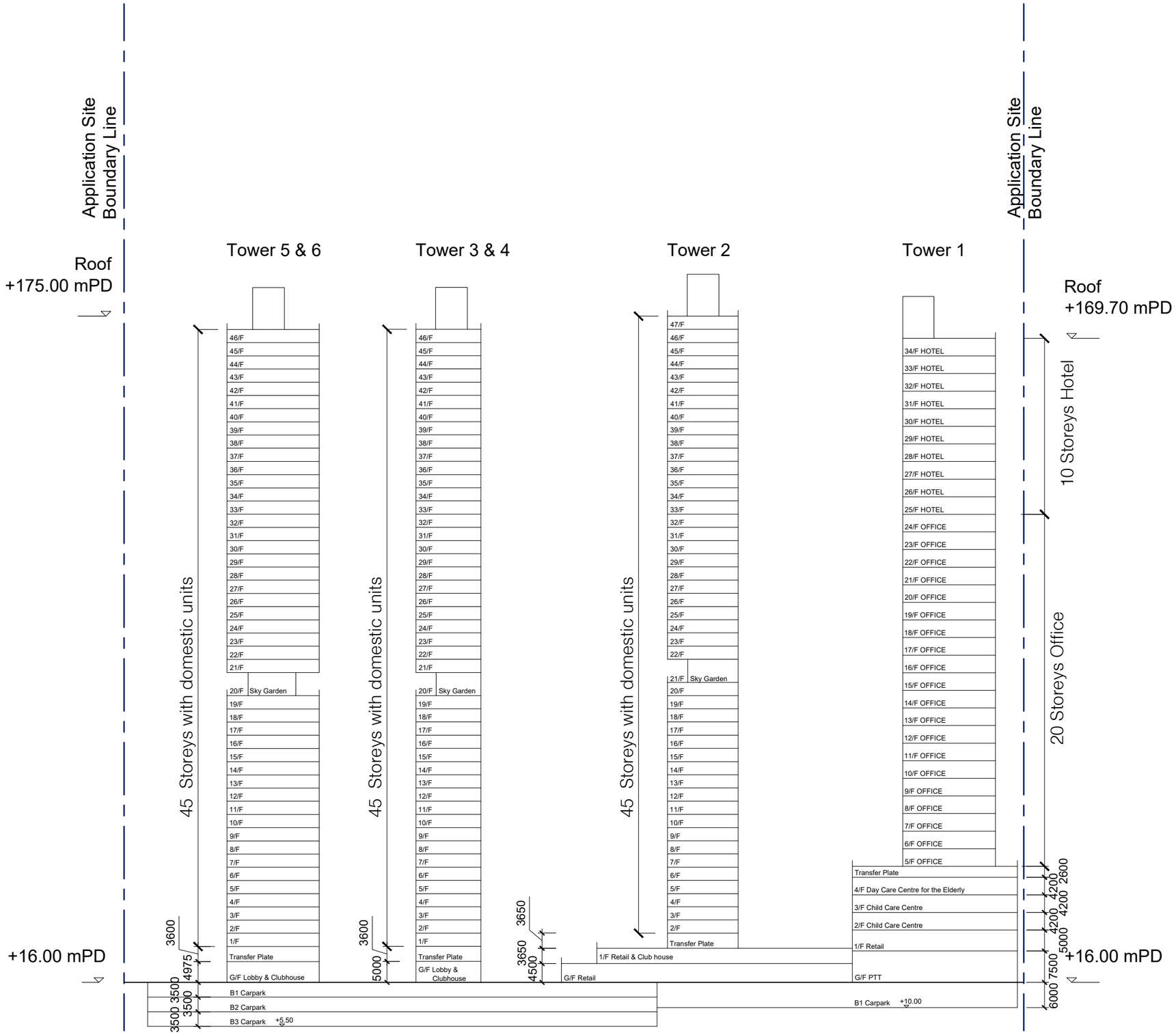
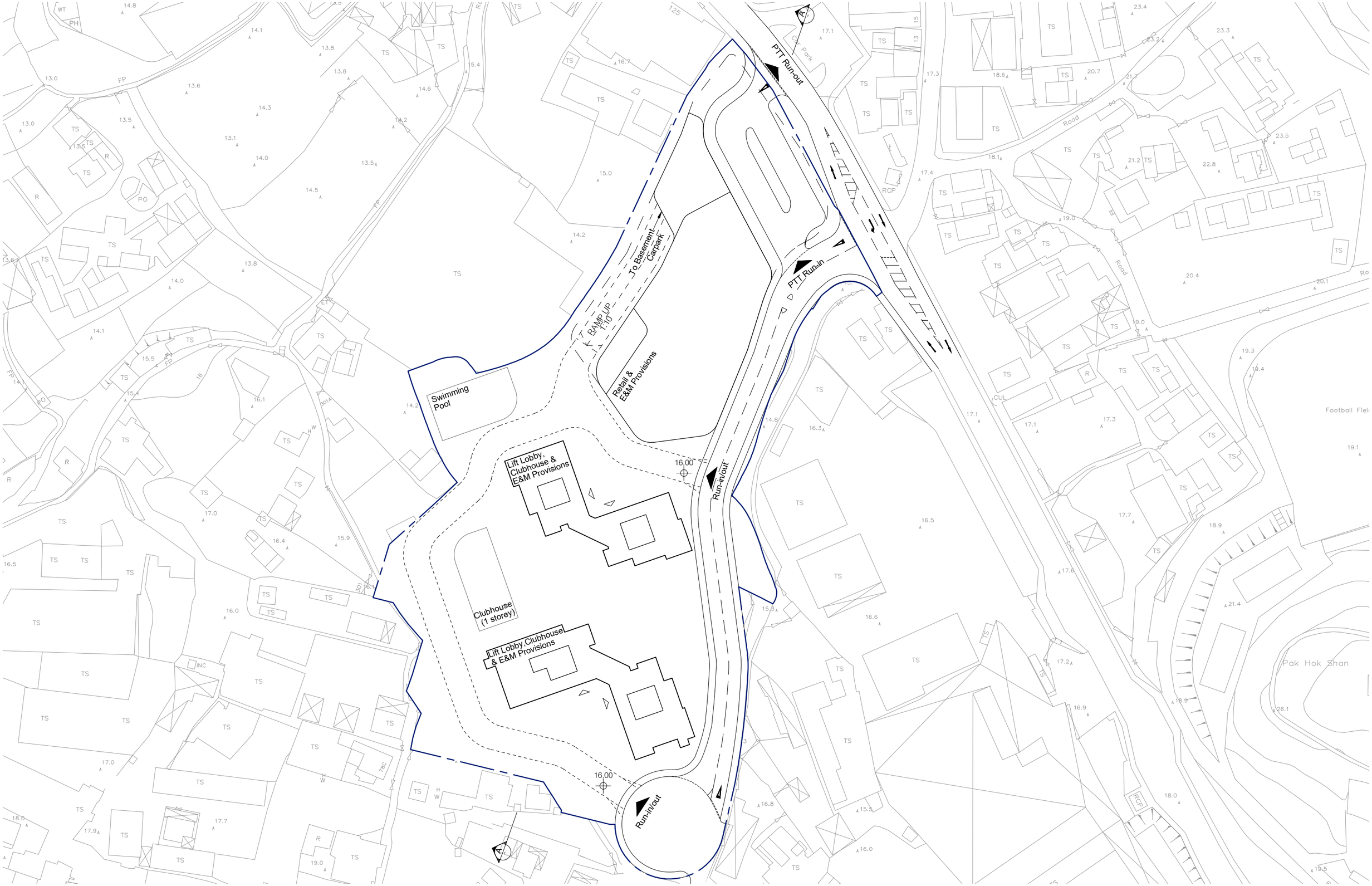


SCHEMATIC SECTION AA' SK-2
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

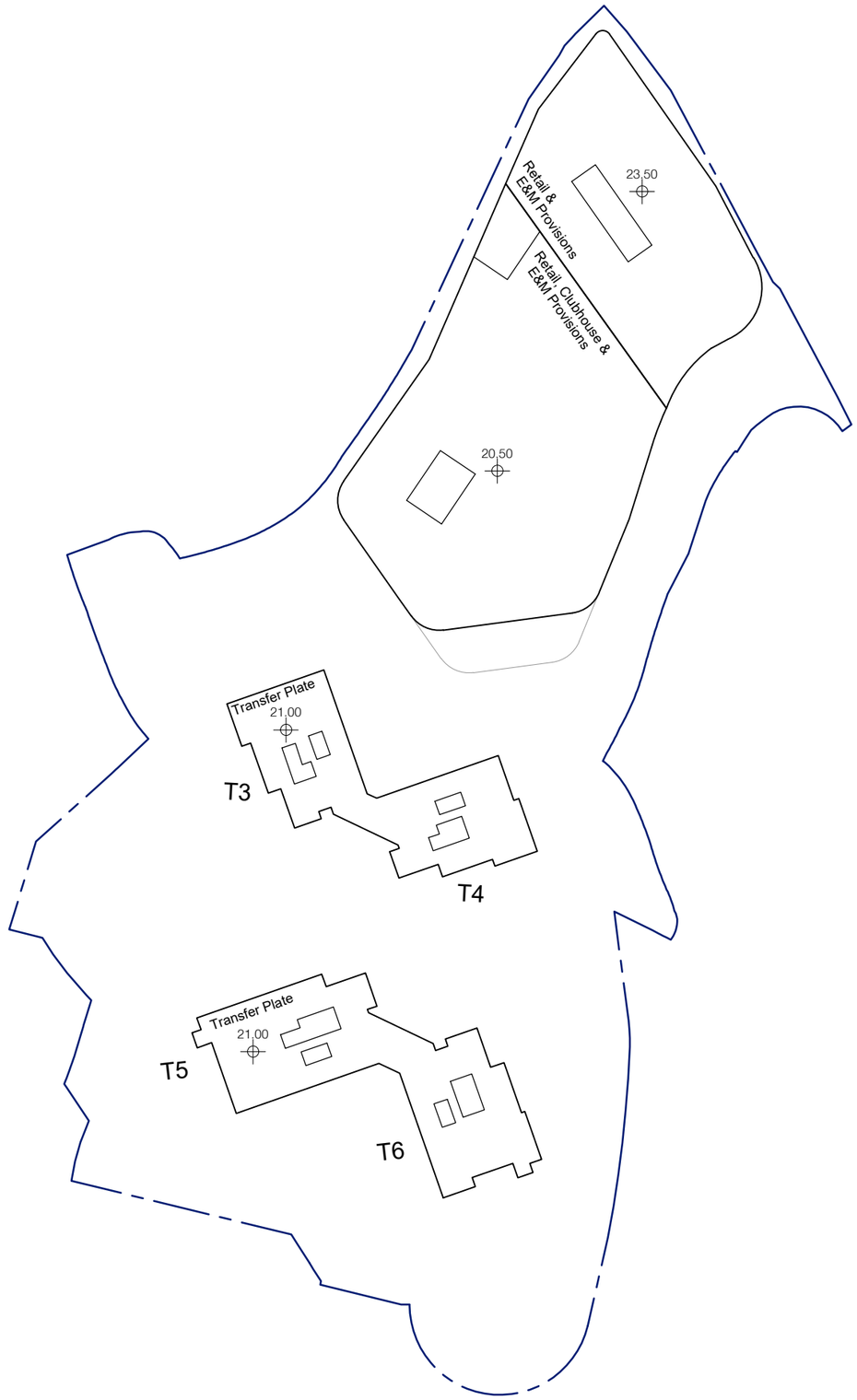
SINGULAR STUDIO LTD
6 OCTOBER 2023



GROUND FLOOR PLAN SK-3
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

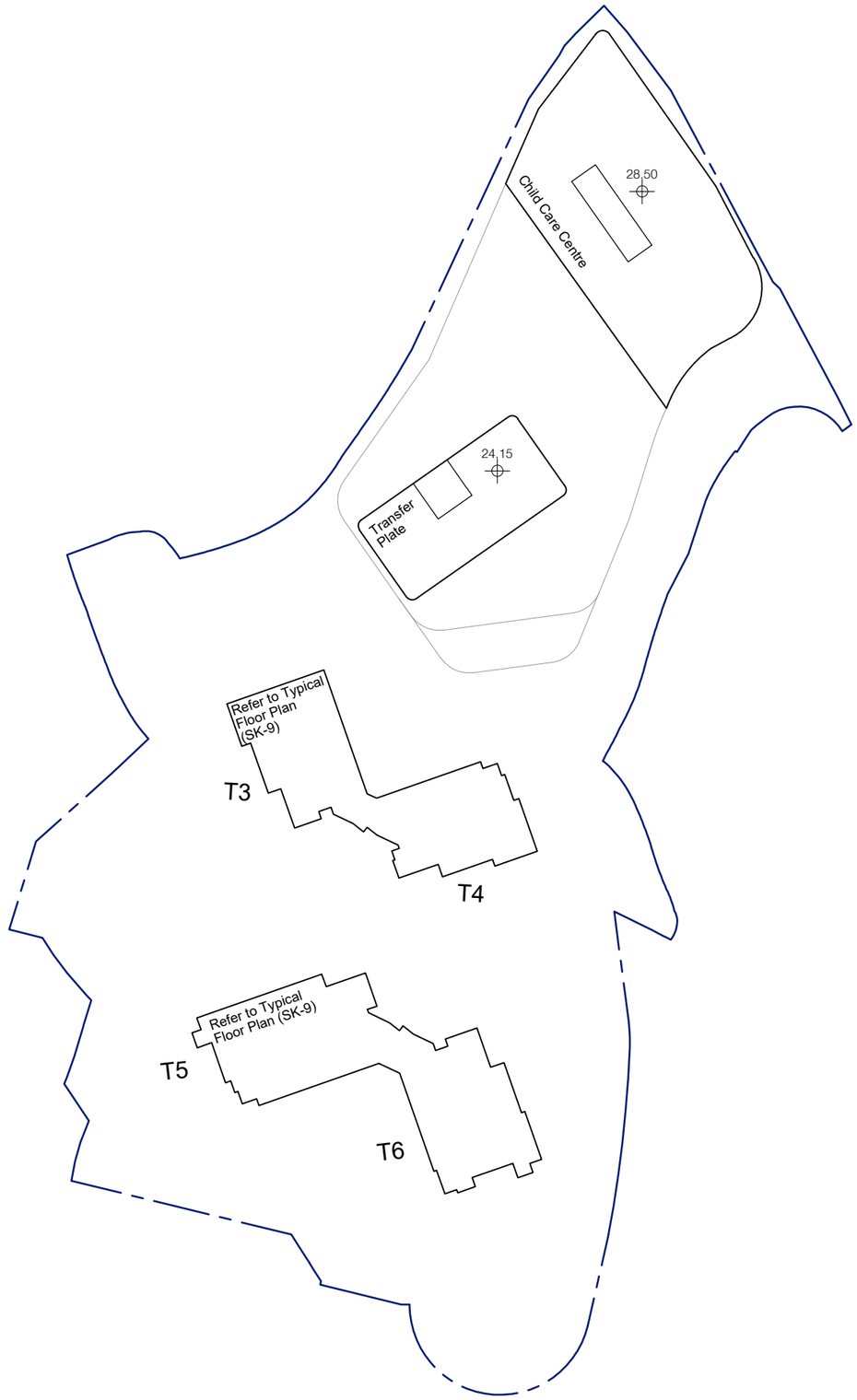
SINGULAR STUDIO LTD
11 DECEMBER 2023



FIRST FLOOR PLAN SK-4
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

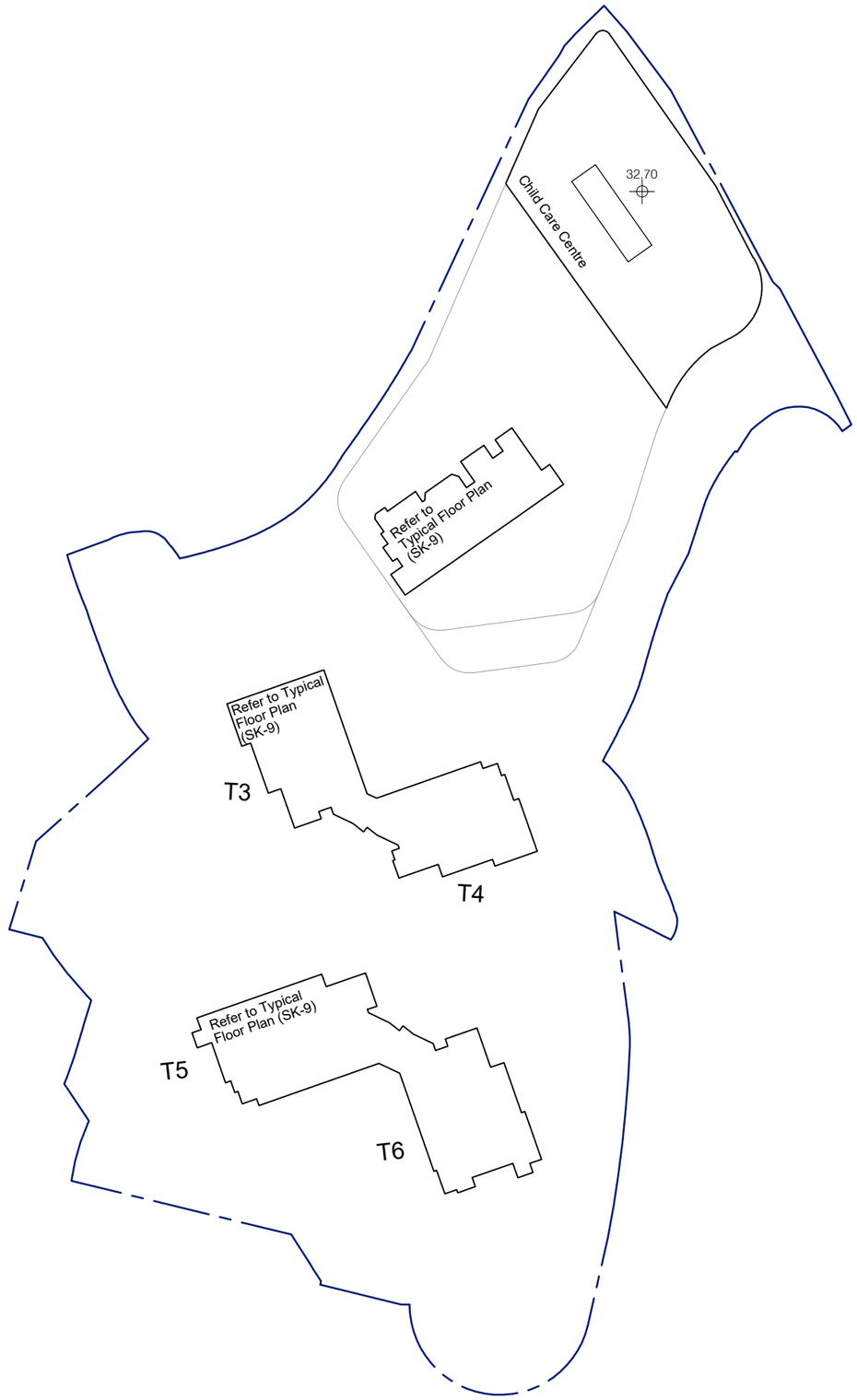
SINGULAR STUDIO LTD
12 OCTOBER 2023



SECOND FLOOR PLAN SK-5
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

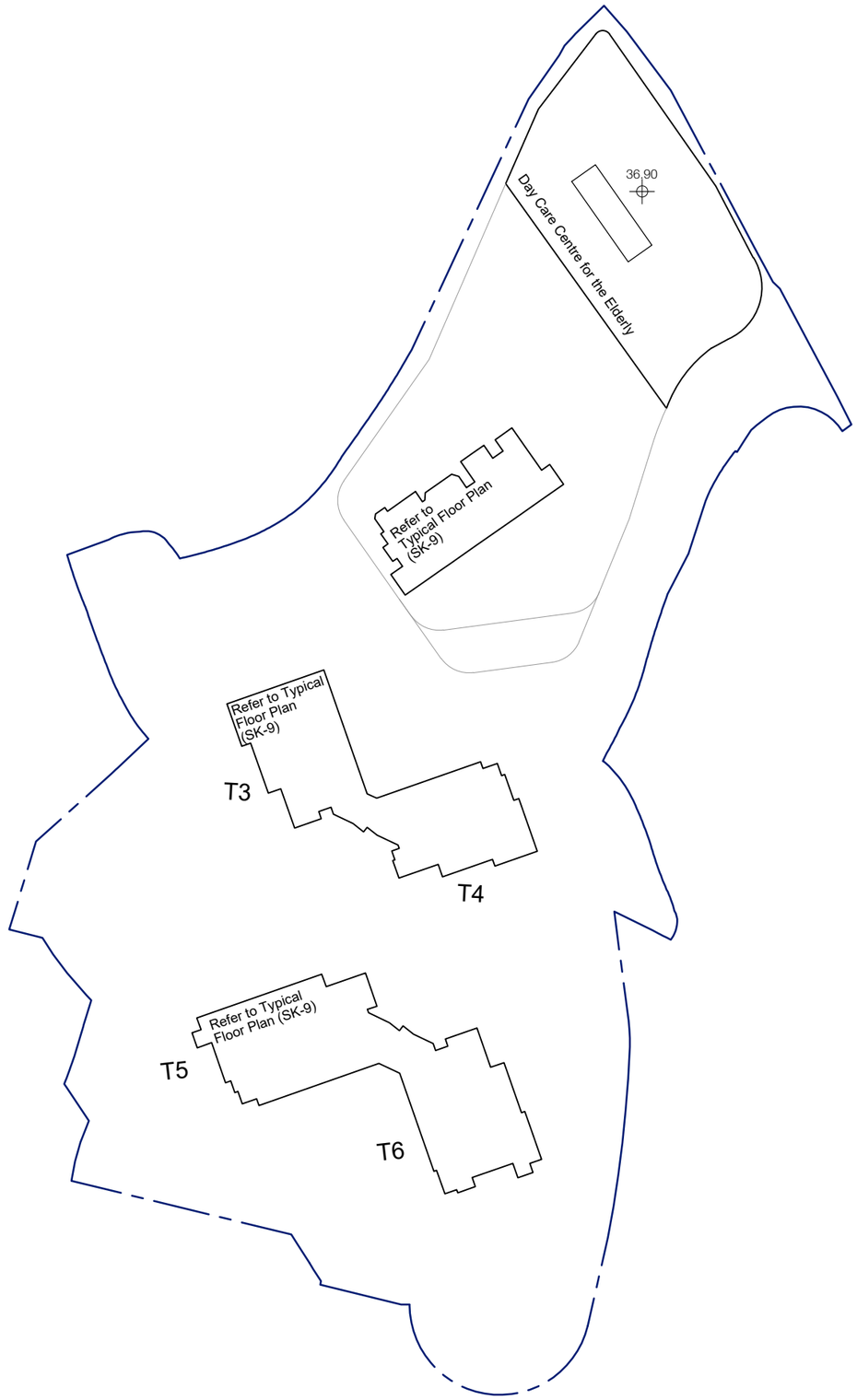
SINGULAR STUDIO LTD
12 OCTOBER 2023



THIRD FLOOR PLAN SK-6
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
12 OCTOBER 2023



FOURTH FLOOR PLAN SK-7
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

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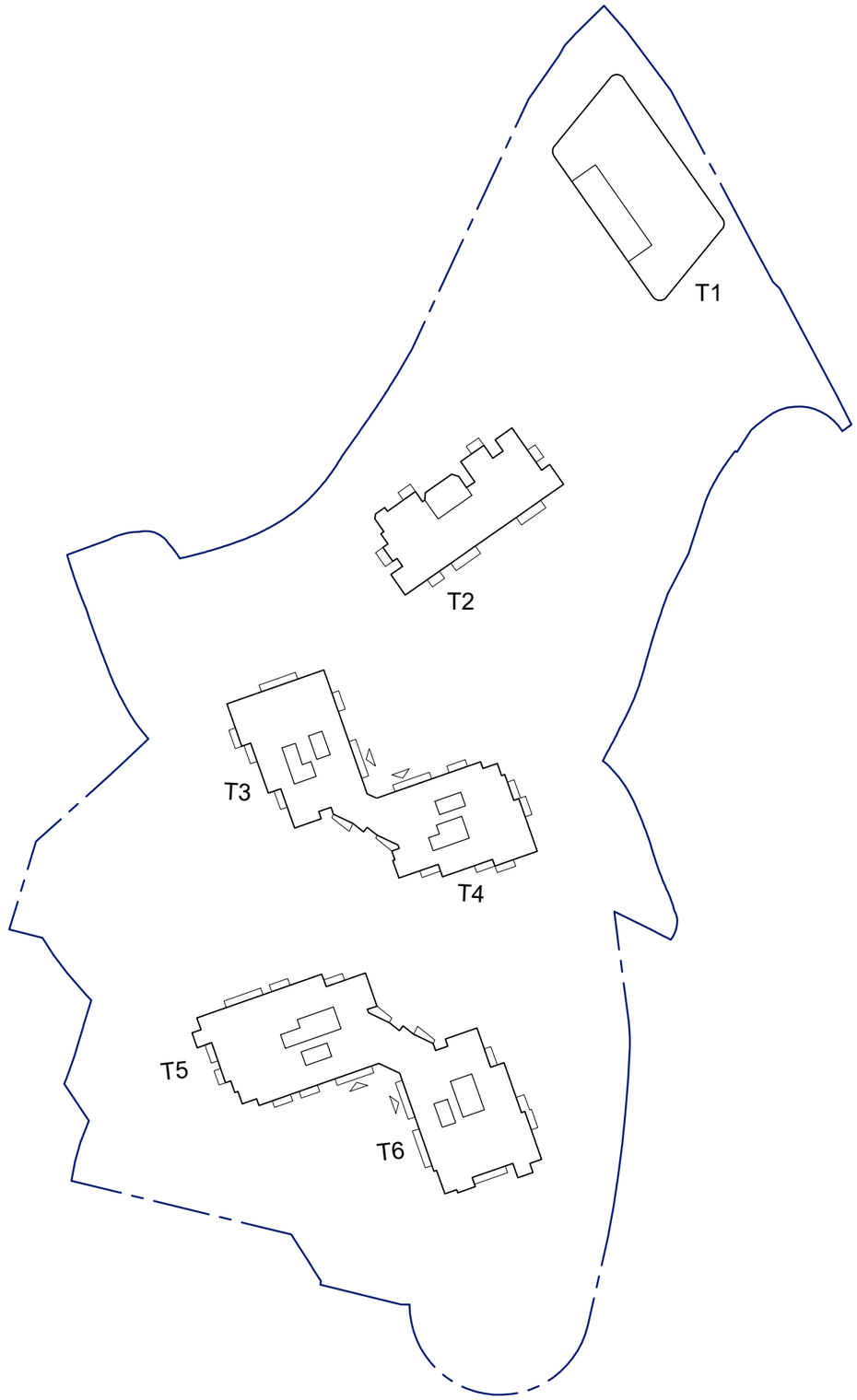

TYPICAL FLOOR PLAN SK-9
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

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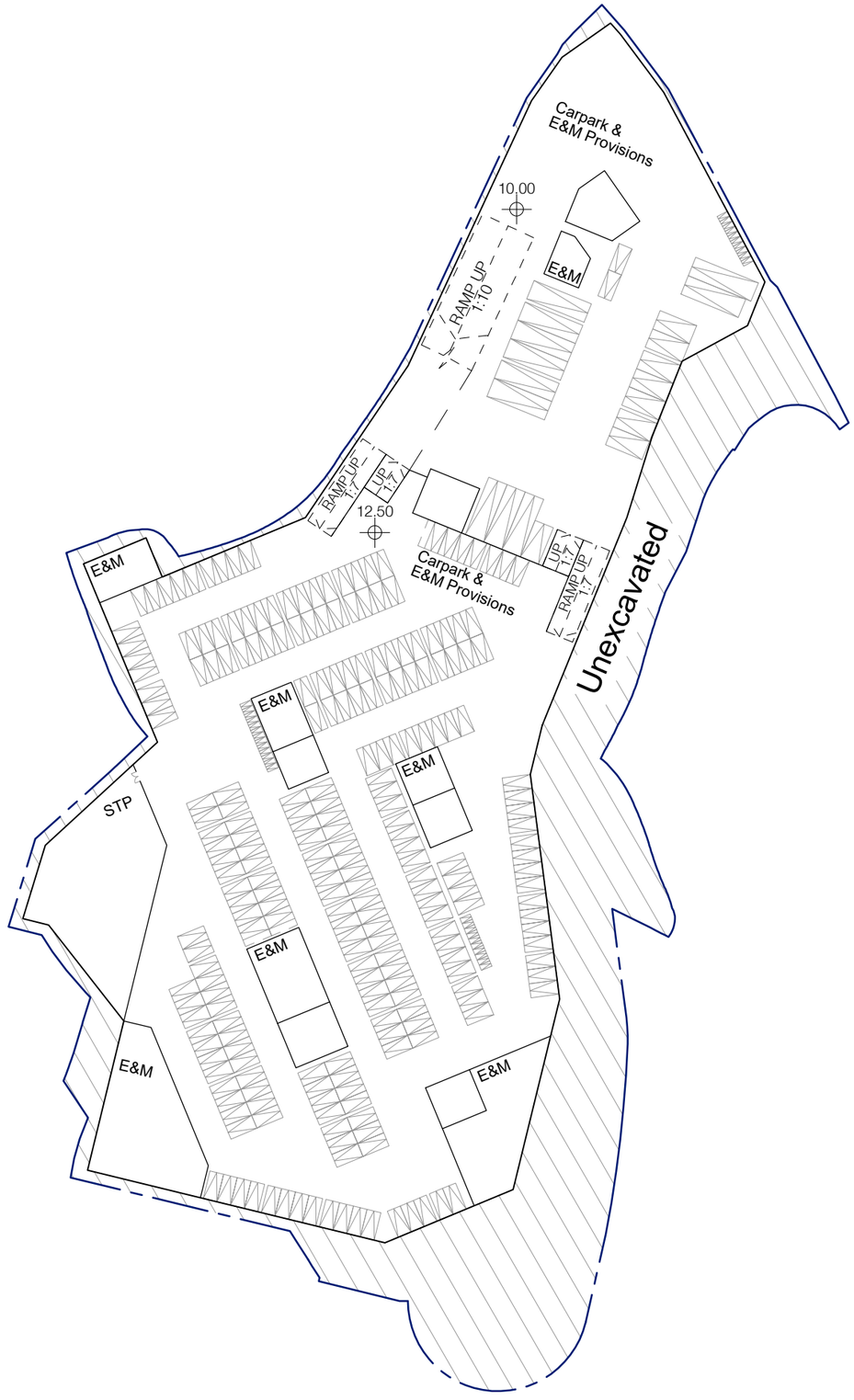
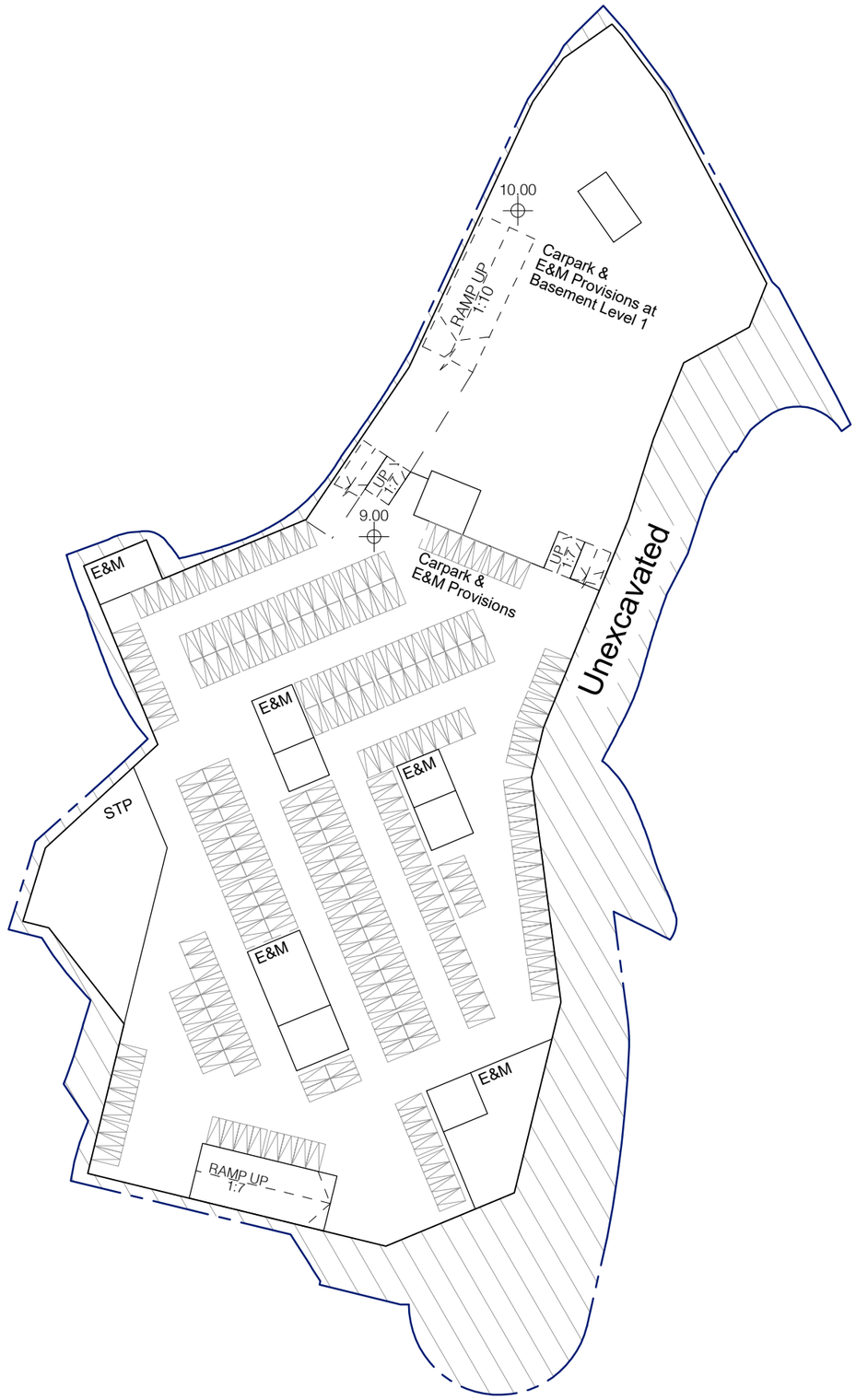


BASEMENT LEVEL 1 PLAN SK-10
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

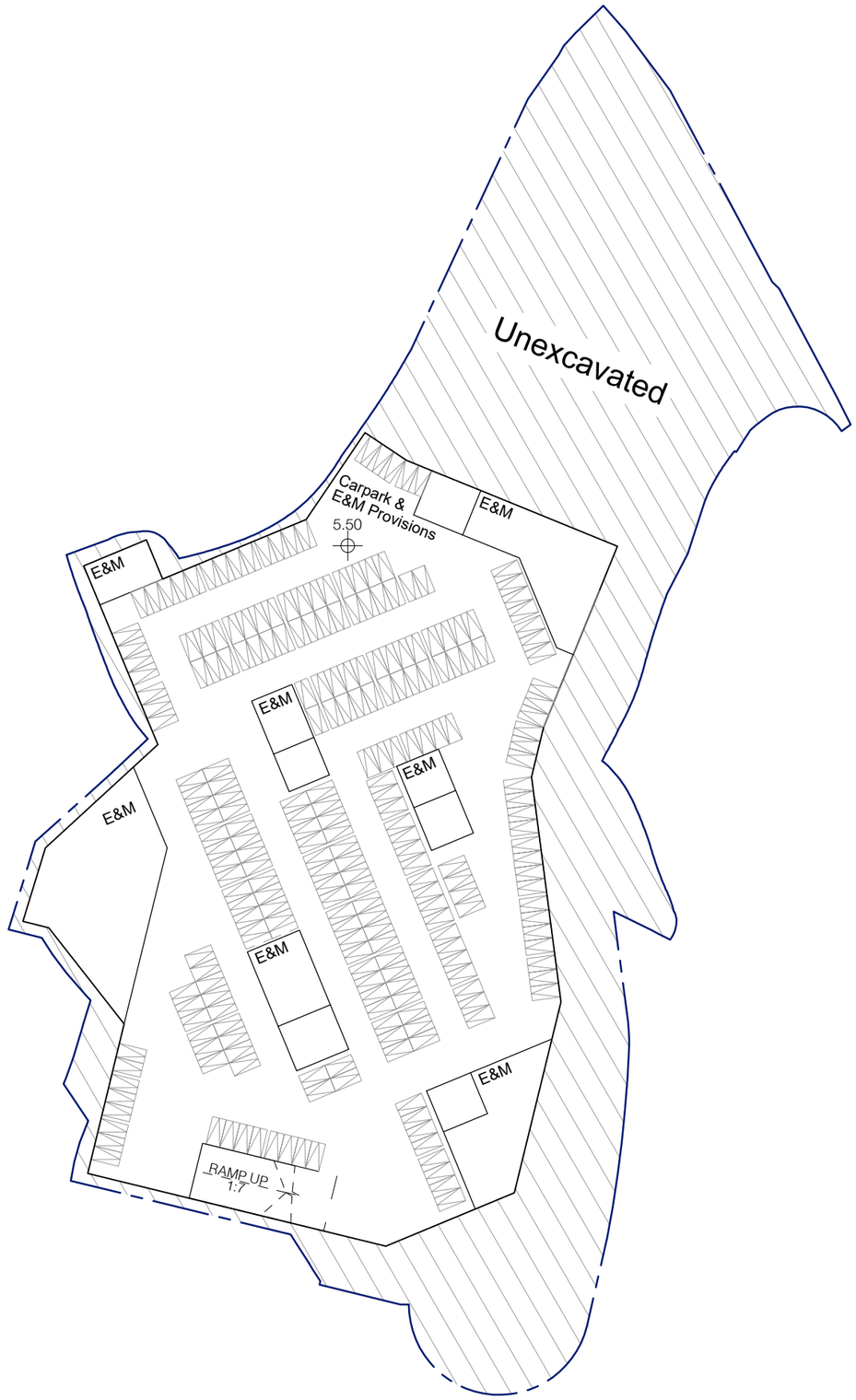
SINGULAR STUDIO LTD
15 MARCH 2024



BASEMENT LEVEL 2 PLAN SK-11
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

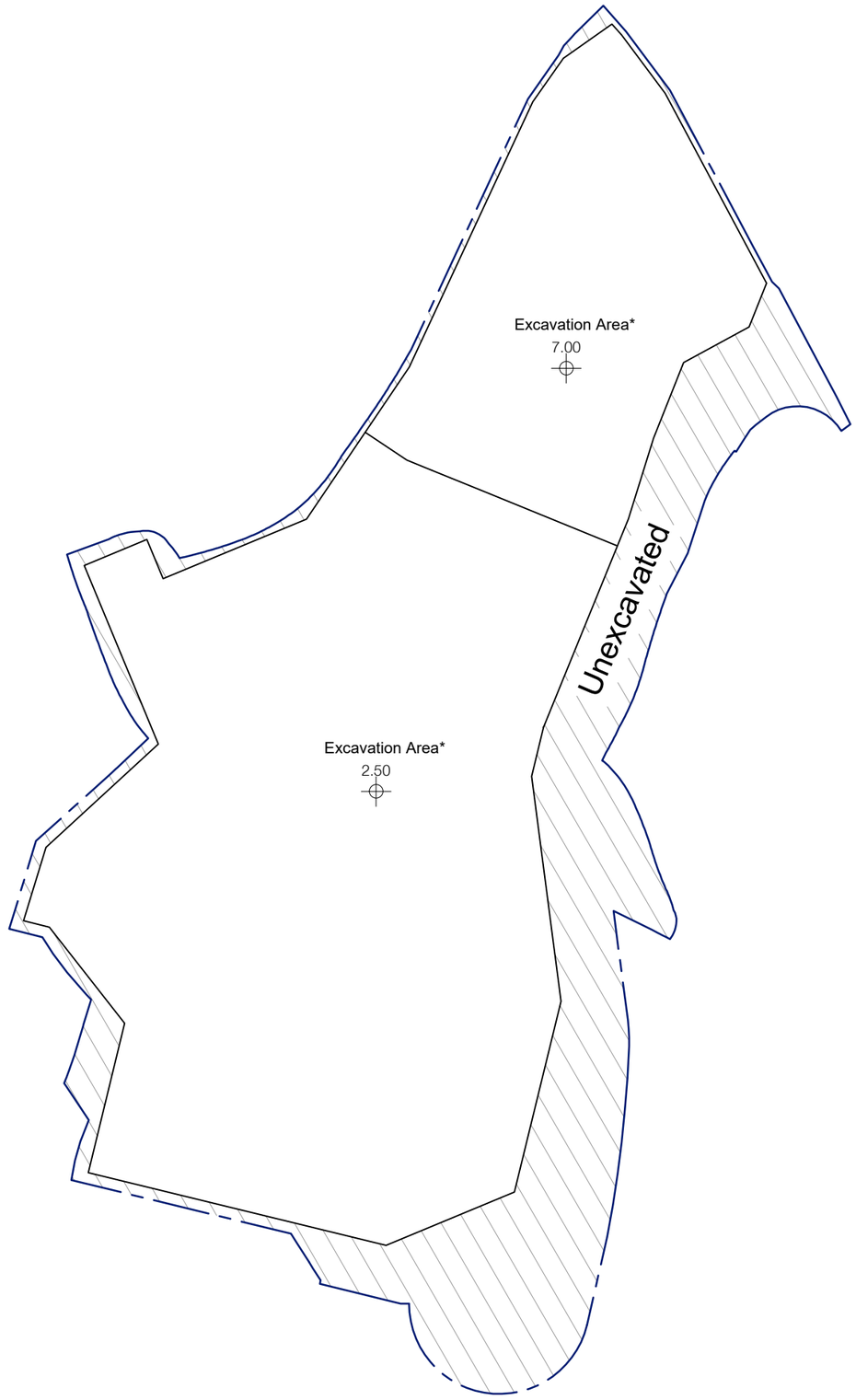
SINGULAR STUDIO LTD
15 MARCH 2024



BASEMENT LEVEL 3 PLAN SK-12
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
15 MARCH 2024



*The excavation area is about 13,500m^2 and the excavation depth is about 13.5m. The excavation area and depth are subject to future detailed design on foundation based on further geotechnical information.

EXCAVATION PLAN SK-13
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

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BLOCK PLAN (BASELINE SCHEME) SK-14
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

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BLOCK PLAN (WITH DIVERSION OF WATER MAINS) SK-15
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
11 DECEMBER 2023

Appendix B

Broad Land Use Concept of TKLPDA

River Ganges Pumping Station

Ta Kwu Ling Ling Ying Public School

Caritas Nursery School Ta Kwu Ling and Caritas Fung Wong Fung Ting Home

Vehicle Depot

Planned LT/HYW Link Road

Wun Chuen Sin Koon

Ping Yeung Public School

Tong Fong

Fung Wong Wu

Chow Tin Tsuen

Lei Uk

Ping Yeung

Ping Che Kat Tin

Tai Po Tin

Ping Che Yuen Ha

Ping Che

Ta Kwu Ling Farm

Ta Kwu Ling Rural Government Offices

Sha Tau Kok Road

1 3 9 12

5 7

Illustrative purpose only

Legend

- Potential Cavern Location
- 1 Proposed Waste-to-Energy Plant, IWMF (approx. 12ha, of which 6ha in cavern)
- 3 Proposed Local Sorting & Recycling Centre (Ping Che) & Refuse Transfer Station (RTS) & Local Sorting & Recycling Centre (Ngau Tam Mei) (approx. 1.5ha, of which 0.75ha in cavern)
- 5 Proposed Fresh Water Service Reservoir (7,800sqm, 7m in depth, fully in cavern)
- 7 Proposed Flushing Water Service Reservoir (3,400sqm, 5m in depth, fully in cavern)
- 9 Proposed Sewage Treatment Works (approx. 5ha, of which 2.5ha in cavern)
- 11 Proposed District Cooling System (approx. 1ha)
- 12 Proposed Tri-generation Plant (approx. 2ha, of which 1ha in cavern)

(Site areas above are subject to detailed design)

- Cycle Rental/Parking
- Existing/Planned Cycle Track
- Proposed Cycle Track
- Fringe Car Park
- Commercial (PR6.5)
- Commercial (PR5)
- Residential (PR7.5)
- Residential (PR6)
- Residential (PR5)
- Residential (PR3.5)
- Residential (PR1.5)
- Mixed Use (PR6+PR1.5)
- Science Park (PR3)
- Industrial Estate (PR4)
- Logistic Industries (PR3)
- G/IC (Existing/Planned)
- G/IC (Proposed)
- Agriculture
- Open Space
- Green Belt
- Village
- Existing Settlement
- Roads (Existing/ Planned)
- Roads (Proposed)*
- G/IC Primary School
- G/IC Secondary School
- G/IC Sports Ground
- G/IC Sports Centre
- G/IC Swimming Pool Complex
- G/IC Fire Station Cum Ambulance Depot
- G/IC Police Station
- G/IC General Clinic/ Health Centre
- G/IC Hospital
- Max. Building Height (mPD)
- Max. Building Height (storeys)
- Site Formation Level
- PDA Boundary
- Retention Pond
- Ping Che Egretry
- River/Stream

* Proposed road location and width are indicative

Scale and Orientation

N

0 100 200 300 400 500m

Drawing No.	Drawn	Date
Figure 3.8.2d	CR/ JH	Mar 2016
1:5000 on A0	Checked	Approved

Drawing Title

Broad Land Use Concept Plan - TKL PDA Scenario II

Job Title

Agreement No. CE 42/2013 (CE)
Preliminary Study on Developing the New Territories North

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CEDD 土木工程拓展署 Civil Engineering and Development Department

規劃署 Planning Department

Appendix C

Supplementary Drawing for Visual and Air Ventilation Mitigation Measures

~9m (>7.5m from the centreline of the street)

~9m

~30m

~18m

~18m

~20m

~20m

1.5

1.5

PTT Run-out

PTT Run-in

Run-in/out

Run-in/out

Possible connection to Ping Che Station

Commercial (30 storeys)

T1
169.70

PTT, Retail, Child Care Centre & Day Care Centre (6 storeys)

Retail (1 storey) & Clubhouse (1 storeys)

T2
175.00

To Basement Carpark

Swimming Pool

T3
171.85

T4
171.85

21.00
Clubhouse (1 storey)

T5
171.83

T6
171.83

41.10

24.15

41.10

27.75

20.50

16.00

16.00

Car Park

Road

Road

Football Field

Pak Hok Shan

PROPOSED DESIGN MEASURES OF INDICATIVE SCHEME SK-16
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
5 APRIL 2024

Appendix F Environmental Assessment

Issue No. : 5
Issue Date : June 2024
Project No. : 2127

ENVIRONMENTAL ASSESSMENT

FOR

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Prepared by

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Document Verification

Project Title	APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES	**Project No.**	2127
Document Title	ENVIRONMENTAL ASSESSMENT		

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
1	December 2023	1st Submission	Various	Cathy Man	Grace Kwok
2	December 2023	2nd Submission	Various	Cathy Man	Grace Kwok
3	February 2024	3rd Submission	Various	Cathy Man	Grace Kwok
4	April 2024	4th Submission	Various	Cathy Man	Grace Kwok
5	June 2024	5th Submission	Various	Cathy Man	Grace Kwok

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1. Introduction

1.1.1. Allied Environmental Consultants Limited (AEC) has been appointed to conduct an Environmental Assessment (EA) for the proposed application for amendment of Plan under S.12A of the Town Planning Ordinance at Lot 796 and 1008 RP at D.D. 77 and adjoining Government land in Ping Che (hereinafter called "Proposed Amendment"). Architectural drawings and other technical information on the Proposed Amendment are provided by the Project Architect and the traffic forecast is provided by the Project Traffic Consultant (LLA Consultancy Ltd.).

2. Objectives

2.1.1. An Environmental Assessment for the Proposed Amendment is required to assess the potential air quality, noise and land contamination impacts on its sensitive uses and recommend relevant mitigation measures where necessary.

3. Site Context

3.1. Site Location and Its Environs

3.1.1. The Proposed Amendment is located at Ping Che Road from the north to northeast, the unnamed village road to the east, village, agricultural land and open storage area to the south and west.

3.1.2. ***Figure 3.1*** shows the Site location and its environs.

3.1.3. According to the approved Ping Che and Ta Kwu Ling Outline Zoning Plan (OZP No.: S/NE-TKL/14) gazette on 12/03/2010, the Application Site is currently zoned as "Open Storage" ("OS") Zone, southern part of the Application Site is zoned as "Agriculture" ("AGR") and a minor portion of the Application Site is shown as "Road". Re-zoning is required of the Proposed Amendment.

3.1.4. The surrounding areas of the Application Site are characterized by a mixture of various land uses. These include villages, workshops, open storage uses and major roads.

3.1.5. According to the Study Brief ESB-341/2021, the Application Site is within the New Territories North (NTN) New Town and Man Kam To Development plan under the New Territories. No relevant development plan and programme can be obtained during the course of study.

3.2. Proposed Amendment Scheme

3.2.1. The proposed site area of the subject site is 17,822m^2, with a plot ratio of 5.9 for domestic use and 1.1 for non-domestic use. The total GFA for domestic use is 105,145 m^2, and the 19,603 m^2 for non-domestic use. The Proposed Amendment will consist of 5 blocks of residential tower ranging from 47 to 48-storey in height (excluding basement), provided 2,205 residential unit, and 1 block of commercial tower with 35-storey in height (excluding basement) . The Master Layout Plan (MLP) is shown in ***Appendix 3.1***.

3.2.2. The commercial tower accommodating retail facilities, office, hotel or service apartment, child care centre and day care centre for the elderly are planned strategically along Ping Che Road.

3.2.3. Expected completion year and operation year of the Proposed Project is in 2032. The tentative indicative program is given in ***Appendix 3.2***.

4. Implication on Environmental Impact Assessment

4.1.1. This is not a designated project under the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). This EA has been undertaken with reference to the guidance for environmental considerations provided in Chapter 9 "Environment" of the Hong Kong Planning Standards and Guidelines (HKPSG). This EA presents a study of the potential environmental impacts, with respect to both air quality water quality, waste management and land contamination and noise aspects.

4.1.2. Noted that the Application Site is located within the proposed tentative boundary of New Territories North New Town which the EIA study for such is under preparation during the course of the study for this application. The latest available information on the development of New Territories North New Town Development and Man Kam To (NTN development) has been obtained on the public domain and relevant government departments have been consulted for development details and programme. Yet, the exact programme and development details for its implementation is yet to be confirmed.

4.1.3. Based on the EIA Project Profile and Study brief for Development of New Territories North New Town and Man Kam To (NTN Development) (ESB-341/2021), the NTN remaining phase development is proposed for housing, economic and employment-generating developments. It contains area about 1,100 ha, including Ping Che and Ta Kwu Ling which the Application Site is located at. The works for the development include site formation works and the associated infrastructure works. The said infrastructure works would include the necessary slope works, roadworks, sewerage works, sewage pumping station, sewage treatment works, drainage works, waterworks, utility works, fresh water and flushing water service reservoirs, rock caverns, cycle tracks, etc. within or outside the proposed boundaries of the Project for serving the proposed development. As refer to the Project Profile, the broad land use concepts identified for the NTN development would be further review, such as commercial, residential, industrial estate, science park, logistic industries, etc.

4.1.4. As refer to the Project Profile, the Planning and Engineering (P&E) study including the EIA study for NTN Development is targeted to commence in latter half of 2021 for completion within a study period of about 36 months. Subject to the recommendations of the P&E study, detailed design and associated statutory procedures of the NTN Project will follow. Outline implementation programme for the development will be formulated under the NTN Project.

4.1.5. Since the implementation details of NTN Development is yet to be confirmed, this study covers the scenario without NTN development in place for completeness and aims to demonstrate that there is feasible solution to meet relevant environmental standards.

5. Air Quality Impact Assessment

5.1. Introduction

5.1.1. This section assesses the potential air quality impacts in association with the proposed residential development by taking into account the following considerations:

- Road traffic emissions from nearby roads in the proximity;
- Industrial emissions; and
- Potential cumulative air quality impacts, if any, from nearby major housing developments.

5.2. Environmental Legislation, Standards and Criteria

Hong Kong Air Quality Objectives

5.2.1. Air quality in Hong Kong is governed under the Air Pollution Control Ordinance ("APCO") (Cap. 311). Under this legislation, the Government has designated various Air Control Zones for the whole territory, and the new Air Quality Objectives ("AQOs") was taken into effect in January 2022. The AQOs stipulate the statutory limits for seven pollutants and dictate the maximum number of allowable exceedances over specified periods as shown in ***Table 5-1***.

Table 5-1 *Hong Kong Air Quality Objectives*

Pollutant	Averaging Time	Concentration Limit (ug/m^3)[i]	Number of Exceedances to be allowed
Sulphur Dioxide (SO_2)	10-minute	500	3
	24-hour	50	3
RSP or PM_{10}[ii]	24-hour	100	9
	Annual	50	N/A
FSP or $PM_{2.5}$[iii]	24-hour	50	35
	Annual	25	N/A
Nitrogen Dioxide (NO_2)	1-hour	200	18
	Annual	40	N/A
Ozone (O_3)	8-hour	160	9
Carbon monoxide (CO)	1-hour	30,000	0
	8-hour	10,000	0
Lead (Pb)	Annual	0.5	N/A

Note:
[i] All measurements of the concentration of gaseous air pollutants, i.e., sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293Kelvin and a reference pressure of 101.325 kilopascal.
[ii] Respirable suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 10 µm or less.
[iii] Fine suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 2.5 µm or less.

Hong Kong Planning Standards and Guidelines

5.2.2. The Hong Kong Planning Standards and Guidelines (HKPSG) also provide guidance for all private and public development projects. A summary of relevant environmental design guidelines extracted from Table 3.1 of the HKPSG Chapter 9 is provided below.

Table 5-2 *Recommended Buffer Distance for Land Uses (Table 3.1 of HKPSG Chapter 9)*

Polluting Uses	Parameters	Permitted Uses	Buffer Distance
Road and Highways	Trunk roads and Primary Distributor	(a) Active and passive recreational uses (b) Passive recreational uses (c) Amenity areas	>20m 3 – 20m < 3m
	District Distributor	(a) Active and passive recreational uses (b) Passive recreational uses	>10m <10m
	Local Distributor	(a) Active and passive recreational uses (b) Passive recreational uses	>5m <5m
Industrial Areas	Difference in Height between Industrial Chimney Exit and the Site		
	< 20m	(a) Active and passive recreational uses (b) Passive recreational uses	>200m 5 – 200m

Polluting Uses	Parameters	Permitted Uses	Buffer Distance
	20- 30m	(a) Active and passive recreational uses (b) Passive recreational uses	>100m 5- 100m
	30- 40m	(a) Active and passive recreational uses (b) Passive recreational uses	>50m 5 - 50m
	> 40m	Active and passive recreational uses	>10m
Construction and earth moving Activities	-	(a) Passive recreational uses (b) Active and passive recreational uses	>50m

Air Pollution Control (Construction Dust) Regulation

5.2.3. The Air Pollution Control (Construction Dust) Regulation specifies processes that require special dust control. The Contractors are required to inform the EPD and adopt proper dust suppression measures while carrying out "Notifiable Works" (which requires prior notification by the regulation) and "Regulatory Works" to meet the requirements as defined under the regulation.

Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation

5.2.4. The Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation comes into operation on 1 June 2015. Under the Regulation, Non-road mobile machinery (NRMMs), except those exempted, are required to comply with the prescribed emission standards. From 1 September 2015, all regulated machines sold or leased for use in Hong Kong must be approved or exempted with a proper label in a prescribed format issued by EPD. Starting from 1 December 2015, only approved or exempted NRMMs with a proper label are allowed to be used in specified activities and locations including construction sites. The Contractor is required to ensure the adopted machines or non-road vehicle under the Project could meet the prescribed emission standards and requirement.

Air Pollution Control (Fuel Restriction) Regulations

5.2.5. The Air Pollution Control (Fuel Restriction) Regulations was enacted in 1990 to impose legal control on the type of fuels allowed for use and their sulphur contents in commercial and industrial processes to reduce sulphur dioxide (SO_2) emissions. In June 2008, the Regulation was amended to tighten the control requirements of liquid fuels. The Regulation does not apply to any fuel-using equipment that is used or operated in premises used solely as a dwelling, or is used or operated in or on a vessel, motor vehicle, railway locomotive or aircraft.

Recommended Pollution Control Clauses for Construction Contracts

5.2.6. The Recommended Pollution Control Clauses (RPCC) are generally good engineering practice to minimize inconvenience and environmental nuisance to nearby residents and other sensitive receivers. Guidelines as stipulated under RPCC should be incorporated in the contract documents to abate dust impact.

5.3. Background Air Quality

Existing Air Quality in North and Tai Po District

5.3.1. The air quality data of the nearest general air quality monitoring station (AQMS) at North (Year 2020-2022) and Tai Po (Year 2018-2019) are adopted to represent the ambient air quality of the area. Latest available 5 years of air quality data, i.e. 2018 to 2022, are summarised in

5.3.2. ***Table 5-3*** to depict the trend of the localised air quality.

Table 5-3 Background Air Quality at North and Tai Po Monitoring Station

Pollutant	Averaging Time	Concentration 2018-2022 (μg/m³)[1][2]					Annual AQO (μg/m³)
		2018	2019	2020	2021	2022	
CO	1st highest 1-hour	N.A. [3]	N.A. [3]	1,830	2,150	1,710	30,000
	1st highest 8-hour	N.A. [3]	N.A. [3]	1,238	1,550	1,304	10,000
FSP/ $PM_{2.5}$	36th highest 24-hour	33	35	28	27	25	50
	Annual	19	20	N.A. [4]	15	14	25
NO_2	19th highest 1-hour	125	142	112	135	115	200
	Annual	36	36	N.A. [4]	36	31	40
O_3	10th highest 8-hour	**167**	**197**	**166**	**187**	**197**	160
RSP / PM_{10}	10th highest 24-hour	69	65	55	62	50	100
	Annual	31	31	N.A. [4]	25	23	50
SO_2	4th highest 10-min	24	20	19	18	27	500
	4th highest 24-hour	8	10	8	7	7	50

Notes:
[1] Monitoring result(s) exceeding the AQO is/are underlined.
[2] All air quality data were extracted from EPD's Environmental Protection Interactive Centre.
[3] CO concentration from 2018-2019 is not available at Tai Po Monitoring Station.
[4] North General Air Quality Monitoring Stations commissioned on 10 July 2020. Annuel $PM_{2.5}$,

NO_2 and PM_{10} concentration is not available in 2020 .

5.3.3. Exceedance of concentration of O_3 in the AQO has been recorded at North and Tai Po Monitoring Station. The exceedance of O_3 is mainly caused by regional air pollution problem and it is not directly emitted from man-made sources.

Future Ambient Air Quality Condition

5.3.4. Background air quality concentrations were extracted from PATH v3.0 (Pollutants in the Atmosphere and their Transport over Hong Kong), which is a regional air quality model has been developed by the Environmental Protection Department (EPD) for simulating air quality over Hong Kong against Pearl River Delta region. Application Site falls within Grid (39, 55).

5.3.5. In view of the operation year of 2032, the PATH v3 data at (39, 55) in Year 2030 is considered representative to represent background air quality concentrations at the Application Site area. A summary of background air quality concentration in Year 2030 is shown in ***Table 5-4***. These data have demonstrated that the concentrations of pollutants are below the AQO, except for ozone (O_3). Ozone is not directly emitted from an emission source. It is formed by the chemical reactions of NOx and VOCs under the presence of sunlight and a regional pollution problem. Ozone is therefore not considered as a key parameter in this assessment.

Table 5-4 *Background Air Quality Concentration of Pollutants*

Pollutant	Averaging time	AQOs Concentration limit (µg/m³) (exceedance)	Background (39,55)
SO_2	4th peak 10-min	500 (0)	32.93
	4th peak 24-hr	50 (0)	7.35
RSP/PM_{10}	10th peak 24-hr	100 (0)	54.18
	Annual Average	50	20.44
FSP/ $PM_{2.5}$	36th peak 24-hr	50 (0)	26.98
	Annual Average	25	12.64
NO_2	19th peak 1-hr	200 (0)	46.23
	Annual Average	40	9.58
O_3	10th peak 8-hr	160 (22)	**174.77**
CO	1st peak 1-hr	30,000 (0)	529.05
	1st peak 8-hr	10,000 (0)	488.86

Notes:
[1] Prediction result(s) exceeding the AQO is/are underlined.

5.4. Assessment Area and Representative Air Sensitive Receivers (ASRs)

5.4.1. In general, the assessment area for an air quality impact assessment (AQIA) is defined by a distance of 500m from the site boundary which is presented in ***Figure 3.1***.

5.4.2. Representative planned and existing air quality sensitive receivers (ASRs) were identified and the separation distance between ASRs and Application Site are shown in ***Figure 5.1*** and summarized in ***Table 5-5*** below.

Table 5-5 Representative Air Sensitive Receivers

ASR ID	Description	Approx. Horizontal Distance to Project Site (m)	Maximum Building Height (mPD)	Land Use
ASR01	8 Ng Chau Road	32	21	Residential
ASR02	Hong Kong Baptist Assembly	111	19	Educational
ASR03	29 Ping Che New Village	76	24	Residential
ASR04	Lots 750 DD77, Ping Che Road	66	11	Residential
ASR05	50C Ping Che	219	23	Residential
ASR06	Ta Kwu Ling Rural Centre Government Offices	150	21.5	Government, Institution, Community
ASR07	Ping Che Nursing Home Limited	159	26.1	Residential care home for the elderly
ASR08	Proposed Residential Development Phase 1* (Tentative Completion Year:2028)	177	120	Residential
ASR09	Ha Shan Kai Wat Village Houses	76	21.5	Residential

Note: * Reference to Y/NE-TKL/4

5.4.3. The existing ASRs were identified with reference to the latest best available information at the time of preparation of this report, including those earmarked on relevant OZP (approved Ping Che and Ta Kwu Ling OZP No. S/NE-TKL/14), Development Permission Area Plans, Outline Development Plans, Layout Plans and other relevant published land used plans, including plans and drawings published by the Lands Department and any land use and development applications approved by the Town Planning Board. Various site surveys were conducted to verify the sensitive receivers and confirm with the desktop studies.

5.4.4. For concurrent project and planned ASRs, as mentioned in Section 4, the proposed project is located within the proposed tentative boundary of NTN development, which is a designated project and EIA is required. The Project Profile for the NTN development (PP-622/2021) has been made referenced to, yet no detailed programme and development are available. The Project Proponent of the NTN (i.e. CEDD) has been approached for programme and development plan for the NTN development during the course of study. However, the requested information is not available for our study. Besides, the Proposed Residential Development Phase 1 will be completed tentatively by 2028. As such, ASR08 of the concurrent project will be assessed.

5.5. Potential Air Quality Impact - Construction Phase

5.5.1. Major source of potential air quality impact during construction phase would be fugitive dust generated from wind erosion of the stockpiles and open sites, as well as from the following construction activities:

- Excavation and Lateral Support (ELS) Works; Foundation works;
- Superstructure and Fitting-out works; and
- Gaseous emissions from diesel-powered construction equipment.

5.5.2. Since excavation and foundation will involve earthworks, material handling and transportation of excavated material, it is anticipated that there may be dust impact as a result of these activities if mitigation measures are not implemented. Suspended particles will be the main air quality parameter concerned for construction works which involve handling of excavated/ fill materials, TSP, RSP and FSP have been identified as the parameters for air quality impact assessment for dust emission impact.

5.5.3. As evaluated in Section 9.3.7, it is anticipated that a total of 126,563m^3 of excavated materials will be generated. The foundation and ELS works will last for 18 months, assuming a capacity of 7m^3 per truck, bulk factor of 1.4, 25 working days a month and the works will not be conducted simultaneously, it is estimated that a maximum of 56 truck trips per day would be required for the delivery of excavated material, which is equivalent to 7 trucks per hour. In view of the estimated number of dump trucks arising from the transportation of inert C&D materials is low, the impacts from transportation off-site are expected to be limited.

5.5.4. During the construction, the Contractor(s) will be required to transport the excavated materials out from the site to avoid cumulation of materials on site. Excavated materials will be reused as fill materials within the Project Site so as to minimize dust emission due to transportation of materials. In case temporary stockpiling of small amount of materials is required, the stockpiling location will be covered by tarpaulin sheets and backfilled as soon as possible.

5.5.5. As the size of the work site is limited, such that the amount of excavated materials generated would be not be significant. The potential air quality impact is however anticipated to be short-term.at the representative ASRs with the implementation of sufficient dust suppression measures as stipulated under the *Air Pollution Control (Construction Dust) Regulation* and guidelines stipulated in EPD's *Recommended Pollution Control Clauses for Construction Contracts*.

5.5.6. Toxic air pollutants (TAPs) in the form of volatile organic compounds (VOC) are anticipated

from the use of chemicals, such as solvents, cleaning agents and fuels, for the maintenance and servicing of construction plants and vehicles during construction phase. Considering that the quantities of chemicals to be used would be limited, the amount of VOC generated would be small. The works areas would be aboveground and in outdoor setting, such that the VOC would be able to disperse and would not accumulate at the works areas. With proper handling of the chemicals, environmental and health impacts associated with TAPs are anticipated to be insignificant.

5.5.7. Fuel combustion from the use of powered mechanical equipment (PMEs) during construction works could be a potential source of air pollutants such as NO_2, SO_2 and CO. To reduce SO_2 emission, Air Pollution Control (Fuel Restriction) Regulation was enacted in 1990 to impose legal control on the types of fuel allowed for use and their sulphur contents in commercial and industrial processes. To improve air quality and protect public health, EPD has introduced the Air Pollution control (Non-road Mobile Machinery) (Emission) Regulation since 1 December 2015, under which only approved or exempted NRMMs are allowed to be used in construction sites. In addition, all construction plants are required to use ULSD (defined as diesel fuel containing not more than 0.005% sulphur by weight) as stipulated in Environment, Transport and Works Bureau Technical Circular (ETWB-TC(W)) No. 19/2005 on Environmental Management on Construction Sites. Furthermore, given the localized and small scale of the Project, as well as the small number of PMEs involved, adverse air quality impacts due to emissions from the use of PMEs would be unlikely.

5.5.8. With the implementation of sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation and good site practices, significant adverse dust generated from the construction of the planned residential developments is not anticipated. Mitigation measures to control construction dust/ gaseous emission listed below are recommended to be incorporated into the future contractor specifications for contractor's implementation:

- Wetting by water spraying or dust suppression chemical on dusty material before loading and unloading, stockpile of dusty materials, area where breaking, excavation or earth moving activities works is carried out, and unpaved main haul road.
- Providing hoarding of not less than 2.4m high from ground level along the site boundary which is next to a road or other public area.
- Providing effective dust screens, sheeting or netting to enclose any scaffolding built around the perimeter of a building.
- Covering or sheltering any stockpile of dusty materials.
- Disposing of any dusty materials collected by fabric filters or other pollution control system in totally enclosed containers.

- Properly treating any exposed earth, such as by compacting or hydroseeding, within 6 months after the last construction activity.
- Providing vehicle washing facilities at all site exits to wash away any dusty materials from vehicles body and wheels before they leave the site.
- Covering of dust load on vehicles before they leave the site.
- Use of ultra-low sulphur content for on-site generators to minimize black smoke emission.
- Providing water spraying system where available and applicable.
- Restricting heights from which materials are to be dropped, as far as practicable, to minimise the fugitive dust arising from unloading / loading.
- Where the public can be affected by exhaust fumes or smoke emission from any construction plants or activities, shielding the related activities by an incombustible screen such as corrugated sheet of at least 2m in width and 1.8m in height.
- Using enclosed chutes for dropping construction materials to ground level and the chutes are dampened regularly, if applicable.
- The foundation work can be carried out either by percussive piling method or non–percussive pilling method. For this project, adoption of non–percussive piling method is anticipated which helps generating lower dust emissions.
- The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcore.
- Vehicles within the site are restricted to a maximum speed of 10 kph.
- Vehicles are inspected regularly and well maintained to ensure that they are operating efficiently and that exhaust emissions are not causing nuisance.
- Vehicle engines are turned off when they are not in use.
- Haul road of the subject site is located as far as possible from nearby ASRs.

5.6. Potential Air Quality Impact – Operation Phase

5.6.1. An environmental survey was conducted and records of specified license were reviewed in August 2023. There is a register of zinc galvanizing works under “Wader Engineering Company Limited” in the 1990s, it is situated in D.D. 77, Lot 1501 approximately 240m to the southeast of Application Site.

Vehicular Emissions from Open Road Traffic

5.6.2. The major air pollution source in the vicinity of the Subject Site during operational phase would be tailpipe emission generated from road traffic along open road.

5.6.3. The Subject Site is bounded by a District Distributor, Ping Che Road. The confirmation from Transport Department with relevant records will be supplemented once available. A local road is situated to the east of the Site. In accordance with to HKPSG, the buffer distance between the proposed residential blocks, clubhouse and the nearby roads should be adopted, which are summarised in ***Table 5-6*** and presented in ***Figure 5.2***.

5.6.4. Centralised Air conditioning will be provided at the podiums clubhouse and Tower 1, the location of fresh air intake will be carefully design and will not encroach on the buffer zone as recommended in the HKPSG. The location of fresh air intake and openable windows for the proposed development which are identified as ASRs are shown in ***Figure 5.2*** to demonstrate the compliance of the buffer distance stipulated in the HKPSG.

Table 5-6 *Buffer distance between the Proposed Amendment and Nearby Road*

Road	**Road Type**	**HKPSG Guideline Buffer Distance Requirement**	Distance between Proposed Residential Development and nearby road
Ping Che Road	District Distributor	>10m	50m
Proposed Local Road	Local Distributor	>5m	10m

5.6.5. As shown in Figure 5.2, the HKPSG recommended buffer distance can be fulfilled for all air sensitive users of the Proposed Amendment including window/door opening and fresh air intake of residential blocks. Moreover, for rooms provided with air conditioning system, the fresh air intake location will be positioned with adequate buffer separation from road kerbs (i.e. shall not within the buffer zone as illustrated in Figure 5.2). It is confirmed that no air sensitive uses, including openable windows, fresh air intake of mechanical ventilation and recreational uses in the open area would be located in the buffer zone. Thus, vehicular emission impact towards Proposed Amendment is not anticipated.

Vehicular Emission from underground carpark

5.6.6. 1 and 3-storey basement carpark is proposed. *ProPECC PN 2/96 – Control of Air Pollution in Car Park* provides the air quality guidelines of carparks as shown in ***Table 5-7.*** When designing this car park layout, the E&M designer (the Developer) should refer to Table 4.8 and ProPECC PN 2/96 for guidelines on ventilation system and air monitoring system so as to ensure good air quality within the carpark. The outlet of the ventilation system should be properly located away from ASRs as far as practicable so as to avoid imposing nuisance, if any, to the nearby ASRs, taking into account the prevailing condition of the area. The potential location of the exhaust outlet is indicated in ***Figure 5.2***. With these measures, it is expected that the

potential air quality impact associated with the underground carpark to the nearby environment is minimal.

Table 5-7 Air Quality Guidelines of Carpark

Air pollutants	Maximum Concentration Not to be exceeded
	5 Minutes Average (¦Ìg/m3)
Carbon monoxide	115,000
Nitrogen dioxide	1,800

* Expressed at the reference condition of 25°C and 101.325 kPa (one atmosphere)

Industrial Chimney Emissions

5.6.7. For chimney emission, an environmental surveys ,including daytime and nighttime, were conducted and records of specified license were reviewed in June , August and September 2023. There is a register of zinc galvanizing works under "Wader Engineering Company Limited" in the 1990s, it is situated in D.D. 77, Lot 1501 approximately 240m to the southeast of Application Site. The results of the environmental survey have confirmed that no chimney is located within 200m radius of the Subject Site. Due to the project nature of the proposed development (i.e. residential, commercial, hotel, elderly day care centre), no chimney emission from the proposed development. The buffer distance requirement of 200m from pollution source of industrial area stipulated in table 3.1 of the Ch 9 of HKPSG is well satisfied. Thus, no significant adverse air quality impact on the Proposed Amendment is anticipated.

5.7. Odour Emission

5.7.1. For odour emissions, the results of environmental survey and site visits show that the Subject Site falls within 200m buffer of a pigsty located toward the southwest. As referred to the reply from EPD regarding the compliant record of the pigsty showed in Appendix 5.1, the pigsty has ceased business. No odour impact concerning the pigsty is expected. No slaughterhouses, sewage treatment works facilities, village incinerator and duty uses are not found within 500m radius of the Subject Site.

5.7.2. As no existing public sewerage system is located in the vicinity of the Project Site, an on-site sewage treatment plant (STP) is proposed within the Project as shown in ***Appendix 3.1***. The potential odour nuisance to the nearby ASRs (including proposed residential units) would result. Nonetheless, the "Guidelines for the Design of Small Sewage Treatment Plants"

published by EPD will be followed to minimize the odour impacts form the on-site OTP. In addition, the odour mitigation measures (e.g. enclosing the STP facilities with negative pressure, forced ventilation system fitted with deodorization (DO) unit and directing away the exhaust air from ASRs etc.) will be adopted in order to protect the ASRs. Hence, the potential odour nuisance to the ASRs is anticipated to be minimal.

5.8. Conclusions

5.8.1. With the implementation of dust suppression measures of the Proposed Amendment and provision of good site practice as stipulated under the Air Pollution Control (Construction Dust) Regulation and Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, fugitive dust impacts and gaseous emission from diesel-fueled construction equipment to the nearby air sensitive receivers due to construction works are expected to be insignificant.

5.8.2. For the vehicular emission, a sufficient horizontal buffer distance between Ping Che Road and Local Road to the Subject Site is being proposed in accordance with the requirements set out in the HKPSG. No significant adverse air quality impact due to vehicular emission on the Proposed Amendment is anticipated.

5.8.3. In view of no chimney/ specified license was identified within 200m from Site Boundary, no air quality impact with respect to industrial chimney emission on the future residents in the Proposed Amendment is anticipated.

6. Noise Impact Assessment

6.1. Introduction

6.1.1. A road traffic noise impact assessment and fixed noise impact assessment are prepared to evaluate the noise impacts on the noise sensitive uses in the Proposed Amendment and recommend mitigation measures where practicable to attenuate the noise impact.

6.1.2. The potential traffic noise impact is mainly dominated by Ping Che Road and the proposed local access road within the assessment area, road traffic noise impact assessment was conducted to evaluate potential noise impact arising from the carriageways in the vicinity of the Application Site (detailed in ***Section 6.3***).

6.1.3. Since the Application Site is surrounded by numerous industrial uses in its vicinity, the potential fixed noise impact on the Proposed Amendment is envisaged. Therefore, a fixed noise impact assessment has been conducted (detailed in ***Section 6.4***).

6.1.4. The latest available information on the development of NTN has been obtained on the public domain and relevant government department has been consulted for development details and programme. Yet, the exact programme and development details for its implementation is yet to be confirmed.

6.1.5. Since the implementation details of NTN development is yet to be confirmed, this assessment covers the scenario without NTN development in place for the completeness and aims to demonstrate that there is feasible solution to meet relevant noise standards.

6.2. Design Strategy for Noise Consideration

6.2.1. General guidance is provided in the Hong Kong Planning Standard and Guidelines (HKPSG) and EPD's website on Innovative Noise Mitigation Designs and Measures to reduce noise exposure. These guidelines have been duly considered in the design layout of the Proposed Amendment. The design strategies adopted in the Proposed Amendment are summarized in ***Table 6-1*** and presented in ***Appendix 3.1***.

Table 6-1 *Summary of Noise Conscious Design Strategy*

Item	Design Strategy/Mitigation Measure	Considerations in the Proposed Amendment
1	Noise Tolerant Building	- A 35-storey commercial tower (Tower 1) which will be served by centralized air conditioning is being proposed to be placed between Ping Che Road and the residential towers serving as a buffer to screen the traffic noise to the residential tower.
2	Building Setback	- The residential towers maintain a 50m setback from Ping Che Road to increase the horizontal separation distance from noise sources.
3	Podium Design	- The noise tolerant building (i.e. commercial tower) sits on top of four-storey podium (27.7m tall) which provides a noise shielding effect for the residential towers. - The residential towers (Tower 2 and Tower 3) closest to Ping Che Road also sits on top of a two-storey podium of 11.8m tall including the retail area, a clubhouse and a transfer plate, such that the vertical distance from the residential floor to the road surface is increased.

6.3. Traffic Noise Impact Assessment

Introduction

6.3.1. This road traffic NIA is prepared to assess the potential traffic noise impact on the noise sensitive uses of the Proposed Amendment and recommend mitigation measures where practicable to attenuate the noise impact, if any.

Assessment Criteria

6.3.2. Noise standards are recommended in Chapter 9, "Environmental" of the HKPSG for guiding new developments against potential noise impact from sources such as road traffic, railway and aircraft. The applicable road traffic standard on the residential unit relies on openable windows for ventilation is $L_{10(1\text{-hour})}$ 70dB(A).

Assessment Methodology

6.3.3. The potential noise impact arising from nearby existing and the local access road within 300m from the site boundary on the Noise Sensitive Receivers (NSRs) of Proposed Amendment was assessed.

6.3.4. This approach considers the worst-case scenario of 15 years from the tentative completion date (Year 2032) of the Proposed Amendment. For worst case scenario evaluation, the assessment year has been chosen to be Year 2047, which has the maximum forecasted traffic flow within the 15-year period. AM Peak is with highest traffic flow and is adopted for

assessment.

6.3.5. ***Appendix 6.1*** presents the predicted peak hour traffic flows and percentage of heavy vehicles of road carriageways within 300m assessment area from the Application Site for Year 2047, with Transport Department's endorsement on such traffic forecast data supplemented once available.

6.3.6. The procedure of "Calculation of Road Traffic Noise" adopted by U.K.'s Department of Transport was used to predict the hourly $L_{10(1\text{-hour})}$ noise levels generated from road traffic at selected representative NSRs. The predicted noise levels were compared to the noise standard set out in the HKPSG (i.e. $L_{10(1\text{-hour})}$ 70dB(A) for domestic uses). Practicable noise mitigation measures have been recommended where necessary.

6.3.7. All carriageways within the assessment area are assumed with a speed limit of 50 kph.

Noise Sensitive Receivers

6.3.8. Noise Sensitive Receivers (NSR) within the Proposed Amendment have been assessed with the road traffic noise impact. The commercial tower will be served by a centralized air conditioning system and will not rely on openable windows for ventilation, therefore it is not regarded as a representative noise sensitive receiver (NSR) for this assessment. Residential dwellings with openable windows/doors for prescribed ventilation purposes are regarded as NSRs, which are likely to be affected by traffic noise impact. All noise assessment points (NAPs) were taken at 1.2m above the floor level and 1m away from the façade of openable windows in rooms of sensitive uses.

6.3.9. ***Figure 6.1*** shows the location of the selected NAPs for traffic noise impact assessment.

Assessment Result under Base Case Scenario

6.3.10. The road traffic noise prediction results under base case scenario indicate that the residential units are likely to be exposed to traffic noise levels exceeding the HKPSG traffic noise criterion of 70 dB(A). Summary of traffic noise prediction results is shown in ***Table 6-2***. The results of the assessment have indicated that 96% of the residential flats of the proposed Amendment will be subjected to noise levels within the criterion. The remaining flats will be subjected to noise levels higher than 70 dB(A), a maximum of 76 dB(A). The residential units facing the planned local access road are anticipated to be the worst-affected locations. The predicted noise levels at the NAPs are presented in ***Appendix 6.2***.

Table 6-2 *Traffic Noise Prediction Results, Base Case Scenario*

	Tower 2	Tower 3	Tower 4	Tower 5	Tower 6	Overall
Maximum Predicted Traffic Noise Level, $L_{10\ (1\text{-}hour)}$ in dB(A)	70	67	75	67	76	76
Total No. of Flats	405	765	405	495	450	2520
Total No. of Flats exposed to noise level >70 dB(A) L10 hr	0	0	46	0	61	107
Percentage of Compliance	100%	100%	89%	100%	86%	96%

Mitigation Measures

6.3.11. According to the assessment result of the base case scenario, the following noise mitigation measures have been considered and incorporated in the Proposed Amendment and shown in ***Figure 6.2***.

Acoustic Window / Acoustic Door (Baffle type) (BAW)

6.3.12. Acoustic Window/ Acoustic Door (Baffle type) is considered a mitigation measure for the Proposed Amendment for the openings with traffic noise exceedance. BAW refers to the type of window which has an inner sliding glass panel behind an outer window, both readily openable, for creating an air gap for the natural ventilation with a noise mitigation effect. It comprises two glazing – (i) the outer window system with a side-hung openable window or a sliding door and (ii) the inner sliding panel. This design prevents excessive traffic noise from entering the indoor environment while enabling natural ventilation through the gap between the outer façade and the inner sliding panel.

6.3.13. The BAW design parameters in this project may not fulfil the parameters described in EPD's "Practice Note on Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact", the design concept of BAW in the Proposed Amendment makes reference to the "Redevelopment Project of ex-North Point Estate (NPE)". The indicative design is shown in ***Appendix 6.4***.

6.3.14. The relative noise reduction of BAW is dependent on the configuration of the acoustic window, and the sound absorption available in the subjected room.

6.3.15. The relative noise reduction of the reference case in NPE reaches 6.9 dB(A) (for a bedroom of 6.8m^2 with an outer opening of 0.7m^2, air gap of 100mm, overlapping length of 253mm and MPA applied) and 8.8 dB(A) (for a living room of 38.3 m^2 with an outer opening of about 3.2m^2, air gap of 100mm, overlapping length of 275mm and without MPA applied).

6.3.16. For the Proposed Amendment, the following design criteria of the BAW in ***Table 6-3*** have

been incorporated.

- The air gap of 100mm and overlapping lengths of not less than 253mm and 275mm will be provided in the bedrooms and living rooms respectively.

- The areas of outer openings would not be larger than 0.7m^2 and 3.2m^2 will be provided in the bedrooms and living rooms respectively.

Table 6-3 *Baffle type acoustic window / acoustic door design criteria*

Design Parameter	Configuration 1	Configuration 2
Type of Room	Bedroom	Living Room
Air gap	100mm	100mm
Overlapping length	253mm	275mm
Area of outer openings	0.7m^2	3.2m^2

6.3.17. Given the room areas of bedrooms and living rooms in the Proposed Amendment with traffic noise exceedance are comparable to the reference cases in NPE, the noise attenuation benefited from BAW in both NPE cases and the Proposed Amendment is evaluated. It is considered that the amount of sound energy entering the indoor environment should be proportional to the area of the window opening and the room area. Thus, the adjustments have accounted for the room size difference between the NPE case and the Proposed Amendment as shown in ***Appendix 6.5***. By adjusting the room size correction, the noise reductions of the BAWs could be up to 6.4 dB(A) and 8.7 dB(A) in living rooms and bedrooms respectively. As a conservative approach, it is anticipated that a noise reduction of 6.0 dB as stated in EPD's "Practice Note on Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact", is achievable and adopted in the assessment.

6.3.18. Future occupants shall be informed through Deed of Mutual Covenant (DMC) and sales brochures the provision of acoustic window/acoustic door (Baffle type) to let them be well aware of the intended purpose, appropriate use and correct setting.

Table 6-4 *BAW (Configuration 1) and the Proposed Amendment*

Parameters	NPE (Bedroom Room)	Proposed Amendment
Size of Room (m^2)	6.8	4.8 to 10.2
Maximum relative noise reduction required (dB)	-	5.4
Noise reduction adopted (dB)	6.9	5.4 to Maximum 6.0

Table 6-5 *BAW (Configuration 2) and the Proposed Amendment*

Parameters	NPE (Living Room)	Proposed Amendment
Size of Room (m^2)	38.3	14.0 to 22.3
Maximum relative noise reduction required (dB)	-	4.5
Noise reduction adopted (dB)	8.8	4.4 to maximum 6.0

Fixed Window / Fixed Glazing / Maintenance Window (FW)

6.3.19. Some of the NAPs were predicted to be exposed to traffic noise impact. Since the prescriptive ventilation requirement of the Buildings Department can be fulfilled by other openings in the same room as confirmed by the project architect, these locations are specified to be fixed window / fixed glazing / maintenance window such that they are not being relied on for opened ventilation. The removable handle and key of the maintenance window will be kept in the management office and cannot be opened by residents under any circumstances. Locations and intended use (i.e. opened for maintenance only but not for ventilation) of the maintenance window will be written in the Deed of Mutual Covenant (DMC) and sales brochure to avoid misuse of maintenance window by future occupants.

6.3.20. To ensure the noise reduction performance of the acoustic window, only one window opening with an acoustic window design will be allowed in each habitable room. This design arrangement is strictly followed.

Assessment Result under Mitigated Scenario

6.3.21. With the abovementioned noise mitigation measures adopted in the Proposed Amendment, it is anticipated that the road traffic noise criterion can be fully complied with HKPSG criterion of 70 dB(A) for residential use. The predicted noise levels under mitigated scenario and the schedule of mitigation measures ***Appendix 6.3***.

Summary of Road Traffic Noise Impact Assessment

6.3.22. Potential road traffic noise impact on the Proposed Amendment has been assessed. According to the road traffic noise impact assessment result, the Proposed Amendment would not be subject to significant adverse road traffic noise impact under the mitigated scenario. Full compliance will be achieved with respect to the traffic noise criterion recommended in the HKPSG.

6.4. Fixed Plant Noise Impact Assessment

Introduction

6.4.1. This assessment aims to assess the potential noise impact arising from the nearby fixed noise sources of the commercial or industrial buildings and activities in an assessment area of 300m radius around the Proposed Amendment. Practicable noise mitigation measures would be proposed to minimize the fixed noise impact to the Proposed Amendment where necessary.

Assessment Criteria

6.4.2. The Noise Control Ordinance (NCO) and the Technical Memorandum for the Assessment of Noise from Places Other than Domestic Premises, Public Places or Construction Sites (TM-IND) control noise from fixed plant noise sources.

6.4.3. According to the latest Ping Che and Tak Kwu Ling Outline Zoning Plan No. S/NE-TKL/14, the lands to the south and west of the Application Site are zoned as “Agriculture” (“AGR”) and “Green Belt” (“GB”). The land use of the adjacent area located to the east and north of the Application Site is zoned as “Open Storage” (“OS”), “Government, Institution or Community” (“G/IC”) and “Industrial (Group D)” ("I(D)”). There are existing residential and village zonings to the north of the Application Site.

6.4.4. In determination of the Acceptable Noise Level (ANL) of concerned NSRs, the Area Sensitive Rating (ASR) should be identified under the IND-TM. Ping Che Road has an annual average daily traffic flow below 30,000 and is not considered as an influencing factor (IF) by definition. Since there is an industrial zone inside a 100m radius around the Application Site, the area sensitive rating of “C” is adopted in this project.

Table 6-6 *Area Sensitive Ratings of NSRs*

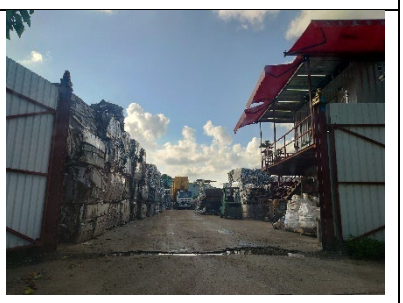
Noise Sensitive Receivers (NSR)	Area Sensitive Rating (ASR)	Acceptable Noise Level (ANL)	
		Day/Evening (0700-2300)	Night (2300-0700)
NSRs	C	70	60

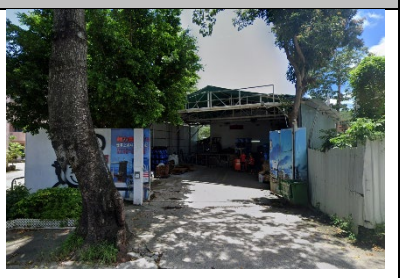
6.4.5. In any event, the ASR and ANL adopted in this report are indicative only and used for assessment only. It should be noted that the noise from fixed noise sources is controlled under section 13 of the Noise Control Ordinance and the Noise Control Authority shall determine the noise impact from the concerned fixed noise sources on the basis of prevailing legislation and practices being in force, and taking account of contemporary conditions/situations of adjoining land uses. Nothing in this report shall bind the Noise Control Authority in the context of law enforcement against any of the fixed noise sources being assessed.

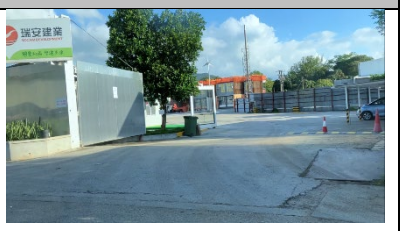
Identified Fixed Noise Sources and Evaluations

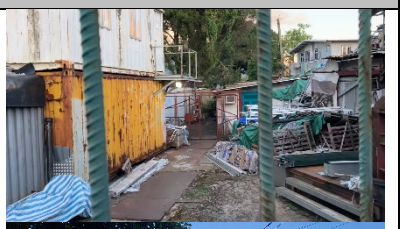
6.4.6. According to the desktop study and further site survey conducted in June and August 2023, various potential industrial noise sources were identified in the vicinity and summarized in ***Table 6-7***. Locations of all the potential fixed noise sources are shown in ***Figure 6.3***. The estimated quantity of identified noise sources to be operated during daytime and night-time and the noise impacts on the representative NSRs are shown in ***Appendix 6.7***.

Table 6-7 *Identified Fixed Plant Noise Sources*

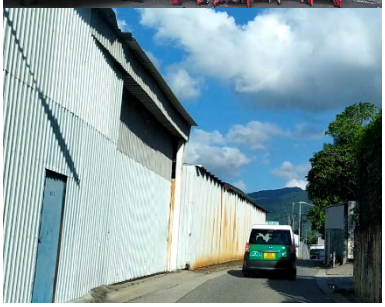
Potential Fixed Plant Noise Source	Activities identified	Photo
S01 Tin Wing Vehicle Services	A logistic centre is found at the northwest of the Application Site. Since the facility is closed at night, there is no night-time operation. Based on the on-site observation, there were approximately 2-3 trucks entering and leaving the facility every half an hour. There are no other activities observed in the facility, it is believed that the facility is for parking purposes only. As a conservative approach, the noise level of 3 nos. of heavy vehicle has been included in the quantitative assessment as the worst-case scenario. There is no direct line of site from the NSR to the logistic centre. No tonality nor impulsive activities were observed from the facility.	
S02 Ho Cheung Scrap metal recycling	A recycling facility is found at the northwest of the Application Site. During site visits, movements of the lorry truck and unloading of scrap metal were observed. Since the facility is closed at night, there is no night-time operation. Based on on-site noise measurement, the corrected sound power level of the activity is 100.3 dB(A). This noise level is adopted in the quantitative assessment as the worst-case scenario. There is no direct line of site from the NSR to the metal recycling facility. No tonality nor impulsive activities were observed from the facility.	

Potential Fixed Plant Noise Source	Activities identified	Photo
S03 Chewy Logistics	A logistic centre is found at the north of the Application Site. During site visits, movements of the vehicle were observed. Since the facility is closed at night, there is no night-time operation. Based on the on-site observation, there were approximately 4 vehicles entering and leaving the facility every half an hour. As a conservative approach, it is assumed that 3nos. of lorry truck movements in the quantitative assessment as the worst-case scenario. There is no direct line of site from the NSR to the logistic centre. No tonality nor impulsive activities were observed from the facility.	
S04 Storage	An open storage for construction equipment is located to the north of the Application Site. During several site visits, movement of the lorry was observed. One mobile crane was identified yet no operation of the crane was observed in the site visits. Since the facility is closed at night, there is no night-time operation. Based on the on-site observation, no noise of material handling inside this storage was heard at the boundary of the Application Site. As a conservative approach, it is assumed that 1nos. of truck movement and one PME operation in the quantitative assessment as the worst-case scenario. There is no direct line of sight from the NSR to the open storage. No tonality nor impulsive activities were observed from the facility.	
S05 Laundry Workshop	A laundry workshop is identified to the northeast of the Application Site. The major noise from the workshop was the one exhaust fan on the building envelope according to the site visit. Since the facility is closed at night, there is no operation during night-time. Based on on-site noise measurement, the corrected sound power level of the activity is 98.7 dB(A). This noise level is adopted in the quantitative assessment as the worst-case scenario. There is no direct line of site from the NSR to the laundry workshop. No tonality nor impulsive activities were observed from the facility.	

Potential Fixed Plant Noise Source	Activities identified	Photo
S06 Shui On Construction site / Storage	A construction site is located to the northeast of the Application Site. During site visits, no activities were observed inside the area. Since the facility is closed at night, there is no night-time operation. It is believed that the area is used for offices or storage. Due to the lack of mechanical equipment identified within the storage area, noisy activities are not expected. There is no direct line of site from the NSR to this construction site. The noise impact is considered infrequent and insignificant.	
S07 Storage	A storage area is located to the west of the Application Site. During site visits, the facility was closed during day-time and night-time, and no activities were observed inside the area. Due to the infrequent use of the storage area, noisy activities are not expected. The noise impact is considered infrequent and insignificant.	
S08 Hong Kong Bamboo Trading Company Limited	A trading company is found at the east of the Application Site. During site visits, no movements of the vehicle were observed. Since the facility is closed at night, there is no night-time operation. Based on the on-site observation, the activity was sheltered and cannot be observed. There is no direct line of site from the NSR to the activities inside the shelter. Given there was no noticeable noise heard at the boundary of this facility, the noise impact to the Application Site is considered insignificant.	
S09 Fat Lee Company Limited	A paper trading company is found at the east of the Application Site. Since the facility is closed at night, there is no night-time operation. Based on the on-site observation, loading and unloading of forklift were observed. As a conservative approach, the noise due to the loading and unloading of forklifts has been included in the quantitative assessment. No tonality nor impulsive activities were observed from the facility.	

Potential Fixed Plant Noise Source	Activities identified	Photo
S10 Storage (unnamed)	A storage area is located to the southeast of the Application Site. During site visits, the facility was closed during day-time and night-time, and no activities were observed inside the area. Due to the infrequent use of the storage area, noisy activities are not expected. The noise impact is considered infrequent and insignificant.	 
S11 Wo Lee Steel logistic & distribution centre	A distribution centre is found at the southeast of the Application Site. Since the facility is closed at night, there is no night-time operation. During site visits, material handling with forklift was observed. As a conservative approach, the noise due to the loading and unloading of forklifts has been included in the quantitative assessment. No tonality nor impulsive activities were observed from the facility.	
S12 Hong Kong United Recycling Company Limited	A company is located to the south of the Application Site. During site visits, the facility was closed during day-time and night-time, and no noisy activities were observed inside the area. According to the S12A Planning Application for Proposed Amendments to the Ping Che and Ta Kwu Ling Outline Zoning Plan from "ARG" and "GB" Zones to "R(A)", "R(A)1" and "G/IC" Zones at Various Lots in D.D. 77 and 84 and Adjoining Government Land in Ping Che, Fanling (Case No: Y/NE-TKL/4) in 2022, the measured noise level from the recycling company was 83.8 dB(A) and adopted in the quantitative assessment as a conservative approach.	

Potential Fixed Plant Noise Source	Activities identified	Photo
S13 Bosa Technology (Manufacturing & warehouse)	A manufacturing company is identified to the south of the Application Site. The facility was closed during night-time, and it is believed that there would not be any night-time operation. During the site visits, processing and welding activities were observed. Based on on-site noise measurement, the corrected sound power level of the activity is 88 dB(A). The noise of welding lasts for approximately 5-10 seconds every minute. There is no time correction adopted in the quantitative assessment as the conservative approach. No tonality nor impulsive activities were observed from the facility. Although the facility is enclosed in a shelter, the opening is facing towards the Application Site. No barrier correction was adopted.	
S14 Shun Cheong Warehouse	A warehouse is found at the south of the Application Site. Since the facility is closed at night, there is no night-time operation. During site visits, loading and unloading of goods using forklift was observed. The loading and unloading were carried out inside the warehouse, there is no direct line of sight from the NSRs to those activities. The noise due to the loading and unloading of forklifts has been included in the quantitative assessment. No tonality nor impulsive activities were observed from the facility.	
S15 Chewy warehouse	A warehouse is located to the south of the Application Site. During site visits, the facility was closed during day-time and night-time. However, noise due to the refrigeration system has been observed. The refrigeration system is placed under covering and surrounded by hoarding, there is no direct line of site from the NSR to the noise source. Based on on-site noise measurement, the corrected sound power level of the activity is 73 dB(A). This noise level is adopted in the quantitative assessment as the worst-case scenario. No tonality nor impulsive activities were observed from the facility.	

Potential Fixed Plant Noise Source	Activities identified	Photo
S16 Warehouse (unnamed)	A warehouse is found at the south of the Application Site. Since the facility is closed at night, there is no night-time operation. Based on the on-site observation, there was a vehicle parked inside the facility. The loading and unloading of goods were operated manually and the noise from these activities was not heard at the Application Site. The noise impact is considered infrequent and insignificant.	 
S17 Vehicle Repair shop	A car repair shop is found at the south of the Application Site. During the site visits, noise of a hand-held pneumatic tool operating by one worker was observed inside the shelter. The noise due to the hand-held pneumatic tool was non-continuous and short in duration (i.e. less than 5 minutes), a time correction has been included in the quantitative assessment. Since this workshop is enclosed in a shelter and the south-facing opening of this facility is not facing the Application Site, a barrier correction has been adopted in the assessment. No tonality nor impulsive activities were observed from the facility.	
S18 Castco Warehouse	A warehouse is located to the west of the Application Site. During site visits, there was no vehicle entering and leaving the warehouse, and no noisy activities were observed inside the area. According to the S12A Planning Application for Proposed Amendments to the Ping Che and Ta Kwu Ling Outline Zoning Plan from "ARG" and "GB" Zones to "R(A)", "R(A)1" and "G/IC" Zones at Various Lots in D.D. 77 and 84 and Adjoining Government Land in Ping Che, Fanling (Case No: Y/NE-TKL/4) in 2022, the measured noise level from the warehouse was 94.1 dB(A) and adopted in the quantitative assessment as a conservative approach.	

Potential Fixed Plant Noise Source	Activities identified	Photo
S19 Wei Cheng Bus Engineering Company	A bus engineering company is found at the south of the Application Site. During the site visits, noise of hand-held pneumatic tools was observed inside the shelter. As observed and confirmed by the operators, there will be mostly two buses repairing at a time. The noise due to the hand-held pneumatic tool was non-continuous and short in duration (less than 5 minutes), a time correction has been included in the quantitative assessment. No tonality nor impulsive activities were observed from the facility.	
S20 Swire Motors repair and maintenance workshop	A car repair and maintenance workshop is located to the west of the Application Site. Since this workshop is enclosed in a shelter, all repairing and maintenance works are carried out inside the workshop as confirmed by one of the workers. Although there are several car parking bays under the shelter, no noise of repairing activities was observed during the site survey. During the site visits, there were approximately 1-2 heavy vehicles entered and left the facility every half an hour. The noise due to vehicle movement has been included in the quantitative assessment. The west-facing opening of this facility is not facing the Application Site, a barrier correction has been adopted in the assessment. No tonality nor impulsive activities were observed from the facility.	 
S21 Bang Jie Company (Warehouse / Logistics)	A warehouse is found at the west of the Application Site. According to the site visits, the warehouse operates both day and night-time. The loading and unloading of one forklift was observed during the site visits. The duration of forklift operation was short (i.e. 5 minutes) and a time correction has been included in the quantitative assessment. No tonality nor impulsive activities were observed from the facility.	

6.4.7. The quantitative assessment results in ***Appendix 6.7*** revealed that the predicted industrial noise levels during daytime and nighttime can meet the ANL requirements set out in the TM-IND.

Fixed Noise Impact due to the Proposed Amendment

6.4.8. Potential fixed plant noise associated with the Proposed Amendment will include noise from the operation of mechanical ventilation and air-conditioning (MVAC), building services equipment and mechanical ventilation provisions for the plant rooms, etc.

6.4.9. In general, building services equipment, such as pump units, transformers, emergency generator, lift machines, will be placed at enclosed plant rooms with concrete building envelope. Typical acoustic treatments such as acoustic louvres and silencers will be provided at the air intake and exhaust louvres of the plant rooms as required. Noise emission will also be controlled by the appropriate selection of equipment and noise control treatments such as acoustic silencers and noise enclosures, whenever necessary.

6.4.10. Fixed plant noise control measures, such as the abovementioned enclosed plant room, equipment selection and acoustic treatments, will be adopted for potential noise sources of Proposed Amendment as necessary for compliance with the fixed noise standards recommended in Table 4.1, Chapter 9 of the HKPSG, i.e. 5dB below ANL or the prevailing background noise level, whichever is the lower. For the development of proposed nature and scale, it is considered that effective measures, such as equipment selection, enclosures, acoustic silencers etc., are available for mitigate noise from outdoor air-conditioning and ventilation systems, to the criteria stipulated under the HKPSG.

6.4.11. The noise criteria stipulated in the HKPSG have specified the following requirements: 5dB below the appropriate ANL set out in IND-TM; or the prevailing background noise levels, whichever is the lower. In order to determine the appropriate criteria for the industrial noise assessment, a background noise survey has been conducted to obtain the prevailing background noise level. The proposed noise criteria are summarized in ***Table 6-8***. Detailed information on prevailing background noise measurement and determination of noise criteria can be referred to **Appendix 6-7**.

6.4.12. The identified nearest NSR to this project is 74.5m from the Application Site. The maximum allowable sound power level from the Application Site would be **98.3dB(A)**.

Table 6-8 *Proposed Noise Criteria for Fixed Plant*

Noise Sensitive Receivers	Area Sensitive Rating (ASR)	Measured Background Noise Level, dB(A) [1]		ANL-5, dB(A)		Assessment Criteria, dB(A)	
		Day/Evening	Night	Day/Evening	Night	Day/Evening	Night
NSRs	C	52.6	52.9	65	55	52.6	52.9

Note:

[1] Free-field measurement was conducted on 14 September 2023. A correction of +3dB has been applied.

Summary of Fixed Noise Impact Assessment

6.4.13. The potential fixed plant noise impact has been evaluated. Based on site surveys and site observations, the noise environment is dominated by traffic noise from Ping Che Road and the local access road inside the Application Site. Noise from potential fixed noise sources nearby is either not noticeable at source and within the prescribed criteria. As such, it is expected that the Proposed Amendment will not subject to adverse noise impact from fixed noise sources.

6.4.14. To ensure that the noise level at potentially affected NSRs will comply with the statutory requirement under Noise Control Ordinance stipulated in IND-TM, the planned fixed plant within the Proposed Amendment shall be controlled and designed to meet the HKPSG requirement, i.e. 5 dB below ANL or the prevailing background noise level, whichever is the lower.

6.5. Conclusion

6.5.1. The potential environmental noise impacts from nearby road traffic and fixed noise sources on the Proposed Amendment have been evaluated.

6.5.2. For traffic noise impact assessment, all NSRs in the Proposed Amendment will comply with the relevant traffic noise standard stipulated in HKPSG. The Proposed Amendment would not be subject to significant adverse traffic noise impact

6.5.3. Fixed noise impact assessment has been carried out for the Proposed Amendment. The results of the assessment have indicated that the predicted fixed noise levels of all NSRs would comply with the fixed noise standard under the Noise Control Ordinance.

7. Water Quality

7.1. Introduction

7.1.1. This section presents an assessment of the potential water quality impacts associated with the construction and operation of the Project. Recommendations for mitigation measures have been provided, where necessary, to minimize the identified water quality impacts to an acceptable level.

7.2. Environmental Legislation, Standards and Guidelines

7.2.1. The water quality impact assessment is carried out with reference to the following:

- Water Pollution Control Ordinance (Cap. 358);
- Hong Kong Planning Standards and Guideline;
- Water Supplies Department (WSD) Water Quality Criteria; and
- Professional Persons Environmental Consultative Committee Practice Note 2/23 "Construction Site Drainage" (ProPECC PN2/23)
- Professional Persons Environmental Consultative Committee Practice Note 1/23 "Drainage Plans subject to Comment by the Environmental Protection Department" (ProPECC PN1/23)

Water Pollution Control Ordinance (cap.358) ("WPCO")

7.2.2. Water quality in Hong Kong is legislated by the provisions of Water Pollution Control Ordinance (Cap 358), 1980 ("WCPO"). Territorial Water has been subdivided into ten Water Control Zones ("WCZ") and four supplementary water control zones. The study area lies within the Deep Bay WCZ and the respective WQOs are summarized in Table.

Table 7-1 **Summary of Water Quality Objectives for the Deep Bay WCZ**

Parameters	Objectives	Sub-Zone
Aesthetic appearance	(a) Waste discharges shall cause no objectionable odours or discolouration of the water. (b) Tarry residues, floating wood, articles made of glass, plastic, rubber or of any other substances should be absent. (c) Mineral oil should not be visible on the surface. Surfactants should not give rise to a lasting foam. (d) There should be no recognisable sewage-derived debris. (e) Floating, submerged and semi-submerged objects of a size likely to interfere with the free movement of vessels, or cause damage to vessels,	Whole Zone

	should be absent. (f) Waste discharges shall not cause the water to contain substances which settle to form objectionable deposits.	
Bacteria	(a) The level of Escherichia coli should not exceed 610 per 100 mL, calculated as the geometric mean of all samples collected in one calendar year.	Secondary Contact Recreation Subzone and Mariculture Subzone (L.N. 455 of 1991)
	(b) The level of Escherichia coli should be zero per 100 ml, calculated as the running median of the most recent 5 consecutive samples taken at intervals of between 7 and 21 days.	Yuen Long & Kam Tin (Upper) Subzone, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones
	(c) The level of Escherichia coli should not exceed 1000 per 100 ml, calculated as the running median of the most recent 5 consecutive samples taken at intervals of between 7 and 21 days.	Yuen Long & Kam Tin (Lower) Subzone and other inland waters
	(d) The level of Escherichia coli should not exceed 180 per 100 mL, calculated as the geometric mean of all samples collected from March to October inclusive in one calendar year. Samples should be taken at least 3 times in a calendar month at intervals of between 3 and 14 days.	Yung Long Bathing Beach Subzone (L.N. 455 of 1991)
Colour	(a) Waste discharges shall not cause the colour of water to exceed 30 Hazen units.	Yuen Long & Kam Tin (Upper) Subzone, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones
	(b) Waste discharges shall not cause the colour of water to exceed 50 Hazen units.	Yuen Long & Kam Tin (Lower) Subzone and other inland waters
Dissolved Oxygen	(a) Waste discharges shall not cause the level of dissolved oxygen to fall below 4 milligrams per litre for 90% of the sampling occasions during the year; values should be taken at 1 metre below surface.	Inner Marine Subzone excepting Mariculture Subzone
	(b) Waste discharges shall not cause the level of dissolved oxygen to fall below 4 milligrams per litre for 90% of the sampling occasions during the year; values should be calculated as water column average (arithmetic mean of at least 2 measurements at 1 metre below surface and 1 metre above seabed). In addition, the concentration of dissolved oxygen should not be less than 2 milligrams per litre within 2 metres of the seabed for 90% of the sampling occasions during the year.	Outer Marine Subzone excepting Mariculture Subzone
	(c) The dissolved oxygen level should not be less than 5 milligrams per litre for 90% of the sampling occasions during the year; values should be taken at 1 metre below surface.	Mariculture Subzone

	(d) Waste discharges shall not cause the level of dissolved oxygen to be less than 4 milligrams per litre.	Yuen Long & Kam Tin (Upper and Lower) Subzones, Beas Subzone, Indus Subzone, Ganges Subzone, Water Gathering Ground Subzones and other inland waters of the Zone
pH	(a) The pH of the water should be within the range of 6.5-8.5 units. In addition, waste discharges shall not cause the natural pH range to be extended by more than 0.2 units.	Marine waters excepting Yung Long Bathing Beach Subzone
	(b) Waste discharges shall not cause the pH of the water to exceed the range of 6.5-8.5 units.	Yuen Long & Kam Tin (Upper and Lower) Subzones, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones
	(c) The pH of the water should be within the range of 6.0-9.0 units.	Other inland waters
	(d) The pH of the water should be within the range of 6.0-9.0 units for 95% of samples. In addition, waste discharges shall not cause the natural pH range to be extended by more than 0.5 units.	Yung Long Bathing Beach Subzone
Temperature	Waste discharges shall not cause the natural daily temperature range to change by more than 2.0 degrees Celsius.	Whole Zone
Salinity	Waste discharges shall not cause the natural ambient salinity level to change by more than 10% Whole Zone	Whole Zone
Suspended solids	(a) Waste discharges shall neither cause the natural ambient level to be raised by 30% nor give rise to accumulation of suspended solids which may adversely affect aquatic communities.	Marine waters
	(b) Waste discharges shall not cause the annual median of suspended solids to exceed 20 milligrams per litre.	Yuen Long & Kam Tin (Upper and Lower) Subzones, Beas Subzone, Ganges Subzone, Indus Subzone, Water Gathering Ground Subzones and other inland waters
Ammonia	The un-ionized ammoniacal nitrogen level should not be more than 0.021 milligram per litre, calculated as the annual average (arithmetic mean).	Whole Zone
Nutrients	(a) Nutrients shall not be present in quantities sufficient to cause excessive or nuisance growth of algae or other aquatic plants.	Inner and Outer Marine Subzones
	(b) Without limiting the generality of objective (a) above, the level of inorganic nitrogen should not exceed 0.7 milligram per litre, expressed as annual mean.	Inner Marine Subzone
	(c) Without limiting the generality of objective (a) above, the level of inorganic nitrogen should not	Outer Marine Subzone

	exceed 0.5 milligram per litre, expressed as annual water column average (arithmetic mean of at least 2 measurements at 1 metre below surface and 1 metre above seabed).	
5-Day Biochemical Oxygen Demand	(a) Waste discharges shall not cause the 5-day biochemical oxygen demand to exceed 3 milligrams per litre.	Yuen Long & Kam Tin (Upper) Subzone, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones
	(b) Waste discharges shall not cause the 5-day biochemical oxygen demand to exceed 5 milligrams per litre.	Yuen Long & Kam Tin (Lower) Subzone and other inland waters
Chemical Oxygen Demand	(a) Waste discharges shall not cause the chemical oxygen demand to exceed 15 milligrams per litre.	Yuen Long & Kam Tin (Upper) Subzone, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones
	(b) Waste discharges shall not cause the chemical oxygen demand to exceed 30 milligrams per litre.	Yuen Long & Kam Tin (Lower) Subzone and other inland waters
Toxins	(a) Waste discharges shall not cause the toxins in water to attain such levels as to produce significant toxic carcinogenic, mutagenic or teratogenic effects in humans, fish or any other aquatic organisms, with due regard to biologically cumulative effects in food chains and to toxicant interactions with each other.	Whole Zone
	(b) Waste discharges shall not cause a risk to any beneficial uses of the aquatic environment.	Whole Zone
Phenol	Phenols shall not be present in such quantities as to produce a specific odour, or in concentration greater than 0.05 milligrams per litre as C6H5OH.	Yung Long Bathing Beach Subzone
Turbidity	Waste discharges shall not reduce light transmission substantially from the normal level.	Yung Long Bathing Beach Subzone

Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters

7.2.3. Discharge of effluents are subject to control under the WPCO. The Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS) gives guidance on the permissible effluent discharges based on the type of receiving waters (foul sewers, stormwater drains, inland and coastal waters). The limits control the physical, chemical and microbial quality of effluents. Any sewage from the proposed construction and operation activities must comply with the standards for effluents discharged into the foul sewers, inland waters and coastal waters of Deep Bay WCZ, as given in the TM-DSS.

Practice Note for Professional Persons on Construction Site Drainage (ProPECC Note PN 2/23)

7.2.4. A practice note for professional persons was issued by the EPD to provide guidelines for handling and disposal of construction site discharges. The Practice Note for Professional Persons on Construction Site Drainage (ProPECC Note PN 2/23) provides good practice guidelines for dealing with various types of discharge from a construction site. Practices outlined in ProPECC Note PN 2/23 should be followed as far as possible during construction to minimise the water quality impact due to construction site drainage.

Protection of Natural Streams/Rivers from Adverse Impacts Arising from Construction Works (ETWB TC (Works) No. 5/2005)

7.2.5. ETWB TC (Works) No. 5/2005 provides an administrative framework to better protect all natural streams/rivers from the impacts of construction works. The procedures promulgated under this Circular aim to clarify and strengthen existing measures for protection of natural streams/rivers from government projects and private developments. The guidelines and precautionary mitigation measures given in the ETWB TC (Works) No. 5/2005 should be followed as far as possible to protect the inland watercourses at or near the Project area during the construction phase.

7.3. Assessment Area

7.3.1. The assessment area for the water quality assessment shall generally include areas within 500m from the boundary of the Project. This has been identified accordingly and is shown in **Figure 7.1**.

7.4. Water Sensitive Receivers

7.4.1. The Proposed Development is located in a rural area. No WSRs including water intakes, ecological valuable locations, country parks, water gathering grounds, beaches or water uses for agriculture within 500m study area of the proposed development, except 4 nos. watercourses are identified. Key WSRs within 500m from the boundary of the Project were identified at **Table 7.2** below and their respective locations are illustrated in ***Figure 7.1***.

Table 7-2 Summary of Representative Water Sensitive Receivers

ID	Location	Nature	Distance(m)	Description
Key Inland WSR within 500m from the boundary of the Project				
WSR1	Near Ta Kwu Ling Farm	Natural watercourse	320	The natural stream is located upstream, at the north of the assessment area
WSR2	Near Ta Kwu Ling Farm	Channelised watercourse	330	The natural stream is located upstream, at the north of the assessment area
WSR3	Near Cat Hill	Pond	410	The pond is located to the south of the Project Site
WSR4	Near DD77 956RP	Stream	390	Located to the south of the Project Site

7.5. Construction Phase Assessment

Construction Site Runoff

7.5.1. The surface runoff from construction works areas may contain increased loads of suspended solids(SS) and contaminants. Potential sources of pollution from construction site drainage include:

- General Construction Activities;
- Wash water from vehicles, equipment and dust suppression sprays;
- Potential minor oil leaks or spills from vehicles and plants;
- Site surface runoff and erosion of exposed bare soil and earth, drainage channels, earth working areas and stockpiles; and
- Sewage generated from on-site workforce.
- Accidental spillage of chemicals

Mitigation Measures and Good Site Practice

7.5.2. Runoff and drainage shall be avoided or minimised with the implementation of mitigation measures and good site practices outlined in ProPECC PN 2/23 which shall include but not limited to the following.

- Providing perimeter channels to intercept storm runoff from outside the site. These shall be constructed in advance of site formation works and earthworks.
- Providing sand/silt removal facilities such as sand traps, silt traps and sediment basins to remove sand/silt particles from runoff to meet the requirements of the standard in Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters under the WPCO. These facilities shall be properly and regularly maintained. Channels or earth bunds or sand bag barriers shall be provided on site to properly direct storm water to such silt removal facilities
- Minimising soil excavation works by careful programming of works during rainy seasons
- Protecting exposed soil surface by paving as practical to reduce the potential of soil erosion
- Protecting temporary access roads by crushed gravel and exposed slope surfaces shall be protected when rainstorms are likely to occur
- Avoiding trench excavation in the wet season as far as practicable, and, if necessary, these trenches shall be excavated and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.
- Covering the open stockpiles of construction materials on site with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.
- Vehicle wheel washing facilities should be provided at the site exit such that mud, debris, etc. attached to the vehicle wheels or body can be washed off before the vehicle leaves the work site". Settling out the sand and silt in the wash water from the vehicles leaving the wheel washing facility, which ensures no earth, mud and debris is deposited on the road, before discharging into the storm drain. The section of the road between the wheel washing bay and the public road shall be paved with a back-fall to prevent wash water or other site runoff from entering the public area.
- Planning ahead the temporary site drainage management and wastewater treatment system for collection, treatment, reuse and discharge of surface runoff and wastewater before the construction works start.
- Groundwater pumped out of wells, etc. for the lowering of ground water level in basement or foundation construction should be discharged into storm drains after the removal of silt in silt removal facilities.

General Construction Activities

7.5.3. Debris and rubbish generated on site shall be collected, handled, and disposed of properly. All fuel tanks shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. Open storm water drains and culverts near the works area shall be covered to block the entrance of large debris and refuse.

Accidental Spillage of Chemicals

7.5.4. The Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap. 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.

7.5.5. Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.

Sewage Generated from On-site Workforce

7.5.6. The sewage from construction work force is expected to be handled by portable chemical toilets. Sufficient portable toilets shall be provided by licensed contractors who shall be responsible for appropriate disposal of collected sewage and maintenance of these facilities.

Evaluation of Impact

7.5.7. The construction phase of the Project will be land-based which does not involve any marine works or works at the streams identified. Therefore, it is unlikely that the Project will have any adverse water quality impact from construction work, given good site practices properly implemented on site by Contractor.

7.5.8. The mitigation measures and good site practices will be included in the contract for contractor's implementation. With the provision and implementation of abovementioned mitigation measures, adverse water quality impact during construction phase is not anticipated.

7.6. Potential Impacts During Operation Phase

7.6.1. During the operation phase of the Proposed Development, surface run-off and sewage generated by the residents and staff are the main sources of water quality impacts. Surface run-off on site will be properly collected via stormwater drains and discharged to existing drainage system. The design of site drainage and disposal of various site effluents generated with the Proposed Development should follow the relevant guidelines and practices as given in the ProPECC PN1/23. Effluent arising from proposed development is subject to the control of WPCO, and the effluent discharge should be in compliance with the WPCO-TM and WPCO discharge license conditions.

Surface Runoff

7.6.2. The Project Site is a gently flat land mostly paved. It is currently a site with machine storage, building material storage and maintenance if necessary. The North and South part of the Site is vegetated. The Proposed Development involves paving of the land with concrete surface, which would increase surface runoff. According to the latest design, some areas of greening/landscaping are recommended to create buffer area around the periphery around the Project Site. The landscape will be managed and maintained in accordance with standard landscape practice and ArchSD General Specification.

Sewage Generated from Population of Proposed Development

7.6.3. The proposed project comprises of 5 blocks of residential tower ranging from 46-47 storey in height, providing 2205 residential unit, 1 block of commercial tower with 35-storey in heigh , clubhouse, day care centre for elderly and child care centre. During operation phase, sewage generated from the Development is the major pollutant source.

Mitigation Measures during Operation Phase

7.6.4. Since there is no public foul sewer identified along Ping Che Road and around Application Site. Therefore, on-site Sewerage Treatment Plant (STP) are proposed for the proposed development. “Guidelines for the Design of Small Sewage Treatment Plants” (The STP Guidelines) and WPCO should be followed in designing the on-site STP in the later detail design stage. The exact treatment process would be subject to later detailed design. It will be necessary for the STP to achieve adequate treatment capacity and the necessary discharge standards, as set out in EPD’s Technical Memorandum – Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters.

7.6.5. With reference to clause 2.1.2 of Annex 6 of the Technical Memorandum on Environmental Impact Assessment Process, the acceptable sewage treatment level for Deep Bay WCZ is given in ***Table 7-3***. The proposed STP will be designed to meet the acceptable treatment levels. Detailed design of the proposed STP is not yet available subject to feasibility investigation and water quality assessment. Tentatively, the proposed STP will be provided with Membrane Bioreactor (MBR) technology with ultra-filtration to achieve the acceptable sewage treatment level, with following conditions:

- For nitrogen removal, the target is 75% total inorganic nitrogen reduction with respect to the annual average influent nitrogen loads or concentrations;
- For phosphorus removal, the target is 80% phosphorus reduction with respect to the annual average influent phosphorus loads or concentrations; and

- Disinfection may not be required if membrane filtration is provided which can meet the relevant discharge standards for bacteria.

Table 7-3 Acceptable Sewage Treatment Level of Water Control Zone

Water Control Zone/ Waters Receiving the discharge	Acceptable Sewage Treatment Level
Tolo Harbour and Channel, Deep Bay	Secondary treatment, nitrogen removal, phosphorus removal, and disinfection
Other Water Control Zones	Secondary treatment, nitrogen removal, and disinfection

7.6.6. The capacity of the STP shall be designed to cater for the design flow rate from the Proposed Development. The detailed calculation of the design capacity of the on-site STP and the hydraulic calculation of the sewerage flow are shown in Sewerage Impact Assessment (SIA) report and Drainage Impact Assessment (DIA) report. The pathway of the connection pipe to public drainage and the emergency bypass also will be shown in SIA and DIA report.

7.6.7. As for good practice for STP, measures will be incorporated into the design to minimize the risk of emergency overflow from STP. As the STP is designed to cater for a peak flow of 3 times the daily average flow rate, 2 duty and 1 standby pump should be provided in equalization tanks as far as practicable to limit the flow through the treatment units within 1.5 times the daily average flow rate during off-peak periods. This is to even out the flow as much as possible. Other measures include secure power supplies and appropriate alarms, as well as comprehensive Operation and Maintenance procedures, to keep the facilities in good working order. Holding tank for emergency storage/retention will be included with adequate capacity (e.g. to store 6-hour of ADWF discharge) to minimize need of emergency discharge. In the event of any emergency overflow, on-call crews will follow the overflow emergency response plan and proceed with the best response to correct the problem at once. For example, the alarm system will be activated once overflow occurs. The on-call crews will provide instant response by acknowledging the alarm, to investigate the cause of overflow and correct the problem. The alarm system will be repeated until it is acknowledged. In addition, the on-call crews will ensure the standby pump is switched on and contains the overflow sewage using temporary weirs or vacuum trucks, where applicable.

7.6.8. The STP will also be subject to regular maintenance to ensure it functions in designed condition and optimal performance and can minimize any emergency situation. Property Management will be responsible for the construction and maintenance of the STP. In addition, regular self-monitoring will be conducted to ensure the quality of the treated effluent shall meet the applicable standard before discharge. Monitoring program will be devised for Terms & Conditions of the system. A discharge license will be applied prior to the

development commencement and monitoring requirements under the license would be strictly followed as per WPCO. Necessary discharge standards, as set out in EPD's Technical Memorandum – Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters will be adopted.

7.6.9. In order to minimize the pollution loading, silt/sand traps should be provided for the drainage systems of open areas. The design of stormwater drains shall follow the relevant guidelines and practices as given in the ProPECC PN 1/23. Manholes, gullies and oil interceptors should be cleaned and inspected regularly. Moreover, the pollution loading of runoff could be controlled by best management practices. The operator should manage the cleaning of roads and open areas within the Site before heavy rain. To further minimise pollution loading, cleaning should be carried out during low traffic periods. Cleaning methods for road/open areas, such as manual cleaning or mechanical methods and including street sweepers are recommended to be adopted. The substances during cleaning should be collected as far as practicable for off-site disposal at landfill sites. After the removal of the substances, the pollution loading of runoff would be reduced.

7.7. Conclusion

7.7.1. WSR 1 and WSR 2 are at upstream of the Proposed Development with a minimum separation distance of 320m. WSR 3 and WSR 4 are ponds and stream respectively located away from the Project Site. The Project would not involve any construction works at/within the above identified watercourses. Therefore, it is not expected to be affected during the construction and operation phases of the Project.

7.7.2. For construction phase, water quality impact is expected to be minimal when appropriate mitigation measures and good site practice are implemented to properly discharge site run-offs.

7.7.3. The contractor shall apply for a Discharge License from EPD under the WPCO. All site discharges should be treated as necessary in accordance with the terms and conditions of the Discharge License.

7.7.4. For operation phase, with implementation of proper pre-treatment facilities and good management measures, the potential water quality impact is anticipated to be insignificant.

8. Land Contamination

8.1. Guidelines

8.1.1. This assessment is prepared in accordance with the following guidance:

- Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management (Guidance Manual), dated December 2007, Revised in April 2023;
- Guidance Note for Contaminated Land Assessment and Remediation (Guidance Note), dated 15 August 2007, Revised in April 2023; and
- Practice Guide for Investigation and Remediation of Contaminated Land (Practice Guide) dated August 2011, Revised in April 2023.

8.2. Objectives

8.2.1. The objectives of this Environmental Assessment are

- to assess the potential land contamination impact at the Subject Site due to current and historical land uses, activities that could result in contamination of the site through desktop review and site survey (e.g. site's land use history, aerial photos, site visit photos, spillage records, potential contamination sources, paving condition, etc);
- and to propose forthcoming actions in case the potential land contamination identified.

8.2.2. This Site Appraisal Report is prepared following the guidance and steps outlined in the Practice Guide for Investigation and Remediation of Contaminated Land (Aug 2011), Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management (Dec 2007), and the Guidance Note for Contaminated Land Assessment and Remediation. All guidance notes and guidance manual are published by the Environmental Protection Department (EPD) of the Government of HKSAR.

8.2.3. This Site Appraisal Report prepared for the submission to EPD presents the review of current and historical use, aerial photos, observation of site visits, spillage records, the potential of contamination and the need for site investigation and methodologies for site investigation works (if any).

8.2.4. A Contamination Assessment Plan (CAP) will be prepared and submitted to EPD for approval before the Site Investigation. Remediation works, if required, will be carried out according to

the Practice Guide before the commencement of development of project.

8.3. Site Appraisal & Its Environs

8.3.1. The Site Appraisal has been conducted to assess the potential land contamination impact at the Application Site due to current and historical land uses, on and off-site activities that could result in contamination of the site.

8.3.2. According to the approved Ping Che and Ta Kwu Ling Outline Zoning Plan (OZP No.: S/NE-TKL/14) gazette on 12/03/2010, the Application Site is currently zoned as "Open Storage" ("OS") Zone, the southern part of the Application Site is zoned as "Agriculture" ("AGR") and minor portion of the Application Site is zoned as "Road".

8.3.3. The proposed site area of the subject site is 17,822m^2, bounded by the Ping Che Road from the north to northeast, the unnamed local road to the east, village, agricultural land and open storage area to the south and west.

8.3.4. The Application Site is currently used as open storage area for construction materials and machinery, chemical oil drums and machinery maintenance.

8.4. Review of Historical Aerial Photos and Past Land Use

8.4.1. According to the aerial photograph taken in 1949 by Lands Department, the Application Site was mostly covered by vegetation and used as farmland in southern portion. Based on the photographs, the Application Site was fully or partially used as farmland from 1949 to 1973. Some built structure (i.e. village houses) located northeast and southwest of the Application Site were identified from 1964 to 1980, then it was coverd by vegetation again in 1980 onwards.

8.4.2. Starting from 1986, the central part of the Application Site was turned into the vacant land and then used as open storage area since 1990 and remained as open storage area until now. The Northern side remained vegetated while the southern part remained to have village house settlements and vegetation/ farmland.

8.4.3. The aerial photos are shown in ***Appendix 8.1***. A summary of the land use of the Application Site is given in ***Table 8-1.***

Table 8-1 *Land Use Summary on the Application Site*

Period/Year	Land Use (Project Site)/Description	Offsite Land Use in vicinity /Description	Sources of Information
Before 1949	Mostly covered by Vegetation, southern part as farmland	Northeast: covered by vegetation; Southeast: Farmland; West: Farmland	Aerial Photo from Lands Department
1956	Farmland	Northeast: covered by vegetation; Southeast: Farmland; West: Farmland	Aerial Photo from Lands Department
1961	Northern: Farmland Central Part and Southern part: Vegetation	Northeast: covered by vegetation; Southeast: Farmland; West: Farmland	Aerial Photo from Lands Department
1964	same as 1961	Northeast: covered by vegetation; Southeast: Farmland; West: Farmland	Aerial Photo from Lands Department
1973	Similar to 1964, vegetation removed in the central part	Northeast: covered by vegetation; Southeast: Farmland; West: Farmland	Aerial Photo from Lands Department
1980	Covered by Vegetation, structures found at northern side of the Site	Northeast: covered by vegetation; Southeast: Farmland; West: Farmland	Aerial Photo from Lands Department
1986	Vacant Land with vegetation at northern side of the Site. Farmland at the south	Northeast: Vacant Land; Southeast: Vacant land; West: Farmland	Aerial Photo from Lands Department
1990, 1992,1994,1996, 1998, 2000, 2005, 2009,2013, 2017, 2020, 2021, 2022	Open Storage with structure in the middle of the Site; northern side covered with vegetation; southern side with vegetation and village houses	Northeast: Warehouses occupied by Hong Kong Bamboo Trading Company since 1990 (OLC-2). Southeast: covered by vegetation since 1990, converted to open storage since 2000 (OLC-3). West: Open storage in 1990 and converted to warehouse afterwards. The warehouse further extended in 2005 (OLC-1).	Aerial Photo from Lands Department

8.4.4. For the off-site land uses immediately next to the Application Site, 3 potential off-site contamination sources identified and shown in ***Appendix 8.1*** and ***Figure 8.1*** and summarized in ***Table 8-2.***

Table 8-2 *Potential Off-site contamination sources*

	Uses	Location	Shortest Distance from Project Site (m)	Condition
OLC-1	Open storage (from 1990); Warehouse (i.e. Metal) (from 1992 onwards)	West of proposed Site	13	Warehouse: for storage of metal, enclosed, paved land
OLC-2	Warehouse (i.e. Bamboo) (from 1990 onwards)	Northeast of proposed Site	47	Warehouse: for storage of bamboo, enclosed, paved land
OLC-3	Open storage (from 2000)	Southeast of proposed Site	38	Open storage of building material, no maintenance, no machinery, paved

8.4.5. As summarized in ***Table 8-1*** and ***Table* 8-2**, OLC-1 was a warehouse at the west, operated by Fat Lee Company Limited, a paper merchant. Based on the aerial photos, it was farmland from 1949 until 1986.The Site was first used as Open Storage in 1990, served as warehouses since 2000 with a further extension of the warehouse in 2005. The warehouse is an enclosed warehouse, with pavement. Only storage of stack pallets and paper rolls was observed on site, without operation of machinery and maintenance as observed in several site inspections (Photo 71 in Appendix 8.5). Land contamination issues due to its operation is unlikely.

8.4.6. For OLC-2, Hong Kong Bamboo Trading Company Limited is situated towards the northeast of the Site. The site of the existing Bamboo Trading Company remained vegetated since 1949 and it was a vacant land since 1986. Based on site observation in 2023, the warehouses are enclosed. Due to the storage of bamboo, without other operation of powered machinery and maintenance works, land contamination issues due to its operation are unlikely. During the site inspection conducted in 2024, concrete, soil and sand was observed to be stored within the site (Photo 73 in Appendix 8.5). Only trucks were observed, no operation of PME was identified. The area is enclosed with barriers and there is a road in between OLC-2 and the Project Site (Photo 74 in Appendix 8.5). Given the physical separation found between OLC-2 and the Project Site, impact of offsite land contamination should be insignificant.

8.4.7. For the land towards southeast (OLC-3), it was farmland until 1986. It became vacant at 1986 and was again vegetated in 1990. It served as storage afterwards in 2000. Based on aerial photos and site observation, only storage of building equipment is observed, without other operation of powered machinery and maintenance works. Thus no polluting and hazardous industrial uses are anticipated. Similar to OLC-2, it is a road apart from the Project Site (Photo 61 in Appendix 8.5). Hence, potential contamination issue is not anticipated from these historical surrounding uses.

8.4.8. In view of the above, potential off-site land contamination due to activities in the vicinity is unlikely.

8.5. Information from Government Department

8.5.1. The following HKSAR Government Departments have been enquired on the latest update on the availability of land use status and records of land contamination and/or spillage for the site. The summary of correspondence is presented in ***Table 8-3*** below. Copy of the letters replied from various Government Departments are included in ***Appendix 8.3*** for reference.

Table 8-3 *Enquiries and Responses on Land Contamination Related Record in the Application Site*

Consultant's Letter Ref.	Department	Response Letter Ref.	Response Date	Summary
819.4463/23-0001	Environmental Protection Department	Nil., through Email	6 June 2023	No record of any reported chemical spillage/leakage incident at the Application Site in the past 5 years. For record of Chemical Waste Producers Registration, a registry is available at EPD Territory Control Office in Wan Chai
			6 July 2023 (include additional Site Area)	No record of any reported chemical spillage/leakage incident at the additional Application Site in the past 5 years, and no registered chemical waste producers is found in the additional Application Site.
819.4463/23-0002	Fire Services Department	(153) in FSD GR 6-5/4 R Pt. 47	13 July 2023	Case is being handled, following record will be provided: • Dangerous Goods License Record from the year of 1990 to present moment; Incident Record of past three years of fire and special services incidents.
			10 Aug 2023 (include additional Site Area)	• No Dangerous Goods License was issued at Application Site; • A total of 2 incident records were found at the subject location. - Rubbish fire on 21 Jan 2021, near lamppost VD9044 of Ping Che New Village. (Outside site boundary) - No.1 Fire Alarm, near lamppost EA3379 of Ha Shan Kai Wat. (Within site boundary)

Consultant's Letter Ref.	Department	Response Letter Ref.	Response Date	Summary
819.4463/23-0003	Lands Department	Nil., through Email	8 June 2023	Nil record of relevant illegal land contamination case in the area concerned
		Nil., through Email	14 July 2023 (include additional Site Area)	No record of relevant illegal land contamination case in the area concerned. Advised to approach Planning Department for enquiry in respect of illegal land use information.
819.4463/23-0004	Planning Department	Nil., through Email	20 February 2024	The site falls within an area zoned "Open Storage" on the Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14. No information on the past activities / incidents/ accidents of the Site
819.4463/23-0004 (with updated site boundary)	Planning Department	Nil., through Email	12 April 2024	Part of the Site is the subject of a previous application No. DPA/NE-TKL/31 for proposed warehouse for the storage of tunnel boring machine and scaffolding materials approved by the Rural and New Town Planning Committee on 14.8.1992. No information on the past activities/ incidents/ accidents of the Site

8.5.2. Based on the information available, no record of any reported chemical spillage or leakage incident in the past 5 years, there are chemical waste producer registrations at site location, the consultant visited the territory-wide register of chemical waste producers maintained at the Territory Control Office in Wan Chai on 8 February 2024. There are two registered chemical waste producers at the Project Site (one in DD77 Lot 796 North; another one covers DD77 Lot 796 and 1008RP). Details of the chemical waste producer is provided in **Appendix 8.2**. As advised by EPD, two valid chemical waste producers were found. Given the nature of business of construction/warehouse are on the registry, waste oil for machinery is anticipated to be generated on-site.

8.5.3. For the dangerous goods record provided by FSD, no dangerous goods are stored on-site. For the fire accident records provided by FSD, there were two incidents that happened around the Application Site, which the indicative location of the incidents is shown in ***Appendix 8.3***.

The rubbish fire on 21 Jan 2021 was happened outside site boundary, no land contamination potential upon the rubbish fire outside the site. There was No.1 fire alarm happened near lamppost EA3379 of Ha Shan Kai Wat, and since it was on the access road outside the east boundary of the application site, storage of chemical along access road is unlikely. It is thus expected that there was no dangerous goods or chemicals in the fire incident area, therefore it is anticipated that no potential land contamination upon the fire incident.

8.6. Site Visit and Observation

8.6.1. Site Visit was conducted on 20 June 2023 to identify potential source of contamination. A Site Walkover Checklist has been completed with the Tenant's representative as required in the EPD's Practice Guide and attached in ***Appendix 8.4***. Photo records of the Application Site taken during the site visit are presented in ***Appendix 8.5.*** Indicative air drone diagrams are shown in ***Figure 8.1***.

Entrance, Temporary Office and Village House

8.6.2. The entrance and the container storage area are paved with concrete in good condition (photo 12 – Photo 16, Photo 67, 69), there is no sign of chemical spillage, pollutant nor potential source of contamination observed. There are also some village houses located within the site, no anticipated land contamination around the residential area (Photo 17).

8.6.3. For the temporary storage structures near the site entrance (Photo 55-60), as confirmed by current user, they are used for temporary office, store room for small maintenance equipment and parts. Potential land contamination is unlikely.

Construction Material, Machinery Storage Area, Vehicle Access

8.6.4. The Application Site is used as open storage area for construction materials and machinery. Equipment such as excavators, welding machines, maintenance tools at the machinery storage area. The machinery storage area is not paved. Yet no chemical and oil drums were identified at the material and machinery storage site The construction materials stored on site are mostly concrete blocks. They are kept at southwest area of the Application Site (Photo 34), which is paved in good condition. As verified on site and confirmed by the current users, no maintenance and refilling of chemical would be carried out at the machinery Storage Area at strip of area along the site boundary. Stains were observed along vehicle access between the construction material and machinery storage area (Photo 44-46), where the respective ground is paved in good condition. Stains were also spotted at the edge of building material storage area (Photo 39) where the ground is unpaved.

Machinery Maintenance/Chemical, Oil Drums Storage Area

8.6.5. Given the nature of the site usage, it may involve use and refilling of the chemical (e.g. Lubricant oil) for maintenance of machinery occasionally as confirmed by current user. Two separated machinery maintenance areas are designated at middle portion of the Application Site as shown in ***Figure 8.1a*** and ***Figure 8.1b.*** Onsite maintenance works of machinery resulting in potential land contamination at this area.

8.6.6. The Chemical, oil drums storage area is identified towards the north of the machinery maintenance area. The chemical found within the site includes a temporary oil drum to transport the oil on-site, and acetylene cylinders.

8.6.7. Additionally, waste oil was generated in the daily operation. The oil tanks/oil drum were observed to be placed on the ground (Photo 18, Photo 21 – Photo 23, Photo 26 – Photo 28), where the ground is paved and cracks identified, while some of the acetylene cylinders were placed on the tray with a lock (Photo 29). It was found that the improper storage of chemicals resulted in potential for oil spillage within the site at the machinery area. The stained surfaces were found on the paved ground and were not found on the unpaved ground towards the boundary of the site (Photo 21), the stained surfaces was only limited in the machinery maintenance area of the site. They are considered as potential hotspots of land contamination.

Vegetated Area

8.6.8. Vegetated area is identified at the south portion of the proposed site which is outside the main working area of the site. Only unnamed village houses identified, without any industrial activities. Land contamination is unlikely.

8.6.9. Works area, including Construction Material, Machinery Storage Area, Vehicle Access and Construction Material, Machinery Storage Area are considered to have potential land contaminations while non-works area like Entrance, Temporary Office and Village House and vegetated area are unlikely to have potential land contamination.

8.7. Potential Land Contamination Appraisal

8.7.1. According to the desktop study and site appraisal presented in ***Section 8.3*** to ***8.5***, the current usage of the Application Site is used as open storage area.

8.7.2. According to the government's response, no chemical spillage accidents were recorded at the Application Site within the past 5 years. There are two chemical waste producer registration and no illegal land use identified found at the Application Site. The record of chemical waste producers' registration is given in ***Appendix 8.2***. There were two fire incidents near the Application Site, the rubbish fire happened outside the site boundary, while it is

expected that there is no dangerous goods and chemicals involved in the No.1 fire alarm incidents as it was happened on the access road outside the site boundary. Therefore, it is anticipated that no potential land contamination upon fire incidents. As refer to PlanD's response, part of the site was approved to be used as warehouse for building equipment and materials in 1992.

8.7.3. Upon the site visits, no signs of as abnormal odour and/or distressed vegetation within the Application Site were observed. The dangerous good found (i.e. Acetylene), is gaseous compound where contamination on land is not expected. Given that the acetylene cylinder was kept in a locked tray, and no incident record associated with chemicals is recorded, land contamination due to storage/incidents of dangerous goods are not anticipated.

8.7.4. However, stained surfaces were found on the ground within Application Site within the machinery maintenance area and other works area. Based on the nature of current site usage, with machinery maintenance, there is a potential for chemical spillage and considered as potential polluting evidence under the Practice Guide for Investigation and Remediation of Contaminated Land.

Review on "Hotspots"

8.7.5. As per the Practice Guide, it recommends to investigate the potential contaminated land in regular grid pattern to have a comprehensive study on the potential land contamination site. Apart from the regular grid pattern, Practice Guide also required attention should be paid to those locations where potential land contamination could occur. These are regarded as "hotspots" for investigation.

8.7.6. The site investigation for land contamination can therefore be focused on hotspots that have the potential for land contamination due to various previous site activities, locations of any leakage events, stains observed and former storage locations for chemicals and chemical wastes.

8.7.7. Improper storage of chemicals on paved ground, maintenance workshop, and stained surface were identified on site, in particular, including at Machinery Maintenance/Chemical, Oil Drums Storage Area, Construction Material, Machinery Storage Area and Vehicle Access, are considered as hotpots as shown in **Appendix 8.5**. A detailed site investigation is proposed for the above mentioned area and shall be carried out to investigate the potential land contamination issues of the Site following the "Practice Guide for Investigation and Remediation of Contamination Land" published by EPD in later stage. The proposed sampling location is shown in **Figure 8.2**. Should contamination levels exceed allowable limits for post-restoration land use scenario (i.e. Urban Residential) in the Guidance Manual for Use of Risk-

Based Remediation Goals (RBRGs) for Contaminated Land Management, a Remediation Action Plan (RAP) will be carried out, if needed.

8.7.8. Other than the hotspots mentioned above, upon the site visit of the Subject Site, no signs of obvious/ suspected contamination such as abnormal odour and/or distressed vegetation within the Subject Site were observed and there is no potential source of contamination listed below identified in the Subject Site, including:

- Entrance, Temporary Office and Village House Area and
- Vegetated Area

Further Site Investigation

8.7.9. In view of some of the activities carried out within the Application Site are considered as potential polluting activities under the Practice Guide for Investigation and Remediation of Contaminated Land. A site investigation and remediation works, if required, shall be carried out before the commencement of construction of the project within the machinery maintenance area as shown in ***Figure 8.1***. A Contamination Assessment Plan (CAP) will be prepared and submitted to EPD for approval at later stage before the Site Investigation.

8.7.10. Further Site Investigation is proposed at

- Construction Material, Machinery Storage Area, Vehicle Access; and
- Machinery Maintenance/Chemical, Oil Drums Storage Area

8.7.11. Upon availability of the site investigation results, including field observation and laboratory analytical results, the Consultant will complete the land contamination assessment to ascertain the nature and extent of contamination, if any. All the site investigation results will be presented in the Contamination Assessment Report (CAR), for the submission to EPD for agreement. If land contamination is confirmed, a combined CAR and Remedial Action Plan (CAR-RAP) shall also be submitted to EPD for agreement to formulate necessary remedial measures. Moreover, the land contamination assessment and remediation works (if necessary) should be completed prior to the development of the Project according to the Practice Guide.

8.8. Conclusion

8.8.1. The Site Appraisal has been conducted to identify the potential land contamination impact at the Application Site. Based on the aerial photographs and responses from HKSAR Government Departments, the Application Site is currently used as open storage area for

construction material, machinery and oil drum and chemicals with machinery maintenance. No record of chemical spillage accident and submission relating to land contamination assessment at the Application Site in the past 5 years.

8.8.2. According to site inspection, the activities carried out within site area generated waste oil, and chemical storage(i.e. acetylene cylinders) practices were observed. The stained surfaces were identified specifically in the machinery storage area (towards the site boundary), at the edge of building machinery storage area and along the vehicle access in between two storage areas. In view of the above, further site investigation is required to identify the pollutant concentration. A Contamination Assessment Plan (CAP) will be prepared and submitted to EPD for approval at later stage before the Site Investigation. Upon availability of the site investigation results, including field observation and laboratory analytical results, the Consultant will complete the land contamination assessment to ascertain the nature and extent of contamination, if any. All the site investigation results will be presented in the Contamination Assessment Report (CAR), for the submission to EPD for agreement. If land contamination is confirmed, a combined CAR and Remedial Action Plan (CAR-RAP) shall also be submitted to EPD for agreement to formulate necessary remedial measures before the commencement of the Proposed Amendment.

9. Waste Management Implications

9.1. Legislation and Standards on Waste Management

Waste Disposal Ordinance (WDO) (Cap. 354)

9.1.1. Waste Disposal Ordinance, Cap. 354 provides legislative control on pollution caused by all forms of wastes such as livestock wastes, chemical waste etc. It provides the statutory framework for the planning, management and control of wastes in Hong Kong.

Public Health and Municipal Services Ordinance (Cap.132)

9.1.2. The Public Cleansing and Prevention of Nuisances Regulation provides control on illegal tipping of waste on unauthorized (unlicensed) sites.

Waste Disposal (Chemical Waste) (General) Regulation (Cap.354C)

9.1.3. Under the WDO, Waste Disposal (Chemical Waste) (General) Regulation (Cap.354C) provides regulations for chemical waste control, and administers the possession, storage, collection, transport and disposal of chemical waste. EPD has also issued the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes (1992), which details how the chemical

waste producers should comply with the regulations on chemical waste.

Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap.354N)

9.1.4. Under the Waste Disposal (Charges for Disposal of Construction Waste) Regulation, construction waste delivered to a landfill for disposal must not contain more than 50% by weight of inert material; construction waste delivered to a sorting facility for disposal must contain more than 50% by weight of inert material; and construction waste delivered to a public fill reception facilities for disposal must consist entirely of inert material.

9.1.5. Other Environmental Regulations / Guidelines

- Land (Miscellaneous Provisions) Ordinance (Cap. 28)
- ETWB TC(W) No. 22/2003 and 22/2003A, Additional Measures to Improve Site Cleanliness and Control Mosquito Breeding on Construction Sites
- Works Bureau TC No. 12/2002, Specifications Facilitating the Use of Recycled Aggregates
- Trip Ticket System for Disposal of Construction & Demolition Materials (DEVB TC(W) No. 6/2010)
- Environmental Management on Construction Sites (ETWB TC(W) No. 19/2005)
- Public Dumps (WBTC No. 2/93)
- Waste Disposal Ordinance (Cap. 354) & Public Health and Municipal Services Ordinance (Cap. 132)
- Public Filling Facilities (WBTC No. 2/93B)
- Fill Management (WBTC No. 12/2000)
- Code of Practice on the Packaging, Labeling and Storage of Chemical Waste
- DevB TCW No. 8/2010 "Enhanced Specification for Site Cleanliness and Tidiness
- Management of Construction and Demolition Materials (Technical Circular No. 11/2019) published by CEDD
- CEDD’s Project Administration Handbook for Civil Engineering Works
- Hong Kong Planning Standards and Guidelines, 2022 (Planning Department (PlanD))

- Monitoring of Solid Waste in Hong Kong – Waste Statistics for 2022

9.2. Assessment Approach and Criteria

9.2.1. The assessment of waste management implications from the construction and operation of the Project includes the following tasks:

- Identification of types and quantities of waste arising from various construction activities based on the latest understandings;
- Evaluation of opportunities for waste reduction, re-use and recycling on-site or off-site;
- Identification of disposal options for each type of waste;
- Evaluation of potential impacts from the handling (including stockpiling, labelling, packaing and storage), collection, transportation and reuse/disposal of waste with respect to potential hazards, air and odour emissions, noise, wastewater discharges and public transport; and
- Proposing mitigation measures and evaluation of residual impact.

9.3. Potential Impacts during Construction Phase

9.3.1. The construction works of the Project mainly include clearance and mobilization, excavation and lateral support works, foundation works, superstructure and fitting out works. Excavation of about 10.5m is expected for construction of 3 levels of basement. Construction & Demolition (C&D) materials generated from the construction works comprises of inert and non-inert materials. For inert C&D materials (or public fills), such as soil, rock, concrete, etc., could be reused on-site as filling materials or off-site as public fill at public fills reception facilities (e.g. Tseung Kwan O Area 137 Fill bank). The delivery site of inert C&D materials is subject to the designation by the PFC according to the DEVB TC(W) No.6/2010.

9.3.2. For non-inert C&D materials, such as topsoil, dead vegetative materials, glass, steel, plastics, paper, timber/woody materials etc., would be sorted for reuse/recycle as far as possible before disposal. Timber/ woody materials from site clearance will be sent to the Yard Waste Recycling Centre in Y-Park for recycling as far as possible before landfill disposal. Surplus non-inert C&D materials are proposed to be disposed at North East New Territories (NENT) Landfill at Ta Kwu Ling. The designated disposal site of non-inert C&D materials shall be confirmed with the EPD. Since the works will not be conducted simultaneously, it is estimated that a maximum of 1 trucks trip per day would be required for the disposal at NENT Landfill.

9.3.3. Waste management planning is needed prior to the commencement of construction works. Construction waste management strategy is to avoid, minimize, reuse, re-cycle and finally dispose of waste with the desirability descending in this order. Contractor(s) will be required to implement effective waste management measures to ensure their practices are in line with the strategies. In order to minimize the generation of wood waste, steel is

recommended to be used for formworks.

9.3.4. Chemical waste from maintenance and servicing of construction equipment/plant may be generated. If chemical waste is produced, it will be disposed of according to Code of Practice on the Packaging, Labelling and Storage of Chemical Waste. Special handling and temporary storage of chemical waste is required before removal from site. A licensed chemical waste collector will be employed to deliver of these wastes at EPD licensed chemical waste treatment facility.

9.3.5. General refuse such as food scraps, waste paper, empty containers, etc. would be generated from the workforce during the construction phase. General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling. Enclosed and covered areas should be provided for general refuse collection to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problem. Also, routine cleaning for these areas should be implemented to keep areas clean, so that intentional or accidental release to the surrounding environment does not occur with proper management.

C&D materials

9.3.6. The majority of C&D materials will be generated from the key construction activities mentioned in ***Section 9.3.1***. Demolition waste is not anticipated since the site is currently vacant with minor temporary structures. Where possible, inert C&D materials will be re-used on site and sent to public fill reception facilities as a last resort.

9.3.7. Apart from optimizing the construction programme, alternative designs and construction methods have been duly considered. Use of BIM and MiC will be considered, subject to detailed design.

9.3.8. As advised by project team, the quantities of C&D materials generated will be subject to further design development and contractor's operation procedure/practices. The estimated quantities for inert C&D materials generated is approximately 126,563m^3 given an excavation area of 13,500m^2 and a basement level of 6m / 10.5 m, programmes have been considered to minimize the generation of inert material where minimization and reuse of C&D materials is considered as far as practicable. The foundation and ELS works will last for 18 months, assuming a capacity of 7m^3 per truck, bulk factor of 1.4, 25 working days a month and the works will not be conducted simultaneously, it is estimated that a maximum of 56 truck trips per day would be required for the delivery of excavated material, which is equivalent to 7 trucks per hour. The Contractor shall develop and implement their Environmental Plan (EMP) and Waste Management Plan (which is part of the EMP) to control any potential adverse

impact associated with the construction waste as far as possible. It is targeted that about 20% of the inert materials (25,313 m^3) can be reused onsite. According to the Project Administrative Handbook for Civil Engineering Works and CEDD TC No. 11/2019, the project office is required to draw up a Construction and Demolition Material Management Plan (C&DMMP) at the feasibility study or preliminary design stage of each project, which generates more than 50,000 m^3 of C&D materials. C&DMMP will be prepared and submitted to the CEDD vetting committee on C&D Material Management for endorsement. The Contractor shall develop and implement their Environmental Plan (EMP) and Waste Management Plan (which is part of the EMP) to control any potential adverse impact associated with the construction waste as far as possible. Half-Yearly Status Report and Quarterly Situation Report shall be prepared accordingly.

Chemical Waste

9.3.9. Chemical waste is defined in the Cap 354C Waste Disposal (Chemical Waste) (General) Regulation. Where the construction processes produce chemical waste, the contractor must register with EPD as a chemical waste producer. Chemical waste that is likely to arise from the construction activities for the Project includes:

- Used paints, engine oils, hydraulic fluids and waste fuel;
- Spent mineral oils / cleansing fluids from machineries; and
- Spent solvent / solutions, some of which may be halogenated, from equipment cleansing activities.

9.3.10. Accidental spillages of chemicals in the works area may contaminate the top soils on exposed ground/ earth. The contaminated soil particles may be washed away by construction runoff causes water pollution.

9.3.11. Chemical wastes pose environmental and health and safety hazards if not stored and disposed of in an appropriate manner as outlined in the Waste Disposal (Chemical Waste) (General) Regulation. These hazards include:

- Toxic effects to workers;
- Adverse effects on water quality from spills; and
- Fire hazards.

9.3.12. The amount of chemical waste to be generated throughout construction phase cannot be accurately predicted at this stage since it largely depends on the contractor's housekeeping measures. It is estimated the quantities of chemical wastes will be small (about 0.1 m^3 on a monthly basis). The amount of chemical waste to be generated would be quantified in the Waste Management Plan (WMP) as part of the Environmental Management Plan (EMP) to be prepared by the Contractors. Given that the chemical waste generated are to be handled,

stored, collected, transported and disposed by licensed chemical waste collectors in accordance with the Waste Disposal (Chemical Waste) (General) Regulation, impacts such as potential hazard and spillage will not be anticipated.

General Refuse

9.3.13. General refuse such as waste papers, plastic packaging, food wastes, etc. will be generated by the construction workforce during construction phase of the Project.

9.3.14. Since no information regarding the number of on-site workers is available at this stage of the Project, it has been assumed that a maximum of 350 workers will work simultaneously at the Project site during the construction phase of the Project. Quantity of general refuse to be generated per day is therefore estimated to be 227 kg (assuming a waste generation rate of 0.65 kg per person per day).

9.3.15. Recycling bins for waste papers, plastic packaging should be provided to maximize reuse and recycle volume. Other non-recyclable general refuse, the Contractor shall employ a reliable waste collector to separate general refuse from C&D materials and remove general refuse from the site to NENT Landfill. The quantity of the general refuse is included in the non-inert C&D materials with a maximum of 1 trips per day is anticipated, given an average truck capacity of 7m^3. The impacts arising from increased traffic loading would be limited. With proper on-site handling and storage as well as regular disposal of the wastes, no adverse impact is envisaged. All dump trucks should be equipped with GPS or equivalent system for the monitoring of their travel routings and parking locations to prohibit illegal dumping and landfilling of C&D materials. No adverse impact (e.g., potential hazards, air and odour emissions, noise, wastewater discharges and public transport etc.) is envisaged with the implementation of appropriate mitigation measures such as using trucks with covering and enclosed containers.

9.3.16. Types and quantities of waste arise from various construction activities and the corresponding handling arrangement and outlets are identified and summarized in ***Table 9-1***Error! Reference source not found.**.**

Table 9-1 Summary of Quantities of Waste Generated

Type of Waste	Quantity	Handling Arrangement and Outlets	Remark
Inert C&D Materials Delivered to Public Fill Reception Facilities [1]	101,250 m^3	- Delivered to the public fill reception facilities	Area of Basement for carpark(6m): 3,375 m^2 Area of Basement for Carpark (10.5m): 10,125 m^2
Reused Inert C&D Materials (or Public Fills) For Onsite Reused	25,313 m^3	- Recycled as much as practicable for onsite re-usage	Assumed 20% reused onsite
Non-inert C&D Materials (or C&D waste) Generated [2]	28,690 m^3	- Recycled and reused as much as practicable (e.g. Timber and Woody material to Y-Park etc.) - Disposed of at the landfill	GFA: 124,748 m^2 Private Housing Projects 0.250m^3 /m^2 GFA Hong Kong-wide proportion of inert C&D materials in construction waste:0.92 (Hong Kong –Waste Statistics 2022) Waste Index*: 0.92x0.25 per m^2 GFA
Chemical Waste[3]	~ 0.1 m^3 (on a monthly basis)	- Collected by licensed chemical waste collector for the disposal of at licensed treatment facilities (e.g. Chemical Waste Treatment Centre (CWTC) at Tsing Yi)	/
General Refuse from Workforce[4]	227 kg/day	- Recycled as much as Practicable - Disposed of at the Landfill (i.e. NENT)	Assumed maximum of 350 workers working simultaneously at the Project Site - Assumed waste generation rate is 0.65 kg/person/day (per Monitoring Solid Waste in Hong Kong –Waste Statistics 2022)

Note:
[1] Includes, but not limited to excavated soil, broken concrete, granular materials etc.
[2] Includes, but not limited to, bamboo, timber, paper and plastic, etc.
[3] Includes, but not limited to, scrap batteries or acid/alkali from construction plant maintenance activities; used paints, engine oils, hydraulic fluids and waste fuel, etc.
[4] Includes, but not limited to, food waste, aluminum cans, waste paper, etc.
**Waste Index referenced to Section 3.2 of A Guide for Managing and Minimizing Building and Demolition Waste published by the Hong Kong Polytechnic University in May 2001*

9.4. Mitigation Measures to Control Construction Waste Impact

General

9.4.1. Inert C&D materials shall be delivered to the public fill reception facilities as far as practicable. Any remaining inert C&D materials shall be delivered sorting facilities and landfills. In order to facilitate process of transferring the construction waste to Government waste disposal facilities (e.g. public fill reception facilities, sorting facilities and landfills), waste sorting and segregation shall be carried out on site in accordance with the following categories:

- Hard rock and large broken concrete suitable for reuse on the Site or recycling;
- Metals (i.e. aluminium can, steel metal, ferrous metal, and non-ferrous metal);
- Plastic (i.e. plastic bag, plastic bottle, plastic packaging, etc.)
- Paper;
- Chemical waste;
- Materials suitable for disposal at public fill reception facilities, sorting facilities and landfills

9.4.2. In addition, the Contractor is required to implement good EMP and practices on handling and disposal of waste, including but not limited to:

- Handle, store and dispose of all wastes in accordance with the Waste Disposal Ordinance;
- Handle, store and dispose of chemical waste in accordance with the EPD recommended Codes of Practice on the Packaging, Labelling & Storage of Chemical Wastes and Waste Disposal (Chemical Waste) (General) Regulation under the Waste Disposal Ordinance;
- Store general refuse in enclosed bins or compaction units separate from C&D materials and chemical wastes. A reputable waste collector should be employed to collect and dispose of general refuse from the site on a daily or every second day basis;
- Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste;
- Waste storage areas within the project site should be well maintained and cleaned regularly to prevent cross-contamination;
- Cover trucks with tarpaulin and transporting waste in enclosed containers to minimize windblown litter and dust during transportation;
- Maintain temporary stockpiles and ensure with well cover to prevent inclement weather (e.g. heavy rain).

9.4.3. To clearly spell out the types and amount of waste generated and its associated mitigation measures, a Waste Management Plan (WMP), as part of EMP should be prepared in accordance with ETWB TC(W) No.19/2005 and submitted to the Project / Site Engineer for approval. The recommended mitigation measures should form the basis of the WMP.

C&D Materials/Waste

9.4.4. It is presently anticipated that most of the C&D materials/waste will need to be transported off-site for re-use, recycling and disposal by trucks. With the implementation of the recommended dust and noise control / mitigation measures presented in the air quality and noise sections, such as covering and stockpiling materials to avoid dust and other nuisance impacts from truck movements, these secondary environmental factors are not expected to be a concern.

9.4.5. C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at public fill reception facilities or reclamation site. The following mitigation measures should be implemented in handling the excavated and C&D materials:

- Maintain temporary stockpiles and ensure with well cover to prevent inclement weather;
- Reuse excavated fill material for backfilling;
- Carry out on-site sorting; and
- According to the DEVB TC(W) No. 6/2010, implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials/waste is properly documented and verified. Where waste generation is unavoidable, the potential for recycling or reuse shall be considered. If waste cannot be recycled, disposal routes described in the EMP shall be followed. The amount of waste generated, recycled, and disposed shall be recorded. Trip-ticket system shall also be implemented in accordance with Development Bureau TC(W) No. 6/2010 to monitor the disposal of C&D material and control fly-tipping. Delivery site is subject to the designation by the PFC according to the DEVB TC(W) No.6/2010.

Chemical Waste

9.4.6. If chemical wastes are produced at the construction site, the Contractor would be required to register with the EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosives, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. Chemical waste should be collected by a licensed chemical waste collector and to be disposed of at a licensed chemical waste treatment and disposal facility in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.

9.4.7. Mitigation measures will also include the provision of protective gloves and clothing to site workers, use of bulk earth movers to remove contaminated materials to prevent any possible

human contact, provision of adequate washing facilities and the use of licensed chemical waste collectors to ensure legal disposal of waste, etc.

General Refuse

9.4.8. Recycling bins should also be placed to encourage recycling. Enclosed and covered areas should be provided for general refuse collection to prevent waste materials from being blown around by the wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problem. Also, routine cleaning for these areas should be implemented to keep areas clean, so that intentional or accidental release into the surrounding environment does not occur without proper management.

9.4.9. Particularly, food waste is the main source of generating unpleasant odour and causing environmental hygiene concerns. Team will explore the feasibility for providing separate recycling bins will be provided for food waste to facilitate the recycling of food waste on-site or off-site in a hygienic manner in detailed design stage.

9.4.10. With the implementation of good waste management practices at the Site, and the abovementioned mitigation measures at the Project Site, adverse environmental impacts are not expected to arise from the storage, handling and transportation of C&D materials, chemical waste and general refuse generated during construction phase.

9.5. Potential Impacts and Mitigation Measures during Operation Phase

9.5.1. The major type of waste generated from the operation phase is general refuse. Insignificant amount of Chemical wastes are anticipated to be produced during operations and maintenance of the proposed project. With reference to Monitoring of Solid Waste in Hong Kong - Waste Statistics for 2022 by EPD, the disposal rate of domestic waste and non-domestic waste were 0.93 kg/person/day and 0.59 kg/person/day. The estimated quantities of general refuse anticipated for domestics uses will be 4,630 kg/day, assuming a residential population of 4,978. The estimated general refuse generated by commercial uses will be 388 kg/day with an estimated population of 658 person.

9.5.2. General refuse will be removed on regular basis to minimize odour, pest and litter impacts. To promote the recycling of waste paper, aluminium cans and plastic bottles, the 3-coloured waste separation bins for the collection of recyclable municipal waste will be clearly labelled and placed at convenient locations. The recyclable materials will then be collected by reliable waste recycling agents on a regular basis. Refuse bins for Food waste will be provided to be collected by contracted collectors from site will be sent to the O-Park2 in Sha Ling (scheduled for commissioning in 2024). Waste generated will be disposed of at government waste disposal facilities such as NENT Landfill or refuse transfer station. The Property Management

will register with EPD as a chemical waste producer and handle and dispose of chemical waste in accordance with the Waste Disposal (Chemical Waste) (General) Regulation if any chemical waste produced. Hence, adverse waste management implication is not anticipated during the operation phase.

9.6. Conclusion

9.6.1. During the construction phase, the major waste types generated by the construction activities for this project will include C&D materials from the excavation and foundation works, substructure and superstructures work; chemical waste from maintenance and servicing of construction site and equipment; general refuse from the workforce. Provided that all these identified wastes are reused and recycled if appropriate, handled, transported and disposed of in strict accordance with the relevant legislative and recommended requirements and that the recommended good site practices and mitigation measures are properly implemented, no adverse environmental impact is expected during the construction phase.

9.6.2. During the operation phase, the key waste types generated will be general refuse. Provided that all these wastes are reused and recycled if appropriate, handled, transported and disposed of in strict accordance with the relevant legislative requirements and the recommended mitigation measures are properly implemented, no adverse environmental impact is expected during the operation phase.

10. Overall Conclusion

10.1.1. Air quality impact (including vehicular and chimney emission), traffic noise, fixed plant noise water quality, and land contamination are evaluated in this Environmental Assessment Report for the Application Site.

10.1.2. There is no active chimneys and SP License record identified within 200m from the Proposed Amendment. The setback from the proposed commercial tower and residential towers to the nearby roads, future fresh air intake location of the air conditioning system and openable windows for ventilation would comply with the recommended buffer distance in Table 3.1, Chapter 9 of the HKPSG regarding vehicular emission for air sensitive use. Therefore, it is anticipated that the Proposed Amendment would not subject to unacceptable air quality impact.

10.1.3. The potential environmental noise impacts from nearby road traffic and fixed noise sources on the Proposed Amendment have been evaluated.

10.1.4. For traffic noise impact assessment, all NSRs in the Proposed Amendment will comply with the relevant traffic noise standard stipulated in HKPSG with the implementation of noise mitigation measures, including acoustic window/ acoustic door (baffle type), and fixed window/ fixed glazing/ maintenance window. The Proposed Amendment would not subject to significant adverse traffic noise impact

10.1.5. Fixed noise impact assessment has been carried out for the Proposed Amendment. The results of the assessment have indicated that the predicted fixed noise levels of all NSRs would comply with the fixed noise standard under the Noise Control Ordinance.

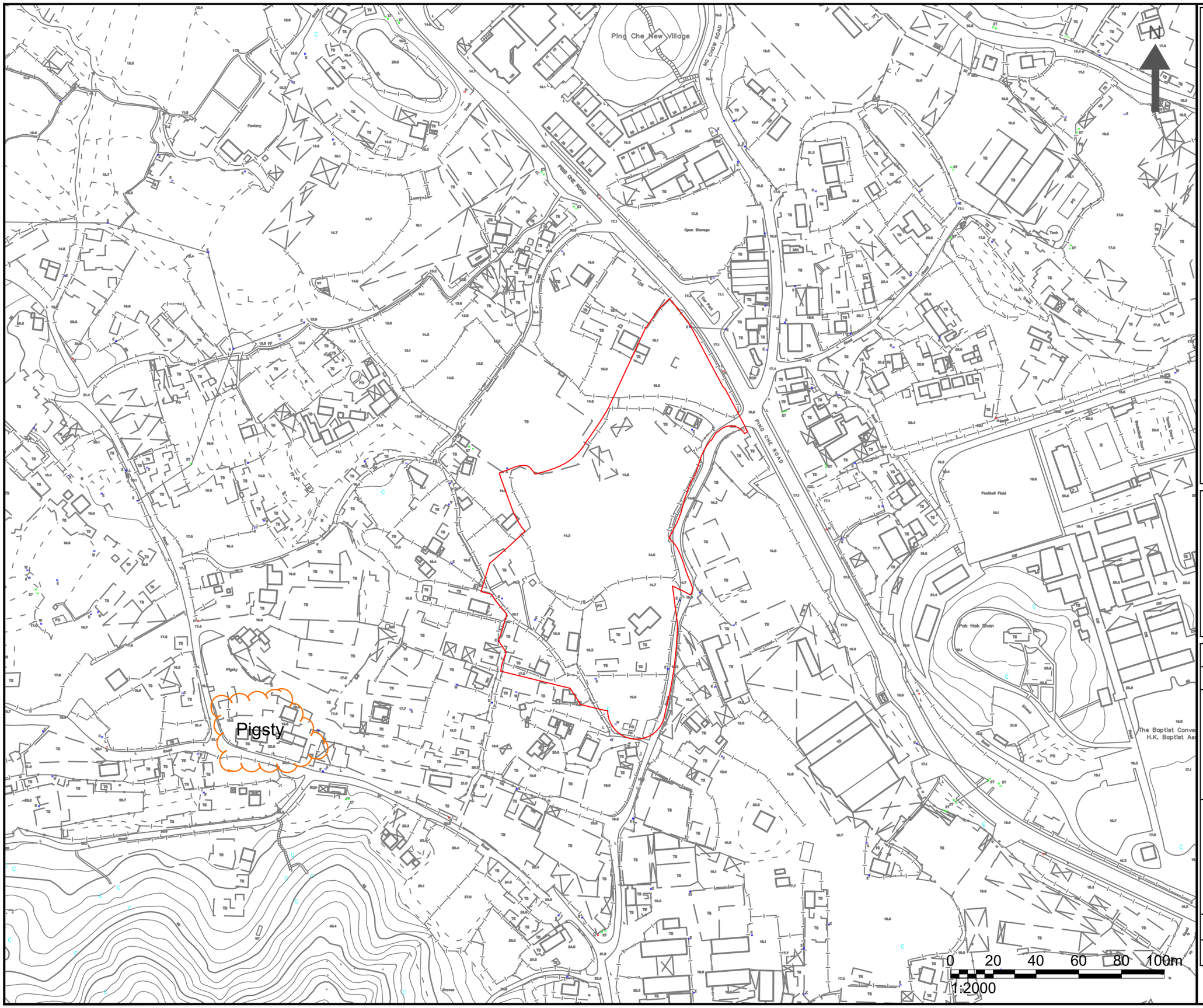
10.1.6. For water quality assessment, the Project would not involve any construction works at/within the above identified watercourses. Therefore, it is not expected to be affected during the construction and operation phases of the Project.

10.1.7. The Application Site is currently used as open storage area for construction material and machinery. No record of chemical spillage accident and submission relating to land contamination assessment at the Application Site in the past 5 years.

10.1.8. According to site inspection, the activities carried out within site area generated waste oil, and chemical storage practices were observed. It is recommended to conduct further land contamination assessment following the “Practice Guide for Investigation and Remediation of Contamination Land” published by EPD in later stage. If found to be necessary, remediation works for the site should be completed prior to the commencement of development works at the site.

10.1.9. For waste management, top priority should be given to waste avoidance, followed by minimization, reuse/recycling, treatment and safe disposal of waste as a last resort during construction and operation phases.

Figures



NOTES :

APPLICATION SITE

Consultant

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Project No. :	2127
Drawing By :	CS

Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

APPLICATION SITE LOCATION & ITS ENVIRONS

Drawing No : FIGURE 3.1	Revision : 1
Scale : AS SHOWN	Date : OCT 2023

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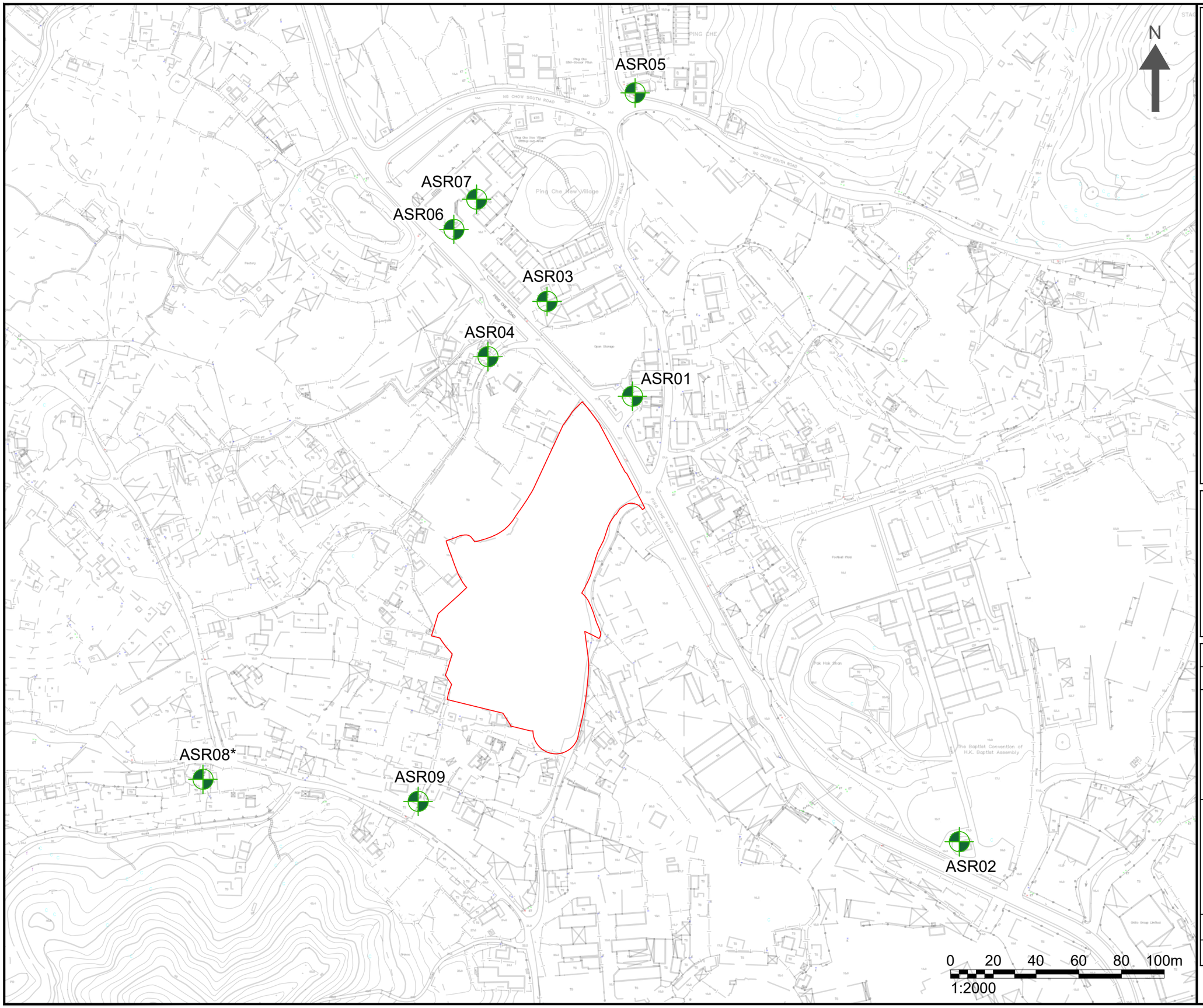
C:\USERS\USER\SYNOLOGYDRIVE\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\01 EA (AIR+NOISE+LANDCON)\DRAFT 2\FIG\FIG 3.1 SITE LOCATION_ISSUE 2.DWG



NOTES :

APPLICATION SITE

REPRESENTATIVE AIR QUALITY SENSITIVE RECEIVERS

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Drawing Title :

LOCATION OF REPRESENTATIVE AIR QUALITY SENSITIVE RECEIVERS

Drawing No :	Revision :
FIGURE 5.1	1
Scale :	Date :
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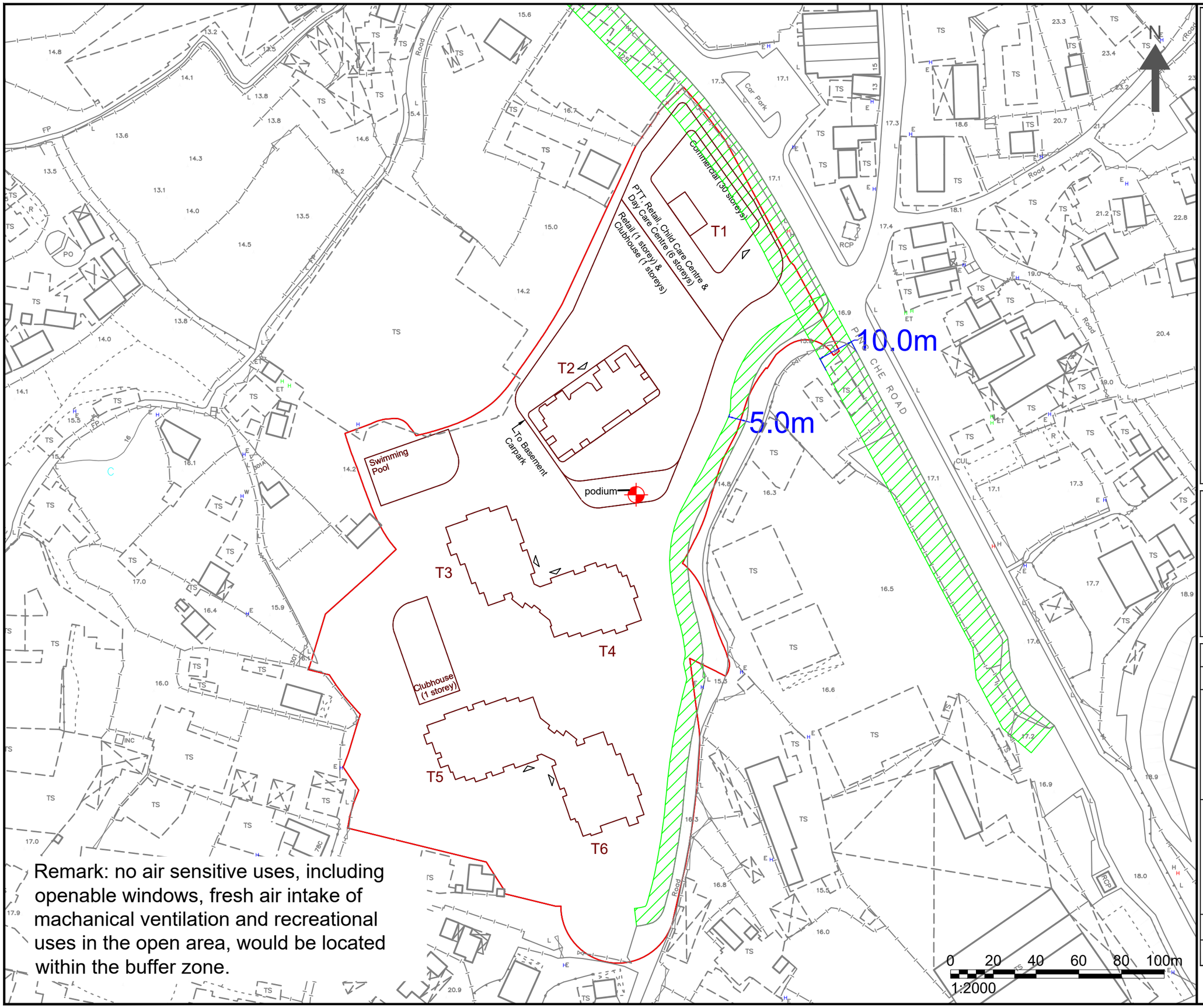

NOTES :

APPLICATION SITE

BUFFER DISTANCE FROM ROAD

PROPOSED BUILDING STRUCTURE

LOCATION OF EXHAUST AIR OUTLET

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Project No. :	2127
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APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

BUFFER DISTANCE FROM SURROUNDING ROADS AND LOCATION OF EXHAUST AIR OUTLET(GROUND FLOOR)

Drawing No : FIGURE 5.2a	Revision : 1
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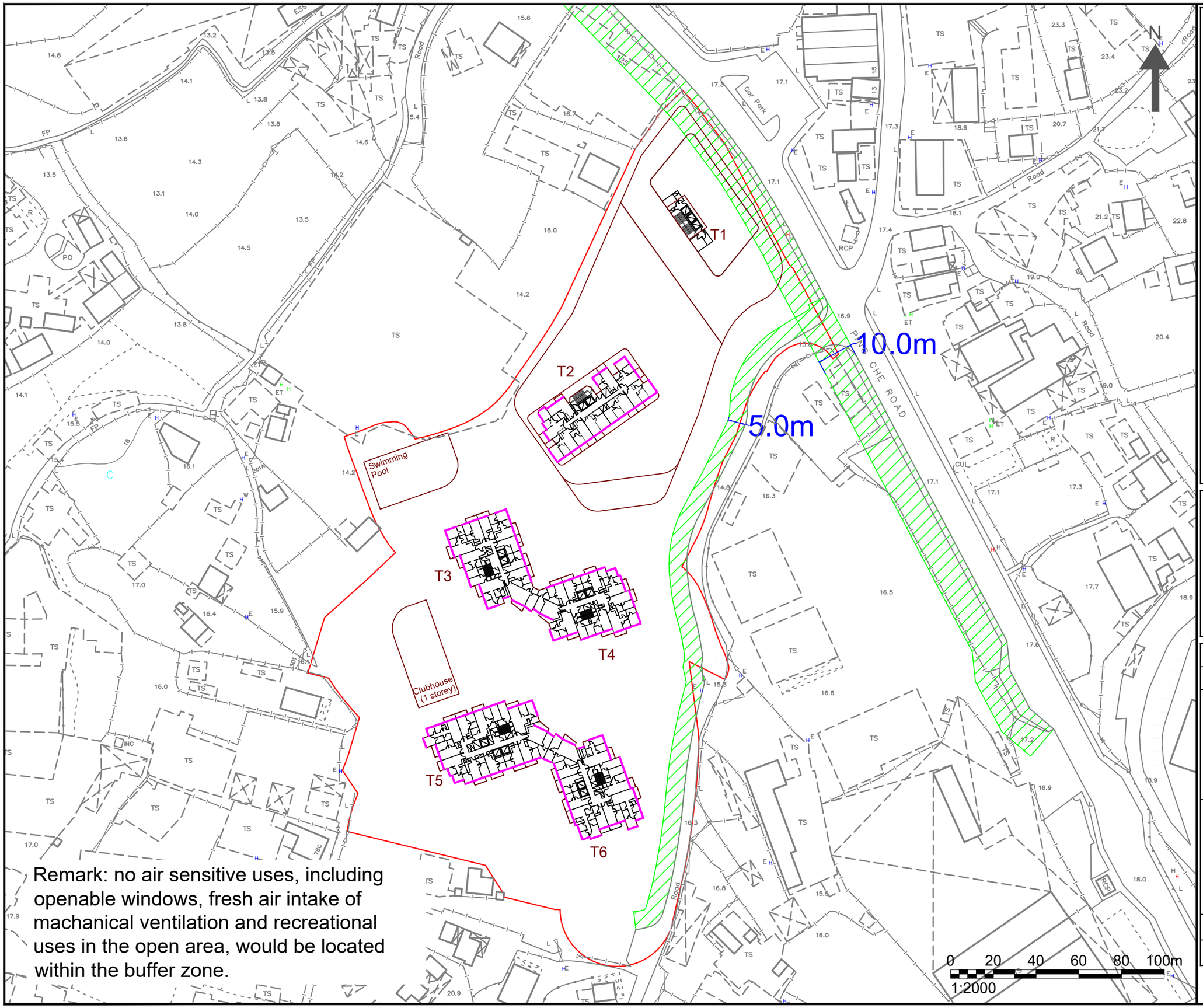
G:\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\01 EA (AIR+NOISE+LANDCON)\ISSUE 3\FIGURE\FIG 5.2 WORKING_20240215.DWG



NOTES :

APPLICATION SITE

BUFFER DISTANCE FROM ROAD

PROPOSED BUILDING STRUCTURE

OPENABLE WINDOW

Consultant

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Project No. :	2127
Drawing By :	CS

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APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

BUFFER DISTANCE FROM SURROUNDING ROADS AND LOCATION OF OPENABLE WINDOWS (TYPICAL FLOOR)

Drawing No :	Revision :
FIGURE 5.2b	1
Scale :	Date :
AS SHOWN	OCT 2023

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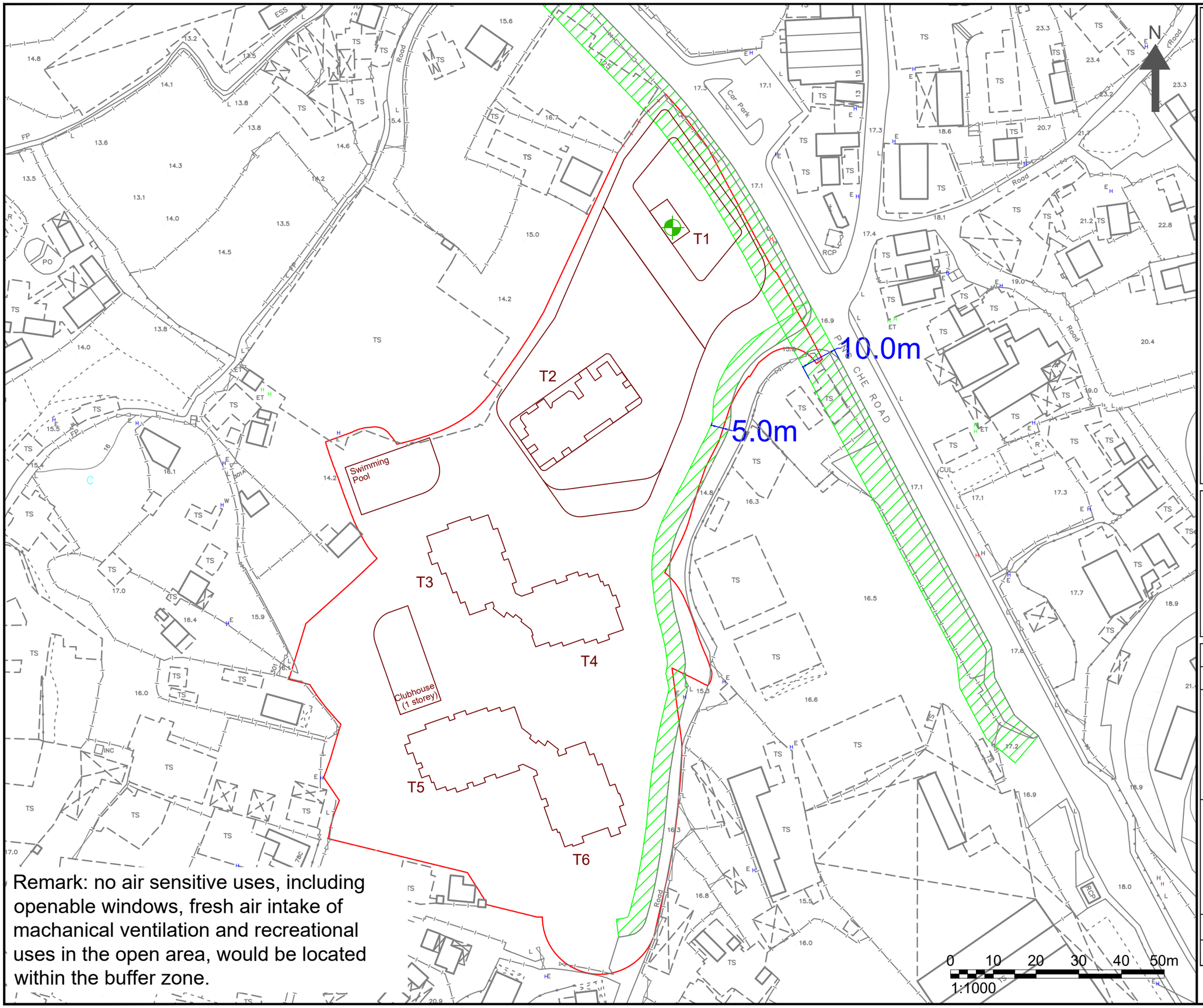
G:\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\01 EA (AIR+NOISE+LANDCON)\ISSUE 3\FIGURE\FIG 5.2 WORKING_20240215.DWG



Remark: no air sensitive uses, including openable windows, fresh air intake of machanical ventilation and recreational uses in the open area, would be located within the buffer zone.

NOTES :

APPLICATION SITE

BUFFER DISTANCE FROM ROAD

PROPOSED BUILDING STRUCTURE

LOCATION OF FRESH AIR INTAKE

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Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

BUFFER DISTANCE FROM SURROUNDING ROADS AND LOCATION OF FRESH AIR INTAKES(Rooftop)

Drawing No :	Revision :
FIGURE 5.2c	1
Scale :	Date :
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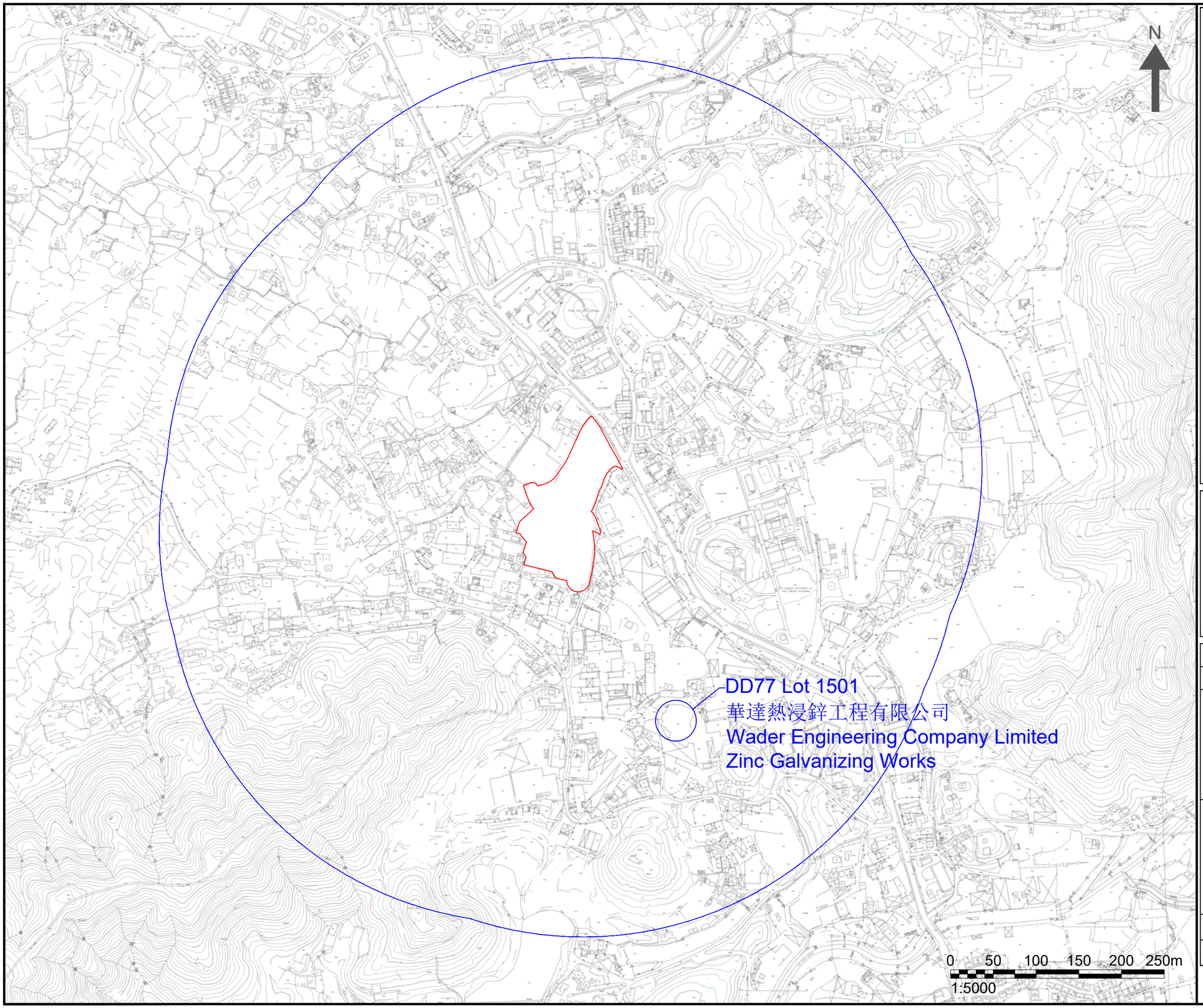
G:\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\01 EA (AIR+NOISE+LANDCON)\ISSUE 3\FIGURE\FIG 5.2 WORKING_20240215.DWG



NOTES :

APPLICATION SITE

500m ASSESSMENT AREA

Consultant

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Drawing By :	CS

Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

500M Assessment Area with SP inspection information

Drawing No : FIGURE 5.3	Revision : 1
Scale : AS SHOWN	Date : OCT 2023

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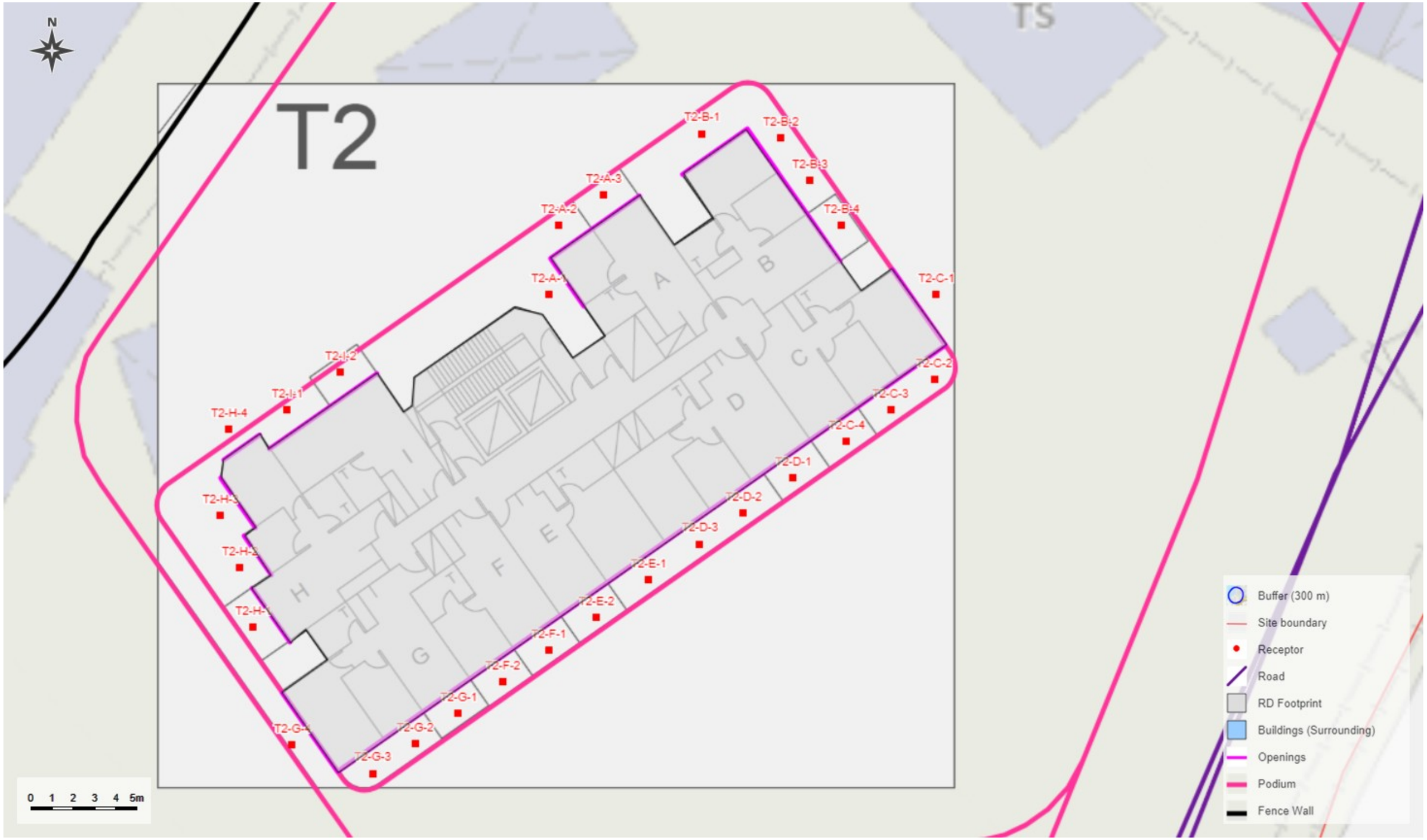
A3 420 x 297

C:\USERS\NGANCHUNSANG\SYNOLOGYDRIVE\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\01 EA (AIR+NOISE+LANDCON)\ISSUE 3\FIGURE\FIG 5.3 500M ASSESSMENT AREA WITH SP LICENSE_ISSUE 2.DWG



LOCATIONS OF NOISE ASSESSMENT POINTS (T2)

Web-NAT-Plan (A3)

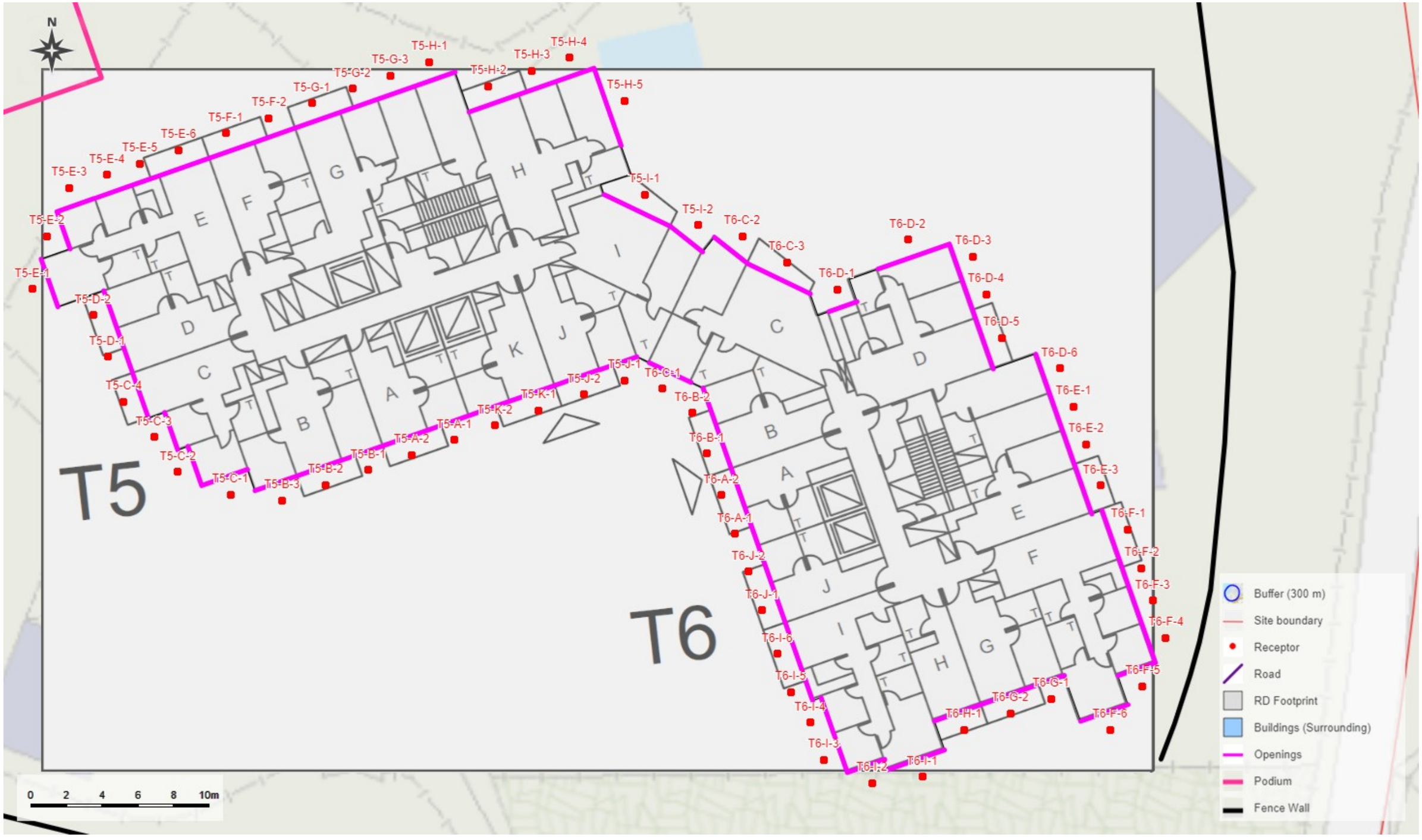
Project Code:	2127 [v1]	User:	AEC
Project Name:	Ping Che	Date/Time:	2023-09-19 10:20
Watermark:	AEC/2127/T2 of 3/2023-09-13 05:47	Remark:	



LOCATIONS OF NOISE ASSESSMENT POINTS (T3&T4)

Web-NAT-Plan (A3)

Project Code:	2127 [v1]	User:	AEC
Project Name:	Ping Che	Date/Time:	2023-09-19 10:20
Watermark:	AEC/2127/T3&T4 of 3/2023-09-13 05:47	Remark:	



LOCATIONS OF NOISE ASSESSMENT POINTS (T5&T6)

Web-NAT-Plan (A3)

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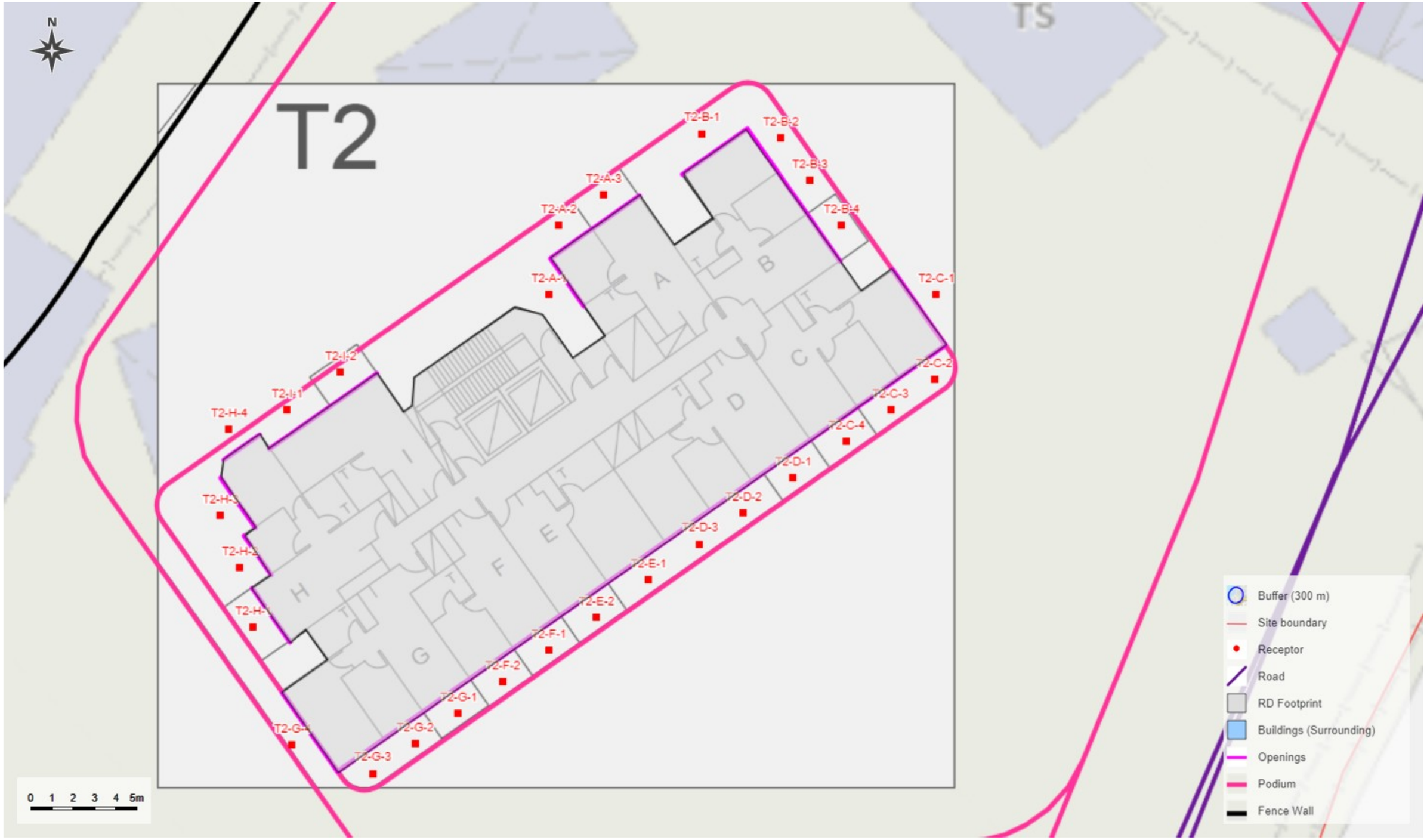
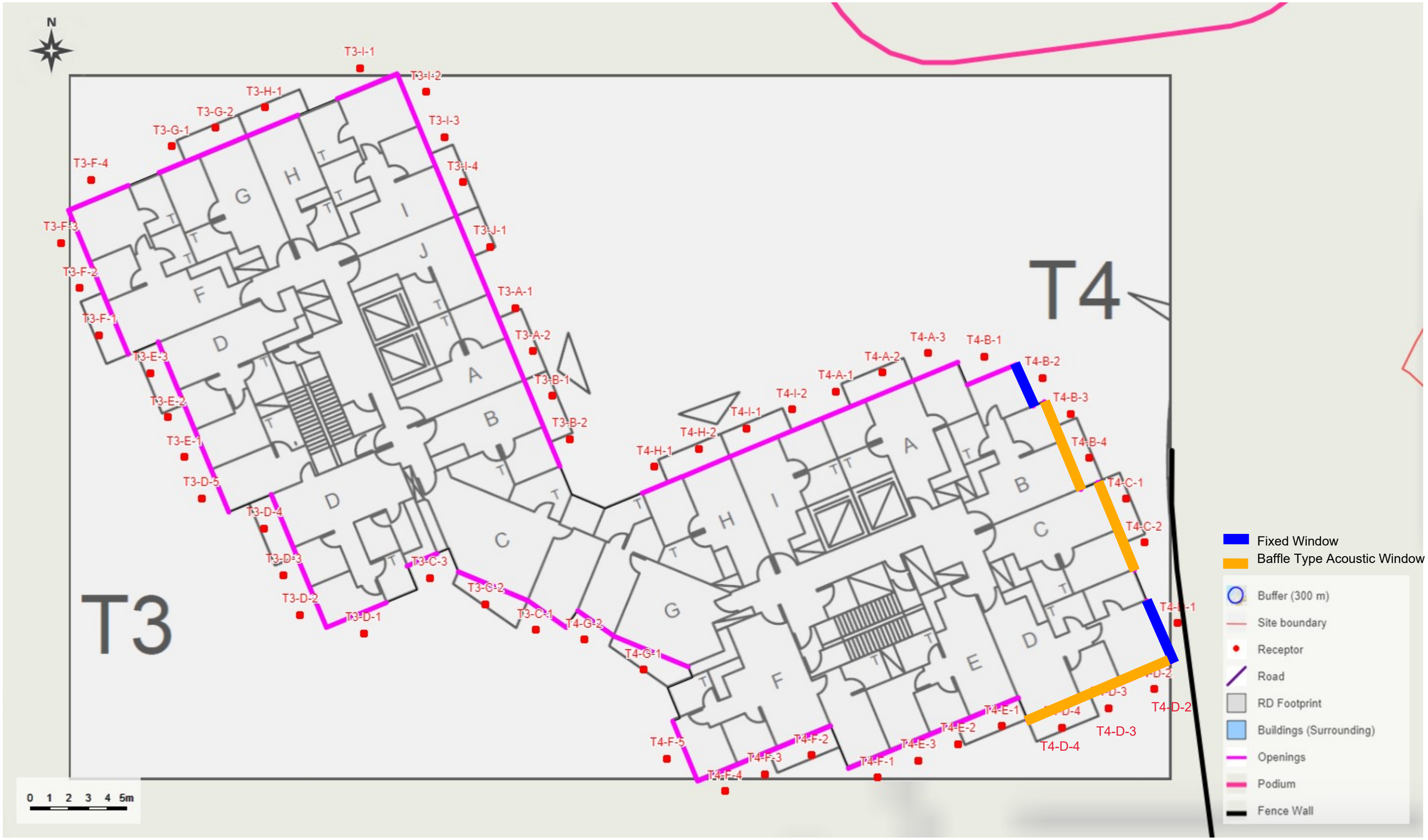
Project Name:	Ping Che	Date/Time:	2023-09-19 10:20
Watermark:	AEC/2127/T5&T6 of 3/2023-09-13 05:47	Remark:	



NAP AND MITIGATION MEASURES (T2)

Web-NAT-Plan (A3)

Project Code:	2127 [v1]	User:	AEC
Project Name:	Ping Che	Date/Time:	2023-09-19 10:20
Watermark:	AEC/2127/T2 of 3/2023-09-13 05:47	Remark:	



NAP AND MITIGATION MEASURES (T3&T4)

Web-NAT-Plan (A3)

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Project Name:	Ping Che	Date/Time:	2023-09-19 10:20
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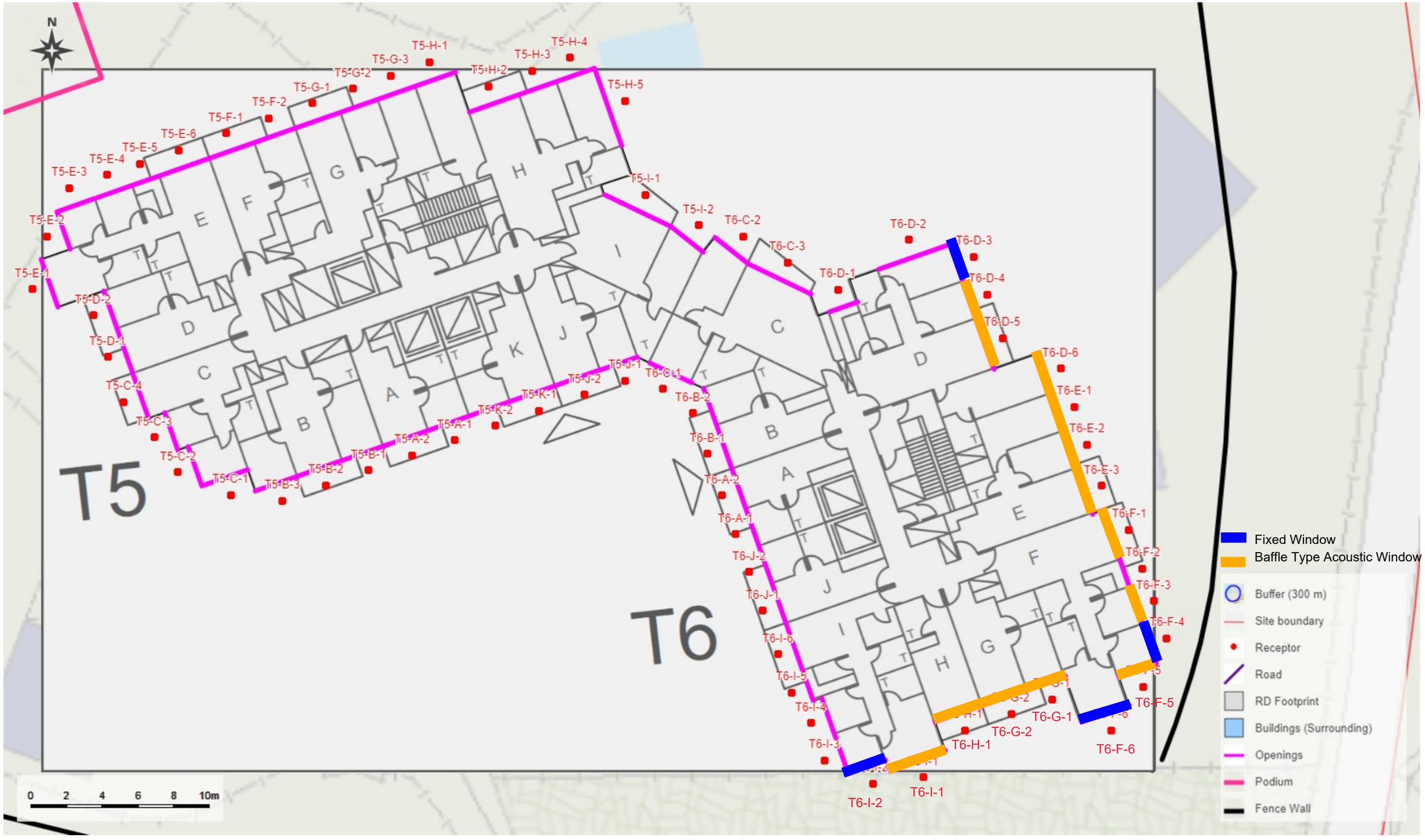

NAP AND MITIGATION MEASURES (T5&T6)

Web-NAT-Plan (A3)

Project Code:	2127 [v1]	User:	AEC
Project Name:	Ping Che	Date/Time:	2023-09-19 10:20
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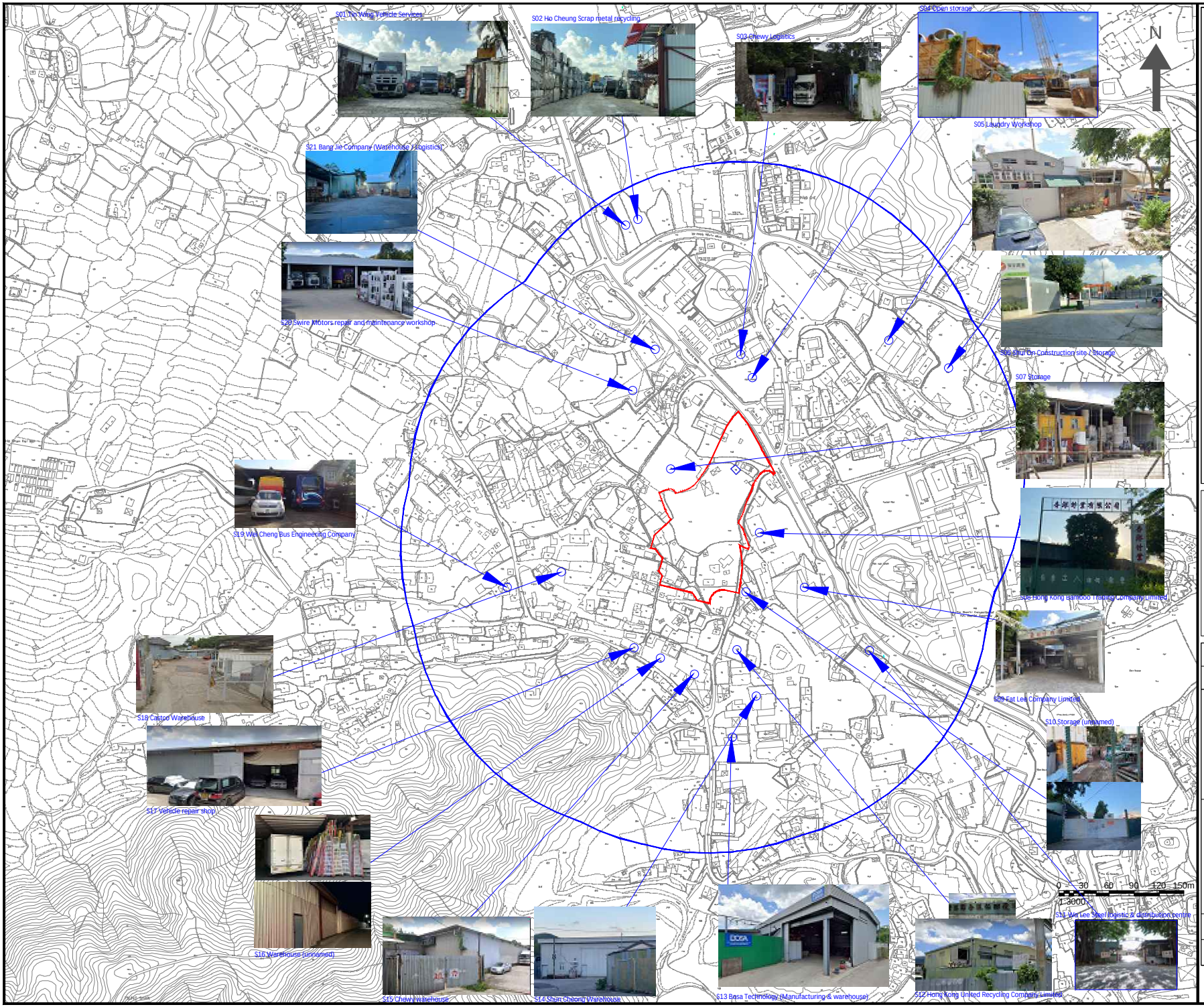

NOTES :

PROJECT SITE

300M ASSESSMENT AREA

Consultant

Allied Environmental Consultants Limited

Project No. :	2127
Drawing By :	CL

Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLA PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT (RESIDENTIAL & COMMERCIAL) AT LOT 796 AND 1008 RP AT D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

Locations of the potential fixed noise sources

Drawing No : FIGURE 6.3	Revision : 0
Scale : AS SHOWN	Date : SEPT 2023

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A3 420 x 297

E:\ISSUE 2\[819.4463] FPN.DWG

WSR1

WSR2

WSR3

WSR4

N

0 50 100 150 200 250m

1:5000

NOTES :

APPLICATION SITE

500M ASSESSMENT AREA

NATURAL WATERCOURSE

Consultant

Allied Environmental Consultants Limited

Project No. : 2127

Drawing By : CS

Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

500M ASSESSMENT AREA AND WATER SENSITIVE RECEIVERS

Drawing No :	Revision :
FIGURE 7.1	1
Scale :	Date :
AS SHOWN	APR 2024

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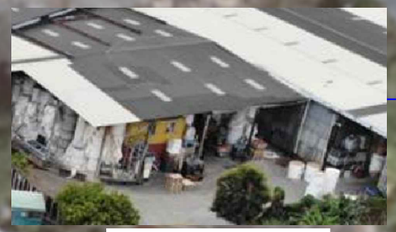
A3 420 x 297

G:\2127 PING CHE DD77\03 DRAWING\01 AEC DRAWINGS\2127 FIG 1.1 SITE LOCATION_ISSUE 2 - COPY.DWG



OLC-1Warehouse



Entrance

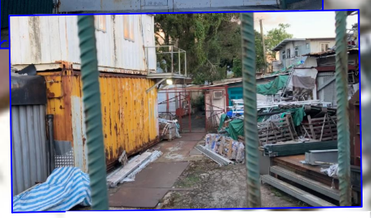


Temporary Office



OLC-2Warehouse





OLC-3
Open Storage

0 10 20 30 40 50m

1:1000

NOTES :

APPLICATION SITE

MACHINERY STORAGE AREA

MACHINERY MAINTENANCE AREA

BUILDING MATERIAL STORAGE AREA

POTENTIAL OFFSITE LAND CONTAMINATION SOURCE

Consultant

Allied Environmental Consultants Limited

Project No. : 2127

Drawing By : LL

Project :
APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :
INDICATIVE AIR DRONE DIAGRAM (ON SITE AND IMMEDIATE SURROUNDING)

Drawing No :	Revision :
FIGURE 8.1a	1
Scale : AS SHOWN	Date : Apr 2024

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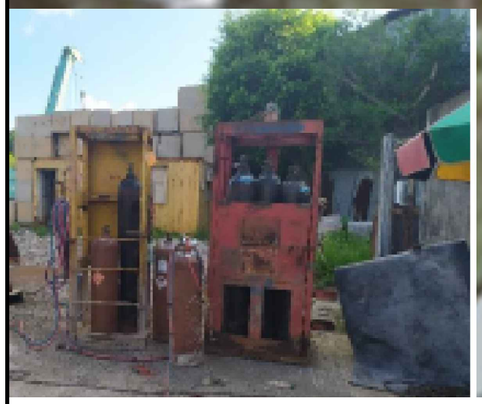
A3 420 x 297

G:\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\01 EA (AIR+NOISE+LANDCON)\ISSUE 4\LANDCON_FIG&APP\AIRDRONE.DWG



Waste oil container found
(improper storage)



acetylene cylinders found
(improper storage)

NOTES :

APPLICATION SITE

UNPAVED

STAINED SURFACE

Consultant

Allied Environmental Consultants Limited

Project No. :	2127
Drawing By :	LL

Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

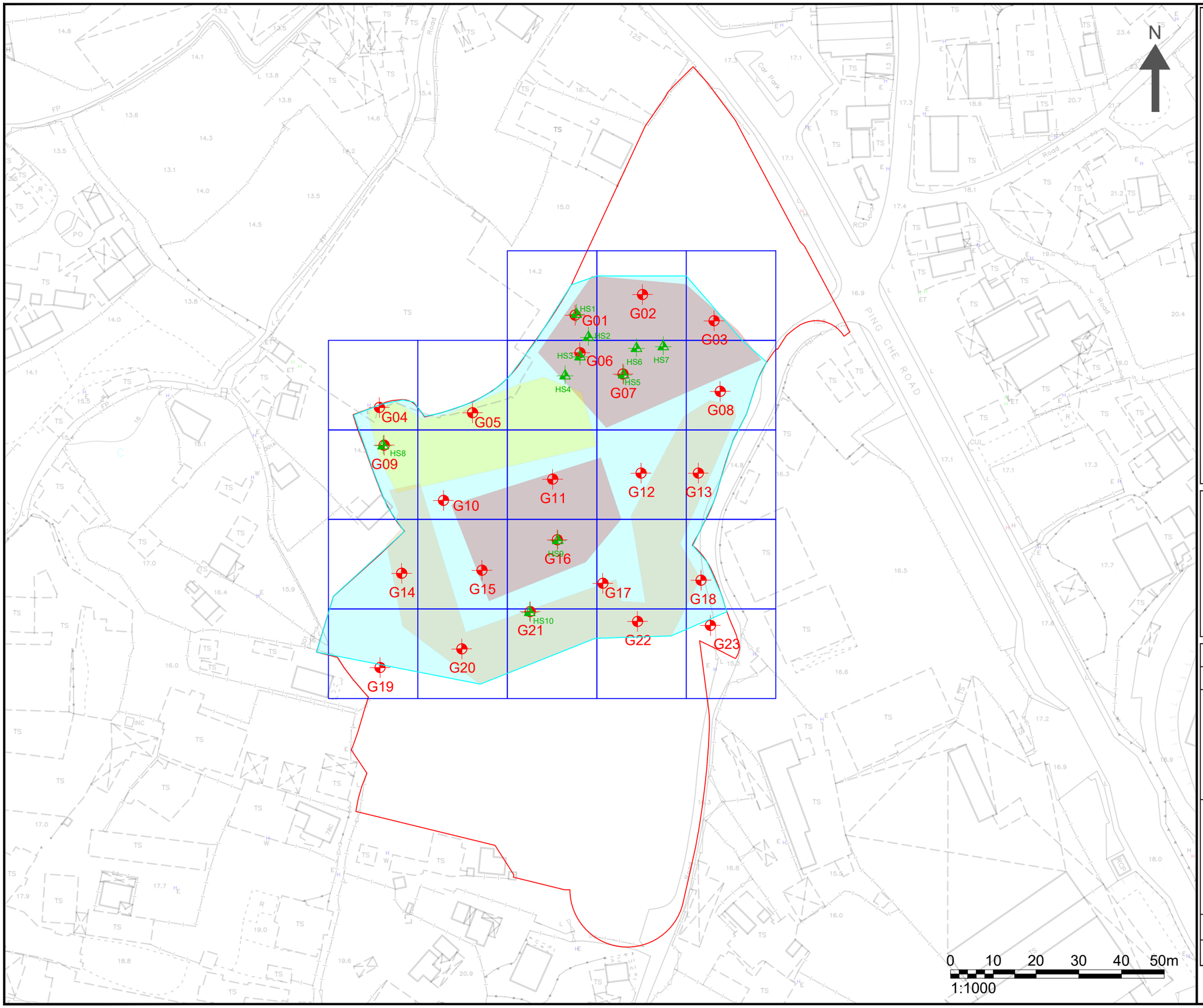
INDICATIVE AIR DRONE DIAGRAM (PAVING CONDITION OF OPEN STORAGE AREA)

Drawing No : FIGURE 8.1b	Revision : 1
Scale : AS SHOWN	Date : FEB 2024

DO NOT SCALE OFF DRAWING. THIS DRAWING IS NOT FOR CONSTRUCTION PURPOSES UNLESS EXPRESSLY STATED. ALL RIGHTS RESERVED AND REPRODUCTION IN ANY FORM MUST BE APPROVED BY ALLIED ENVIRONMENTAL CONSULTANTS LIMITED.

A3 420 x 297

G:\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\01 EA (AIR+NOISE+LANDCON)\ISSUE 5\LANDCON_FIG&APP\AIRDRONE.DWG



NOTES :

- APPLICATION SITE
- 25M X 25M SAMPLING GRID
- PROPOSED SAMPLING LOCATION (REGULAR GRID)
- PROPOSED SAMPLING LOCATION (HOT SPOT)
- WORKS AREA
- MACHINERY STORAGE AREA
- MACHINERY MAINTENANCE AREA
- BUILDING MATERIAL STORAGE AREA

Consultant

Allied Environmental Consultants Limited

Project No. :	2127
Drawing By :	CS

Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

LAND CONTAMINATION ASSESSMENT
PROPOSED SAMPLING LOCATION

Drawing No :	Revision :
FIGURE 8.2	1
Scale :	Date :
AS SHOWN	JUN 2024

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A3 420 x 297

G:\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\01 EA (AIR+NOISE+LANDCON)\ISSUE 5\FIGURE\FIG 5.1 REPRESENTATIVE ASR_ISSUE 5 - COPY.DWG

Appendix 2.1

Tentative Programme of the Project

Project: Proposed Mixed Use Development(Residential and Commercial), Lot 796 and 1008 RP and AdjoiningGovernment Land in Ping Che, Ta Kwu Leng , New Territories

Appendix 2.1 Tentative Programme of the Project(Indicative)

Work Stage / Month / Year	2028												2029												2030												2031												2032											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Site Clearance and Mobilisation							■	■	■	■	■	■																																															
Excavation and Lateral Support work													■	■	■	■	■	■	■	■	■																																							
Foundation, Piling and Pile cap work																						■	■	■	■	■	■	■	■																															
Superstructure and Filting-out work																														■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Appendix 3.1

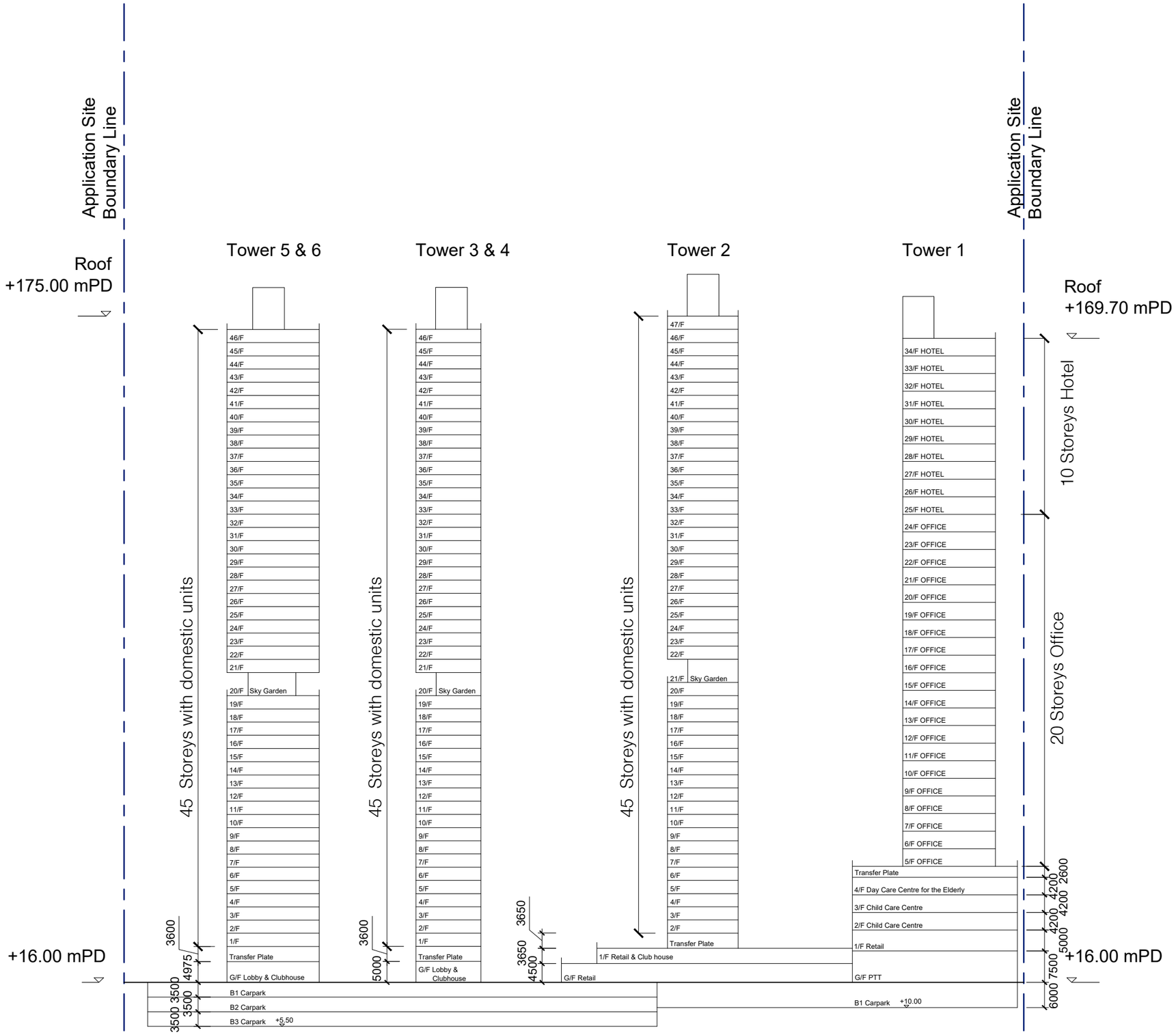
Master Layout Plan of the Proposed Amendment



BLOCK PLAN SK-1
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

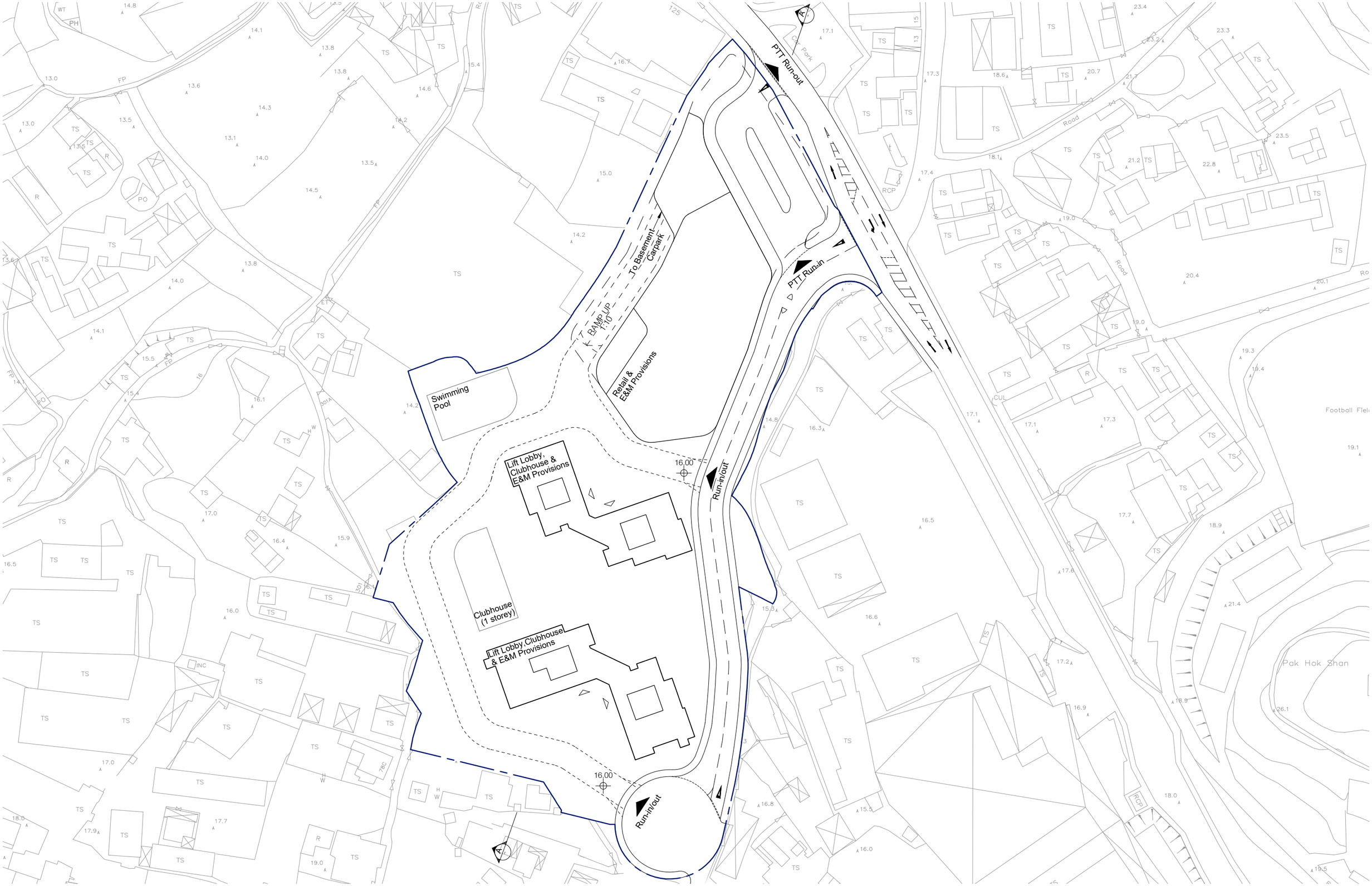
SINGULAR STUDIO LTD
11 DECEMBER 2023



SCHEMATIC SECTION AA' SK-2
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

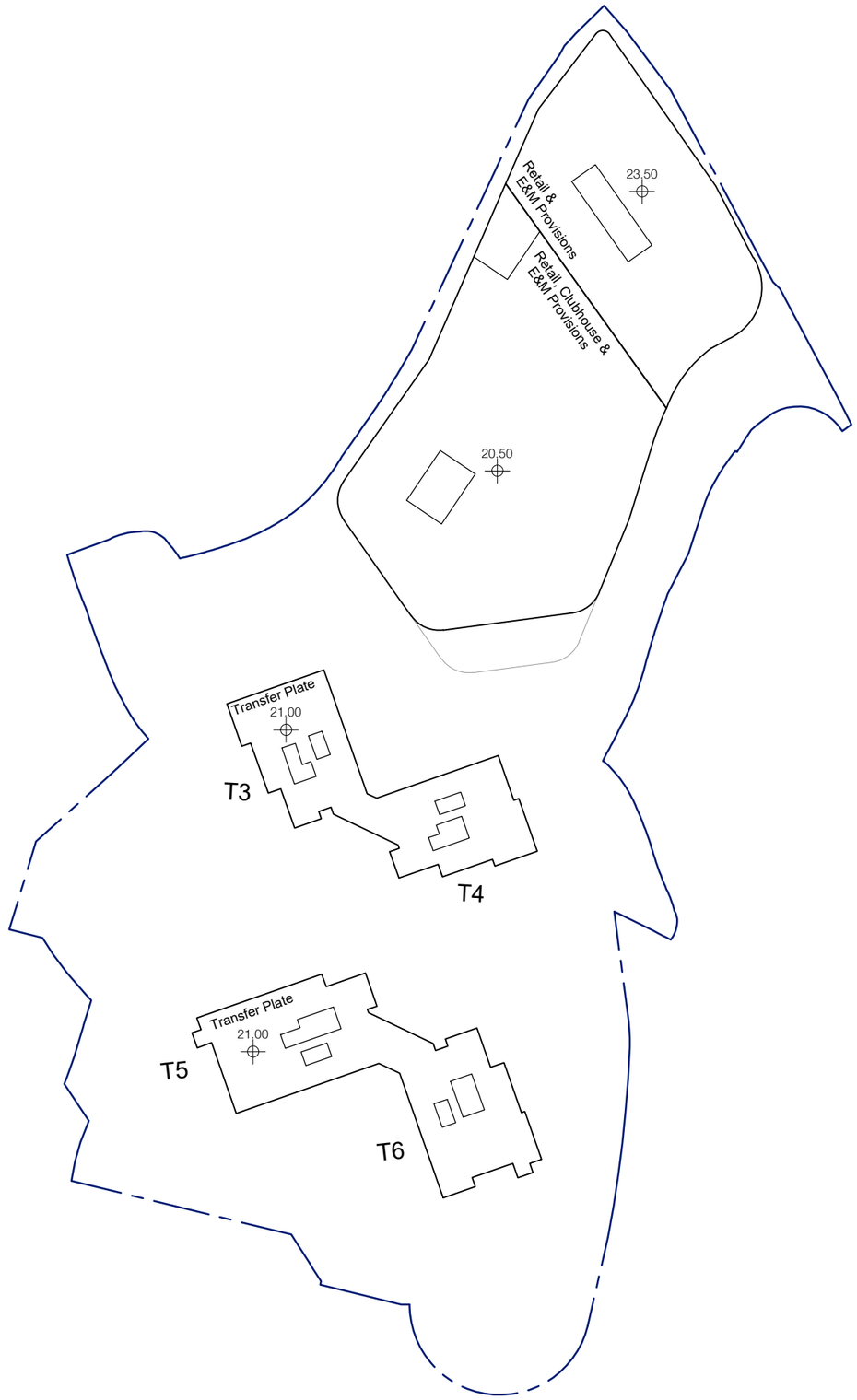
SINGULAR STUDIO LTD
6 OCTOBER 2023



GROUND FLOOR PLAN SK-3
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

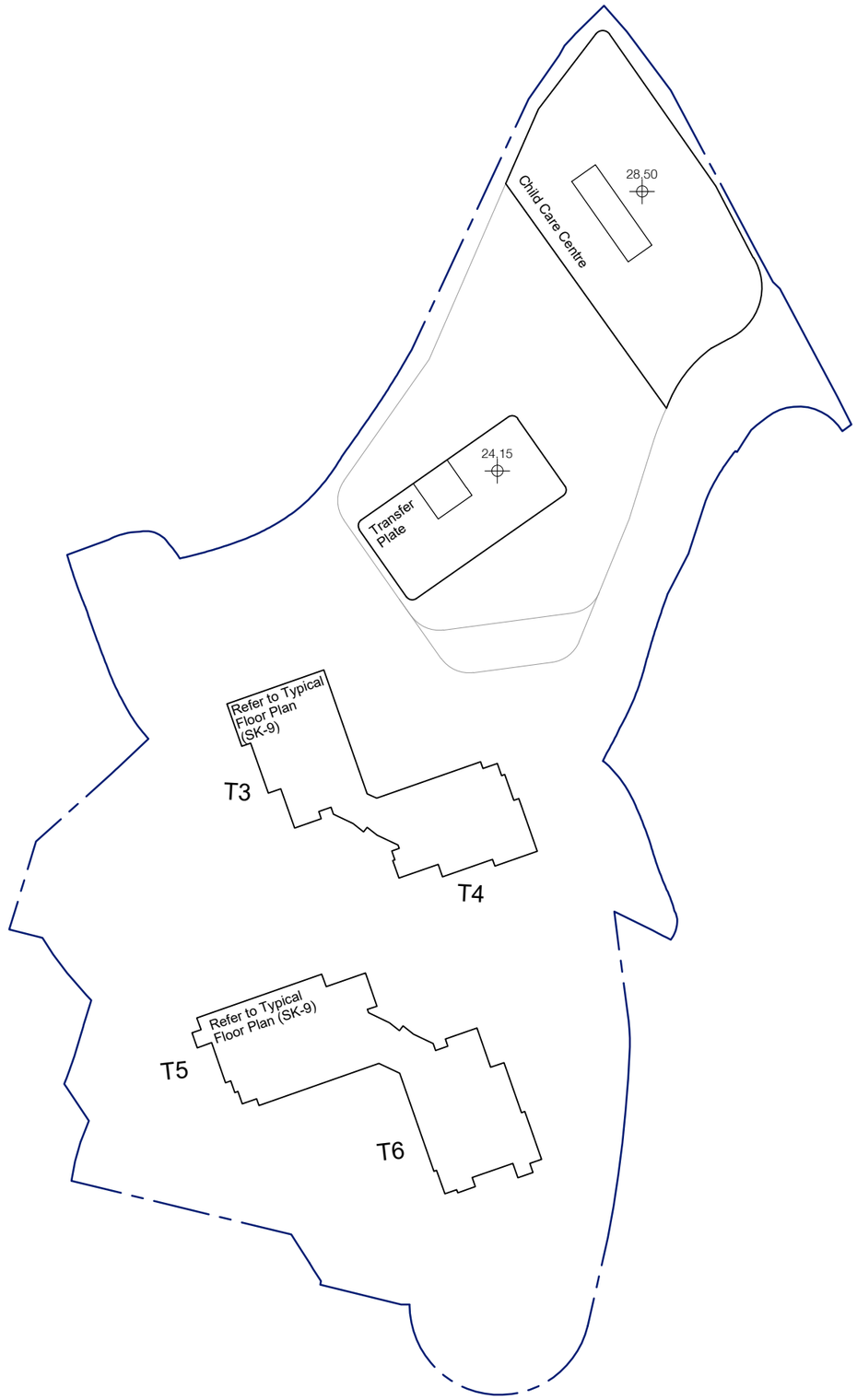
SINGULAR STUDIO LTD
11 DECEMBER 2023



FIRST FLOOR PLAN SK-4
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

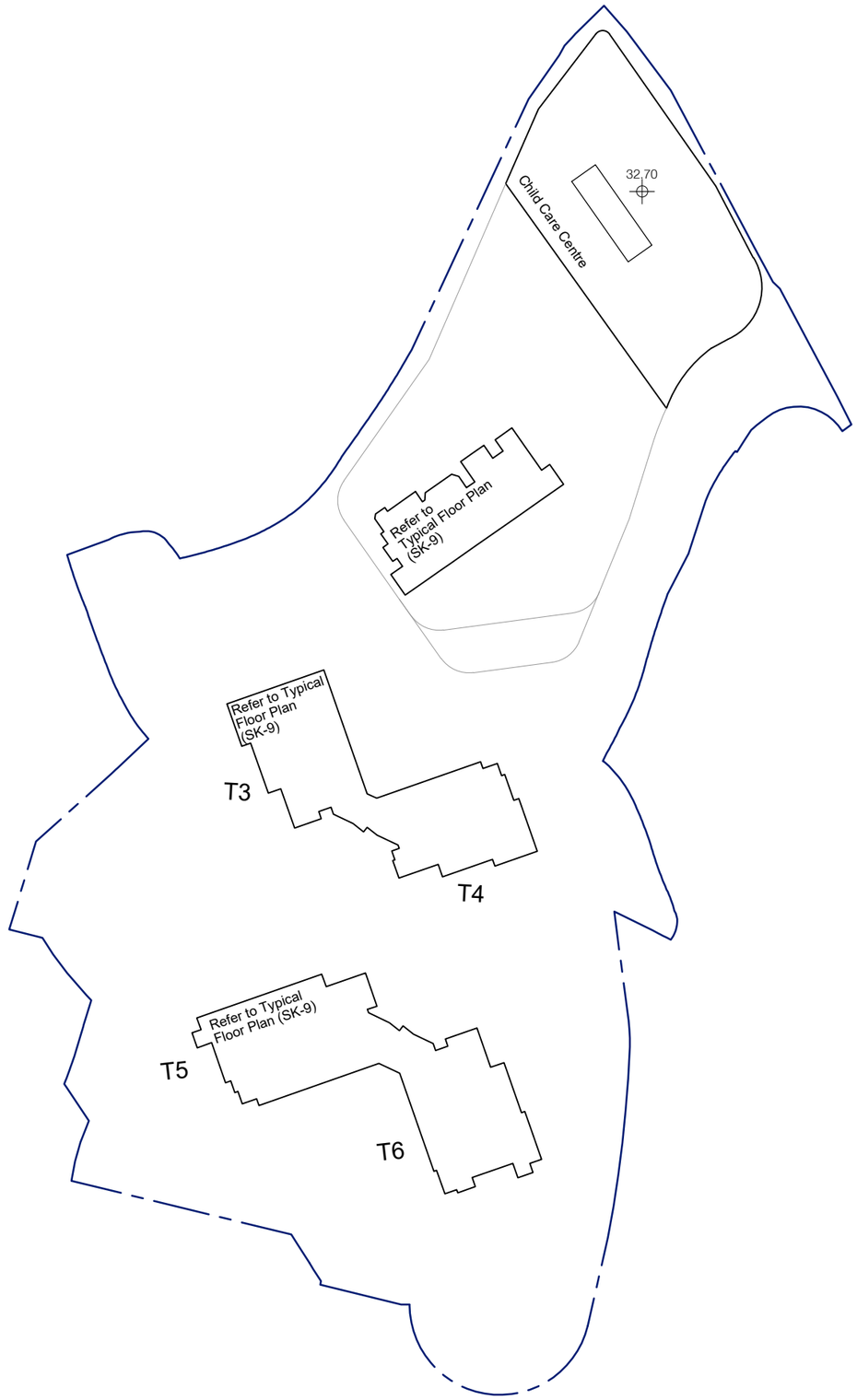
SINGULAR STUDIO LTD
12 OCTOBER 2023



SECOND FLOOR PLAN SK-5
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

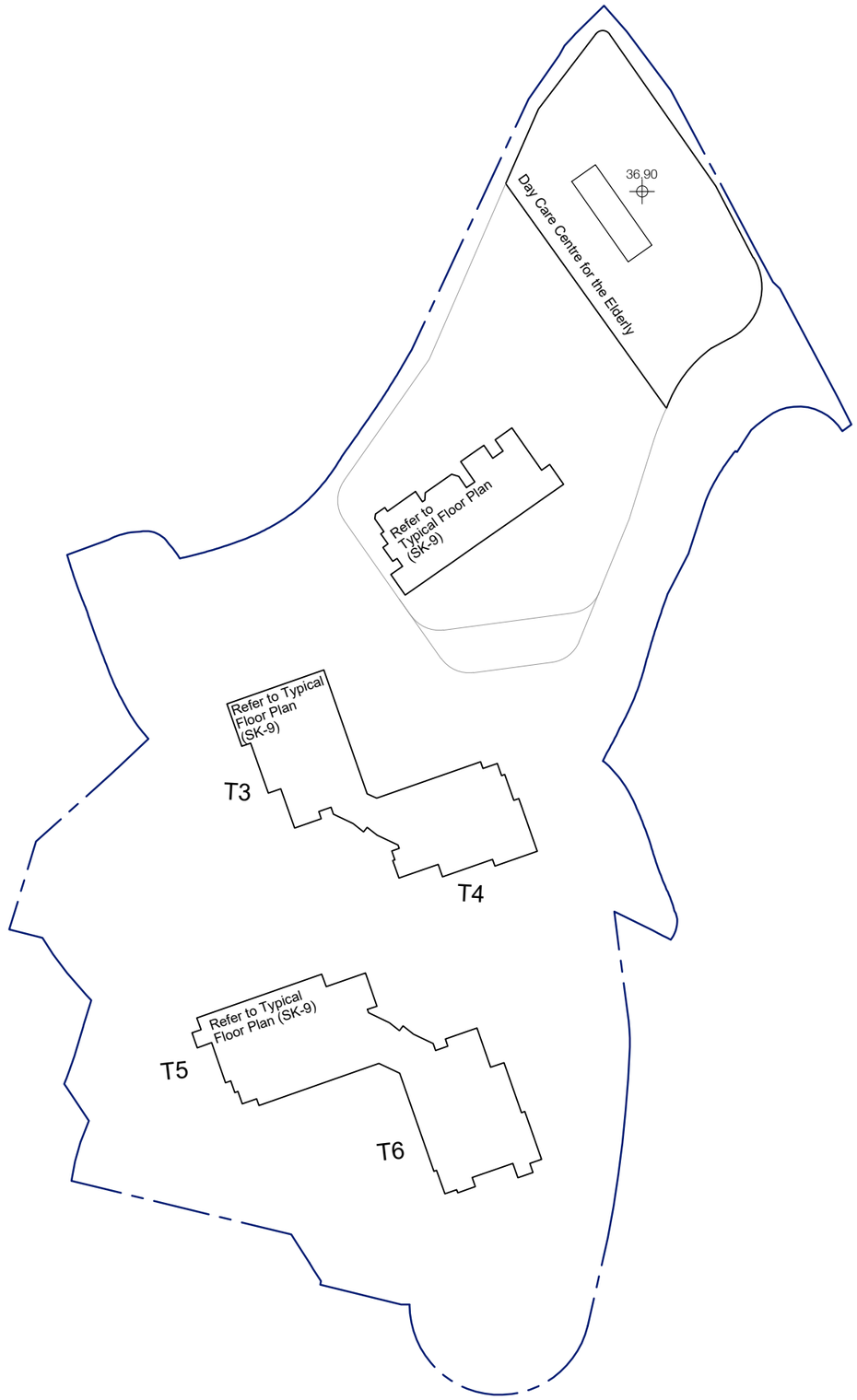
SINGULAR STUDIO LTD
12 OCTOBER 2023



THIRD FLOOR PLAN SK-6
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

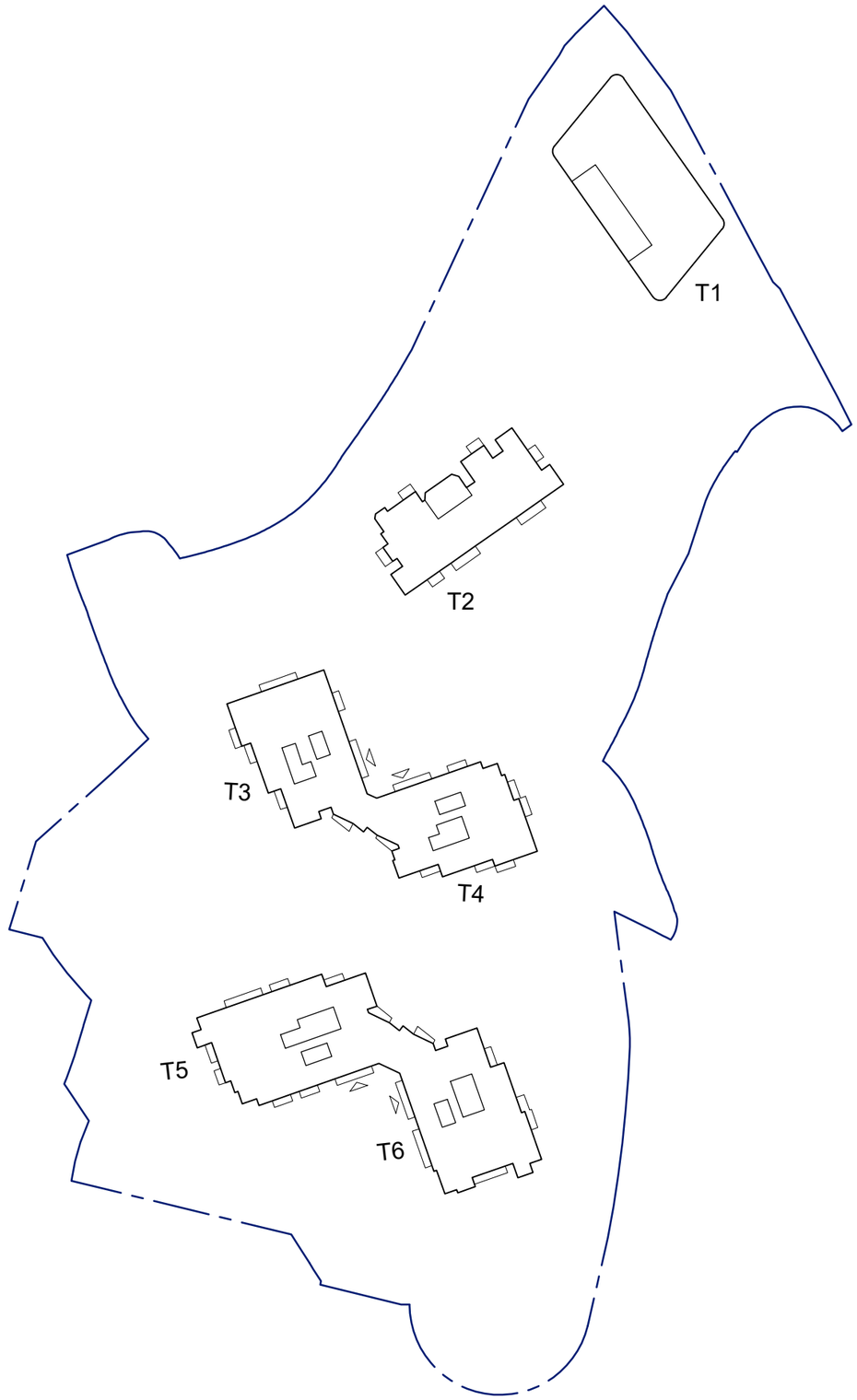
SINGULAR STUDIO LTD
12 OCTOBER 2023



FOURTH FLOOR PLAN SK-7
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

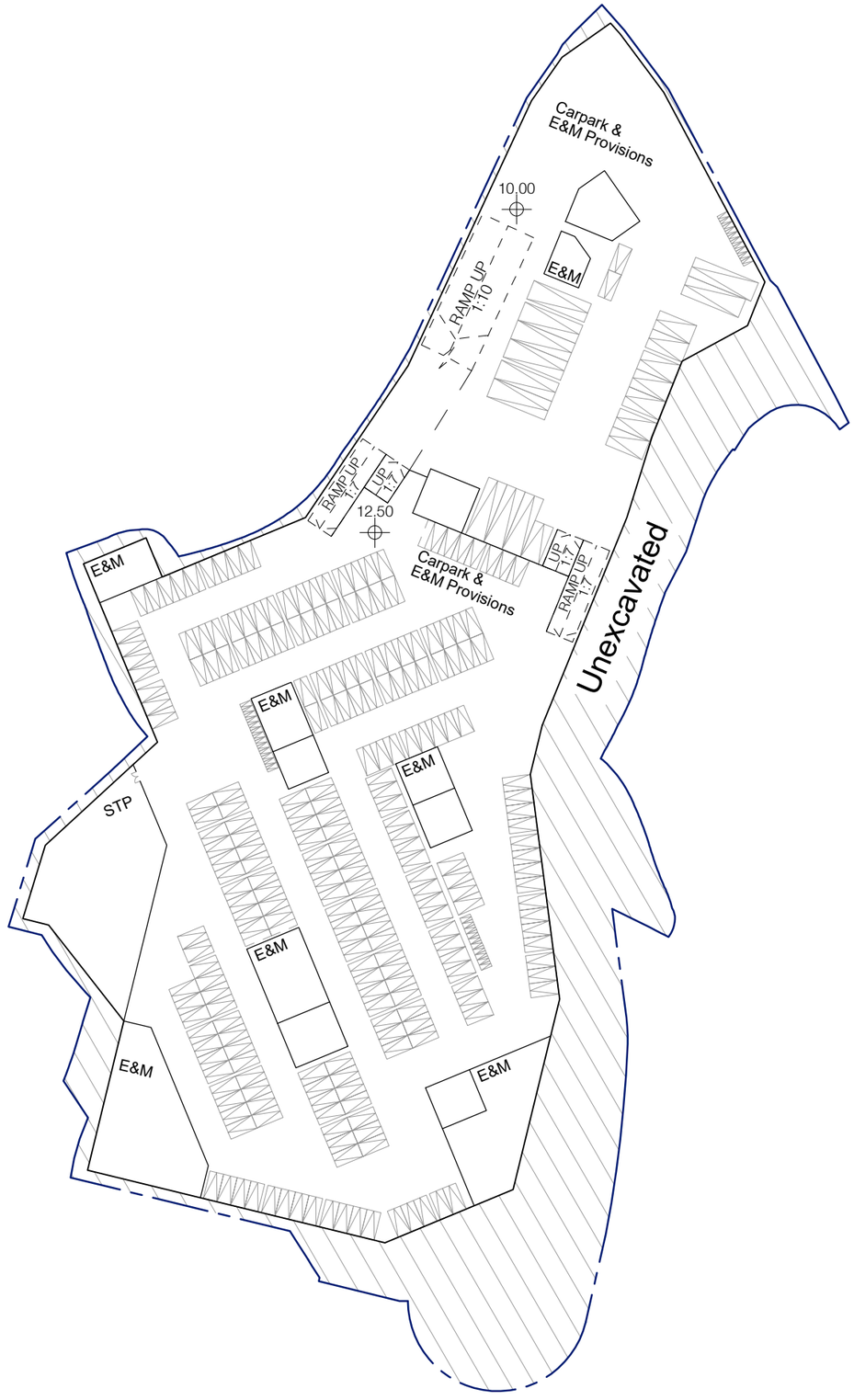
SINGULAR STUDIO LTD
12 OCTOBER 2023



TYPICAL FLOOR PLAN SK-9
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

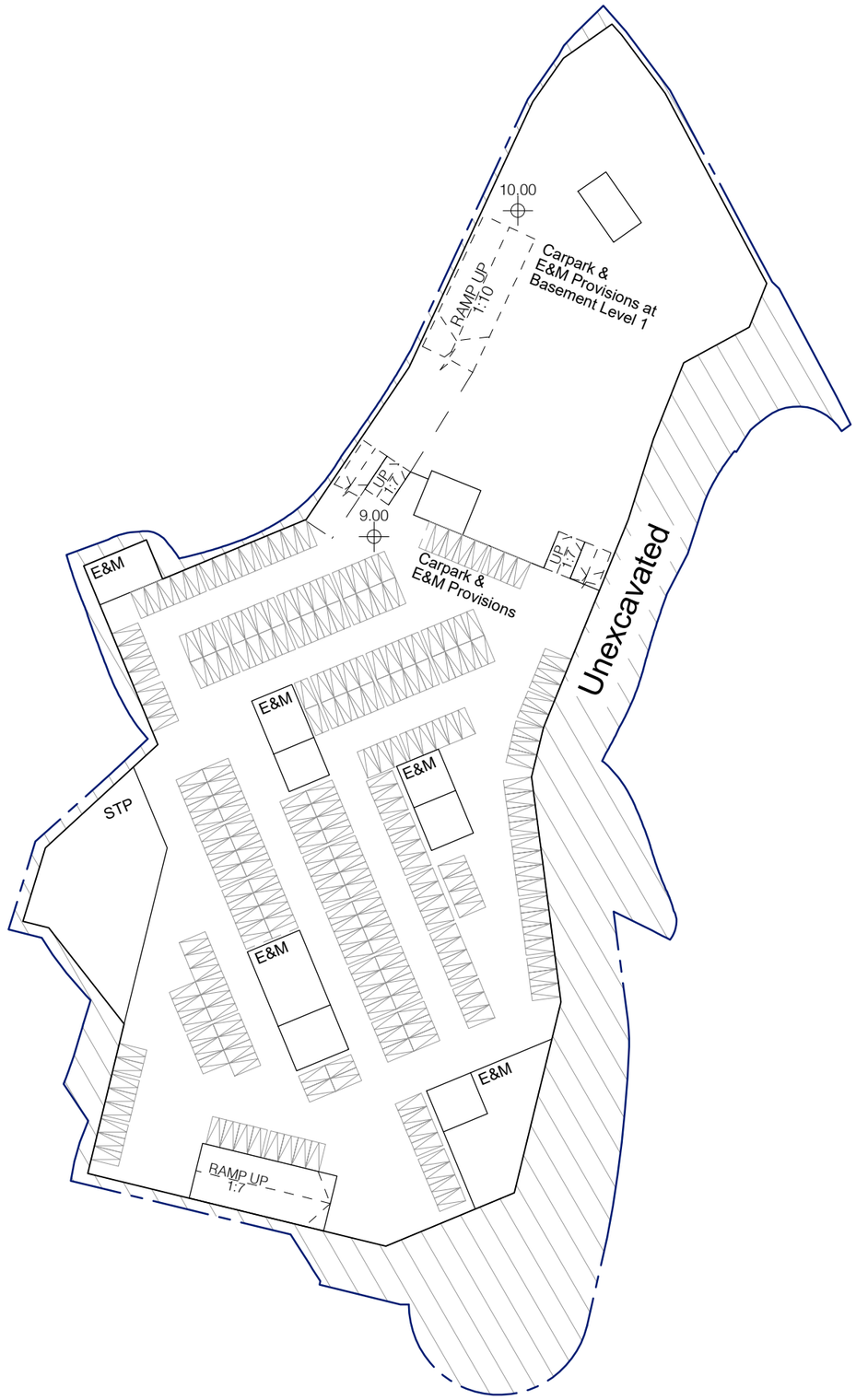
SINGULAR STUDIO LTD
12 OCTOBER 2023



BASEMENT LEVEL 1 PLAN SK-10
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

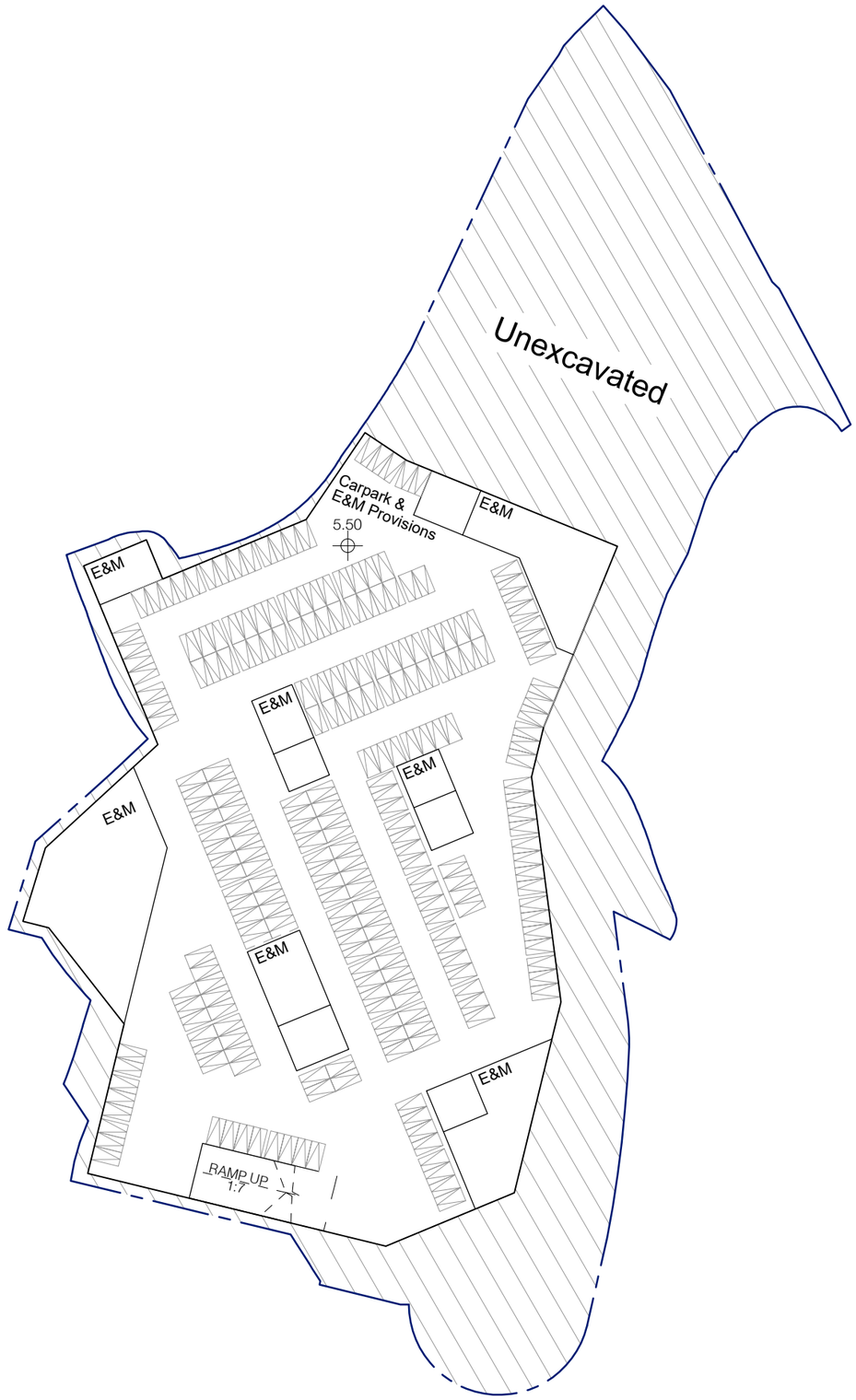
SINGULAR STUDIO LTD
15 MARCH 2024



BASEMENT LEVEL 2 PLAN SK-11
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

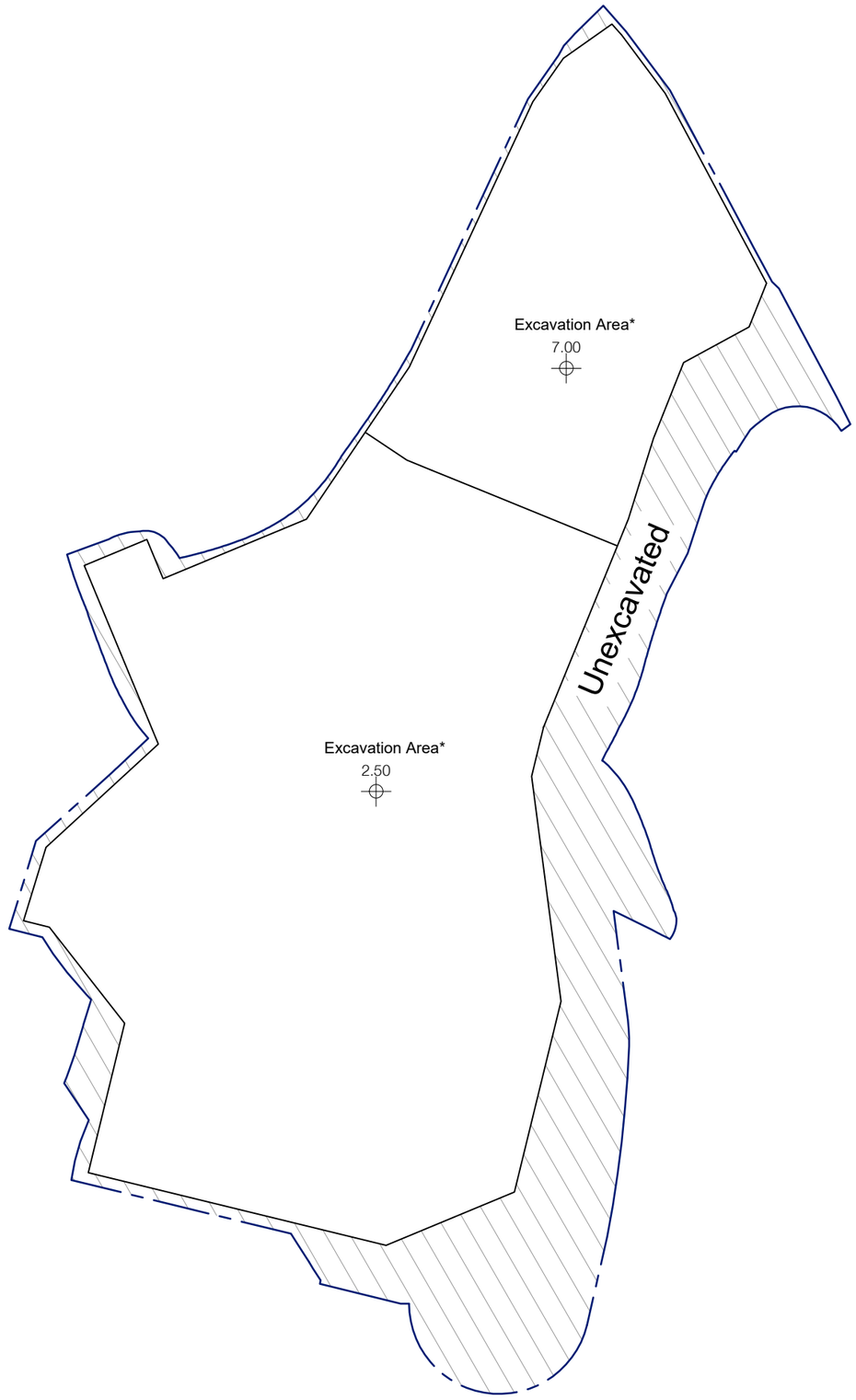
SINGULAR STUDIO LTD
15 MARCH 2024



BASEMENT LEVEL 3 PLAN SK-12
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
15 MARCH 2024



*The excavation area is about 13,500m^2 and the excavation depth is about 13.5m. The excavation area and depth are subject to future detailed design on foundation based on further geotechnical information.

EXCAVATION PLAN SK-13
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
11 DECEMBER 2023



BLOCK PLAN (BASELINE SCHEME) SK-14
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
12 OCTOBER 2023



BLOCK PLAN (WITH DIVERSION OF WATER MAINS) SK-15
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
11 DECEMBER 2023

Appendix 5.1

Replies from Government Department on Concerned Pigsty

Leanna Lei

From: astonccheung@epd.gov.hk
Sent: Monday, May 27, 2024 5:47 PM
To: Leanna Lei
Cc: whhui@epd.gov.hk
Subject: Fw: [2127/819.4463 Ping Che Land Contamination] Request for Information for Air Impact Assessment

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Leanna,

According to our records, the concerned pig farm has ceased business for many years. Therefore, I believed there are no odour complaints record against the pig farm for your concerned time frame.

Please let me know if there any questions. Thanks.

Best Regards,

Aston CHEUNG / E(RN)74

Regional Office (North)
Environmental Compliance Division
Environmental Protection Department

Tel: 3162 8396

----- Forwarded by Aston CC CHEUNG/EPD/HKSARG on 27/05/2024 17:36 -----

From: Alice WY TANG/EPD/HKSARGE[RN]34
To: Aston CC CHEUNG/EPD/HKSARG@EPD
Date: 27/05/2024 14:32
Subject: Fw: [2127/819.4463 Ping Che Land Contamination] Request for Information for Air Impact Assessment

---

Dear Aston,

Re the request of complaint info of pigsty in the preceding email. Grateful for your follow up and reply to the consultant. Many thanks!

Regards,

Alice TANG
E(RN)34 / EPD
2158 5842

----- Forwarded by Alice WY TANG/EPD/HKSARG on 27/05/2024 14:26 -----

From: Leanna Lei <leannalei@aechk.com>
To: "alicewytang@epd.gov.hk" <alicewytang@epd.gov.hk>
Cc: Cathy Man <cm@aechk.com>, NGAN Chun Sang <nganchunsang@aecasia.io>
Date: 27/05/2024 12:22
Subject: RE: [2127/819.4463 Ping Che Land Contamination] Request for Information for Air Impact Assessment

Dear Alice,

S16 Application for A/DPA/NE-TKL/31 Ping Che DD77 Lot 796 & 1008RP,
Ta Kwu Ling, North District, Hong Kong
Request for Information for Air Impact Assessment

We are conducting an S16 Application for A/DPA/NE-TKL/31 Ping Che DD77 Lot 796 & 1008RP, Ta Kwu Ling, North District, Hong Kong which is shown in the enclosed Site Location Plan. As refer to EPD comments, information pertaining to odour emission of a nearby pigsty is required. Of particular interest we would like to check on the odour complaint records of the mentioned odour source and any information you could provide which might be useful for our study. We enclosed herewith a site map showing the location of the Project Site for your reference.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email **by 10 June 2024**. Thank you very much for your kind attention and assistance.

Yours Sincerely,

Leanna

Leanna Lei – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 2815 7028 | **D:** (852) 3915 7178 | **F:** (852) 2815 5399 | **E:** leannalei@aechk.com

Allied Environmental Consultants Limited *Member of AEC Group (HKEX Stock Code: 8320.HK)*

27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
Follow us www.asecg.com

[attachment "Fig 3.1 Site Location_Issue 2.pdf" deleted by Aston CC CHEUNG/EPD/HKSARG] [attachment "20240521_Y_NE_TKL_5_FI_ RtC table _extract.docx" deleted by Aston CC CHEUNG/EPD/HKSARG]

Appendix 6.1

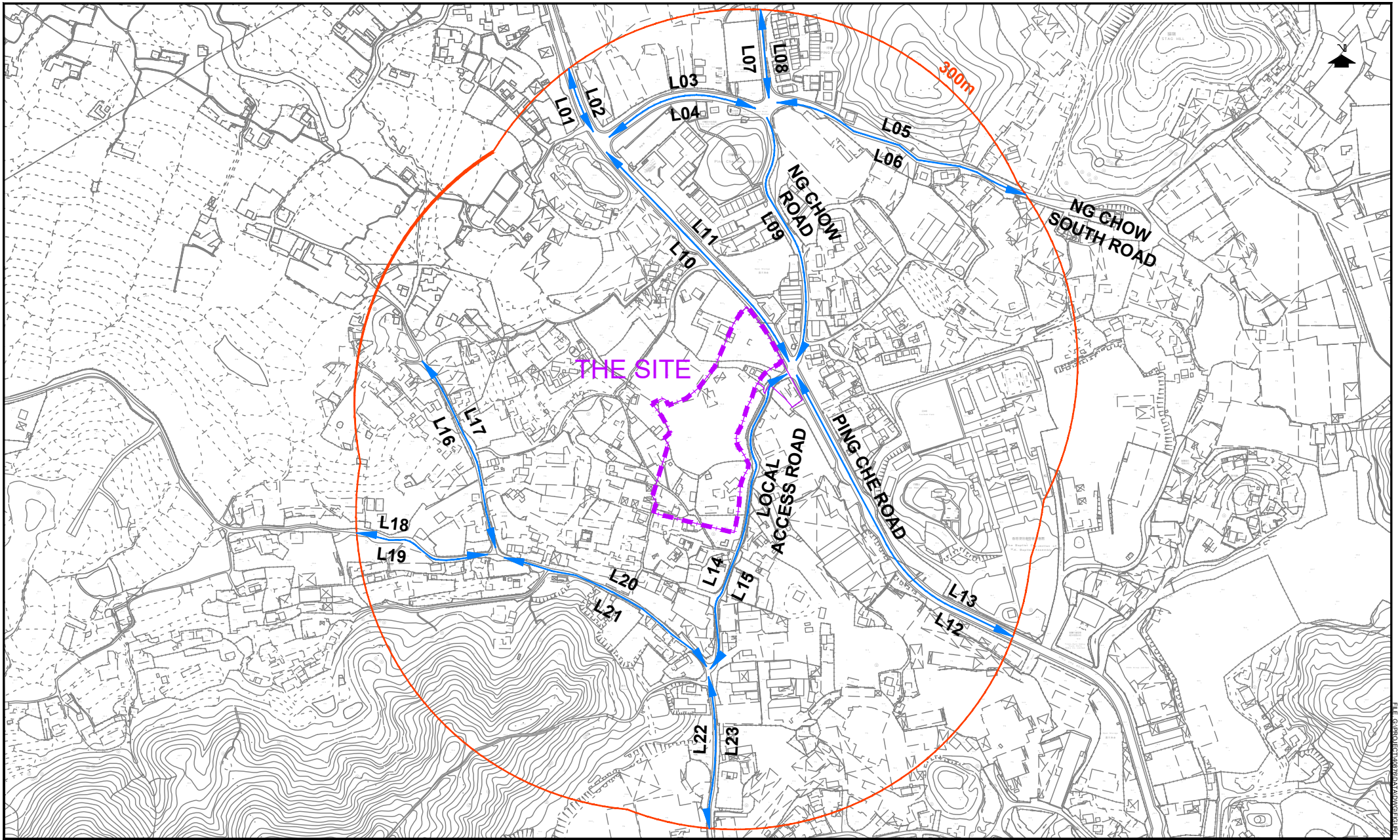
Traffic Forecast of Year 2047 from Project Traffic Consultant

Table 2 2047 Traffic Forecast – AM Peak Hour

No.	Road	2047 Project Traffic Flows (veh/hr)	% of Heavies
L01	Ping Che Road	400	44%
L02	Ping Che Road	350	46%
L03	Ng Chow South Road	200	34%
L04	Ng Chow South Road	50	48%
L05	Ng Chow South Road	100	42%
L06	Ng Chow South Road	50	58%
L07	Ng Chow Road	100	38%
L08	Ng Chow Road	50	40%
L09	Ng Chow Road	100	30%
L10	Ping Che Road	500	41%
L11	Ping Che Road	350	47%
L12	Ping Che Road	650	41%
L13	Ping Che Road	500	49%
L14	Local Access Road	200	56%
L15	Local Access Road	150	33%
L16	Local Access Road	50	56%
L17	Local Access Road	50	33%
L18	Local Access Road	50	56%
L19	Local Access Road	50	33%
L20	Local Access Road	50	56%
L21	Local Access Road	50	33%
L22	Local Access Road	50	56%
L23	Local Access Road	50	33%

Table 2 2047 Traffic Forecast – PM Peak Hour

No.	Road	2047 Project Traffic Flows (veh/hr)	% of Heavies
L01	Ping Che Road	300	46%
L02	Ping Che Road	350	45%
L03	Ng Chow South Road	100	52%
L04	Ng Chow South Road	100	57%
L05	Ng Chow South Road	50	65%
L06	Ng Chow South Road	100	34%
L07	Ng Chow Road	50	61%
L08	Ng Chow Road	100	51%
L09	Ng Chow Road	100	23%
L10	Ping Che Road	350	45%
L11	Ping Che Road	350	45%
L12	Ping Che Road	450	46%
L13	Ping Che Road	600	40%
L14	Local Access Road	200	20%
L15	Local Access Road	150	37%
L16	Local Access Road	50	20%
L17	Local Access Road	50	37%
L18	Local Access Road	50	20%
L19	Local Access Road	50	37%
L20	Local Access Road	50	20%
L21	Local Access Road	50	37%
L22	Local Access Road	50	20%
L23	Local Access Road	50	37%



PROJECT NO. 40876	PROJECT TITLE: RESIDENTIAL DEVELOPMENT AT PING CHE D.D.77 LOT 796 & 1008 RP - TIA STUDY FOR S12A REZONING APPLICATION	DRAWING NO. FIGURE N1	REV. ·
DESIGNED SLN / DATE AUG 2023	DRAWING TITLE: ROAD SECTION WITHIN 300m OF THE SITE	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE 1:5000 @ A4			
CHECKED SLN			

FILE: G:\PROJECT\40876\DATA\DWG\FIGURE_N1.DWG PLOT SCALE : 1 = 1

Appendix 6.2

Traffic Noise Impact Assessment Result (Base Case)

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Base Case Scenario

AM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor

T2

Unit		A			B				C				D			E		F		G				H				I	
Floor	**mPD**	**T2-A-1**	**T2-A-2**	**T2-A-3**	**T2-B-1**	**T2-B-2**	**T2-B-3**	**T2-B-4**	**T2-C-1**	**T2-C-2**	**T2-C-3**	**T2-C-4**	**T2-D-1**	**T2-D-2**	**T2-D-3**	**T2-E-1**	**T2-E-2**	**T2-F-1**	**T2-F-2**	**T2-G-1**	**T2-G-2**	**T2-G-3**	**T2-G-4**	**T2-H-1**	**T2-H-2**	**T2-H-3**	**T2-H-4**	**T2-I-1**	**T2-I-2**
2F	**27.75**	61	62	62	62	68	68	67	69	69	69	68	68	68	67	67	67	67	67	67	66	66	62	57	58	60	63	62	62
3F	**30.90**	63	63	63	63	69	69	68	70	70	69	69	69	69	69	69	69	68	68	68	68	68	64	58	59	61	63	63	63
4F	**34.05**	63	64	64	64	69	69	69	70	70	70	69	69	69	69	69	69	69	69	69	68	68	64	59	59	61	64	63	64
5F	**37.20**	63	64	64	64	69	69	69	70	70	70	69	69	69	69	69	69	69	69	69	69	69	65	59	59	62	64	64	64
6F	**40.35**	64	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	69	69	65	59	59	62	64	64	64
7F	**43.50**	64	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	69	69	65	59	59	62	64	64	64
8F	**46.65**	64	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	69	68	65	59	59	62	64	64	64
9F	**49.80**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	69	68	65	59	59	62	64	64	64
10F	**52.95**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	68	68	65	59	59	62	64	64	64
11F	**56.10**	63	64	64	64	69	69	69	70	70	70	70	70	69	69	69	69	69	69	69	68	68	64	59	59	62	64	64	64
12F	**59.25**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	68	68	64	59	59	62	64	64	64
13F	**62.40**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	68	68	68	64	59	59	62	64	64	64
14F	**65.55**	63	64	64	64	69	69	69	70	70	70	70	70	69	69	69	69	69	69	68	68	68	64	59	59	62	64	64	64
15F	**68.70**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	68	68	68	68	64	59	59	62	64	64	64
16F	**71.85**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	68	68	68	68	64	59	59	62	64	64	64
17F	**75.00**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	68	68	68	68	68	64	59	59	62	64	64	64
18F	**78.15**	63	64	64	64	69	69	69	70	70	70	69	69	69	69	69	69	68	68	68	68	68	64	59	59	62	64	64	64
19F	**81.30**	63	64	64	64	69	69	69	70	70	70	69	69	69	69	69	69	68	68	68	68	68	64	59	59	62	64	64	64
20F	**84.45**	63	64	64	64	69	69	69	70	70	69	69	69	69	69	69	68	68	68	68	68	68	63	58	58	61	64	64	64
22F	**93.10**	62	64	64	64	69	69	68	70	69	69	69	69	69	69	68	68	68	68	68	68	68	63	58	58	61	64	64	64
23F	**96.25**	62	64	64	64	69	69	68	70	69	69	69	69	69	68	68	68	68	68	68	68	68	63	58	58	61	64	64	64
24F	**99.40**	62	64	64	64	68	68	68	69	69	69	69	69	68	68	68	68	68	68	68	68	68	63	58	58	61	64	63	64
25F	**102.55**	62	63	64	64	68	68	68	69	69	69	69	68	68	68	68	68	68	68	68	68	67	63	58	58	61	64	63	63
26F	**105.70**	62	63	63	64	68	68	68	69	69	69	69	68	68	68	68	68	68	68	68	67	67	63	58	58	61	63	63	63
27F	**108.85**	62	63	63	64	68	68	68	69	69	69	68	68	68	68	68	68	68	68	67	67	67	63	58	58	61	63	63	63
28F	**112.00**	62	63	63	64	68	68	68	69	69	68	68	68	68	68	68	68	68	67	67	67	67	63	58	58	61	63	63	63
29F	**115.15**	62	63	63	64	68	68	68	69	68	68	68	68	68	68	68	68	68	67	67	67	67	63	58	58	61	63	63	63
30F	**118.30**	62	63	63	64	68	68	68	69	68	68	68	68	68	68	68	68	67	67	67	67	67	62	58	58	61	63	63	63
31F	**121.45**	62	63	63	64	68	68	68	69	68	68	68	68	68	68	68	67	67	67	67	67	67	62	58	58	61	63	63	63
32F	**124.60**	62	63	63	64	68	68	67	69	68	68	68	68	68	68	67	67	67	67	67	67	67	62	58	58	61	63	63	63
33F	**127.75**	62	63	63	64	68	68	67	68	68	68	68	68	68	67	67	67	67	67	67	67	67	62	58	58	61	63	63	63
34F	**130.90**	62	63	63	63	68	68	67	68	68	68	68	68	67	67	67	67	67	67	67	67	67	62	58	58	61	63	63	63
35F	**134.05**	62	63	63	63	68	68	67	68	68	68	68	67	67	67	67	67	67	67	67	67	67	62	58	58	61	63	63	63
36F	**137.20**	61	63	63	63	67	67	67	68	68	68	68	67	67	67	67	67	67	67	67	67	67	62	58	58	60	63	63	63
37F	**140.35**	61	63	63	63	67	67	67	68	68	68	67	67	67	67	67	67	67	67	67	67	67	62	57	57	60	63	63	63
38F	**143.50**	61	63	63	63	67	67	67	68	68	67	67	67	67	67	67	67	67	67	67	66	66	62	57	57	60	63	63	63
39F	**146.65**	61	63	63	63	67	67	67	68	67	67	67	67	67	67	67	67	67	67	66	66	66	62	57	57	60	63	63	63
40F	**149.80**	61	63	63	63	67	67	67	68	67	67	67	67	67	67	67	67	67	66	66	66	66	62	57	57	60	63	63	63
41F	**152.95**	61	63	63	63	67	67	67	68	67	67	67	67	67	67	67	67	66	66	66	66	66	62	57	57	60	63	63	63
42F	**156.10**	61	63	63	63	67	67	67	68	67	67	67	67	67	67	67	66	66	66	66	66	66	61	57	57	60	63	63	63
43F	**159.25**	61	62	63	63	67	67	67	68	67	67	67	67	67	67	66	66	66	66	66	66	66	61	57	57	60	63	62	63
44F	**162.40**	61	62	62	63	67	67	66	68	67	67	67	67	67	67	66	66	66	66	66	66	66	61	57	57	60	63	62	62
45F	**165.55**	61	62	62	63	67	67	66	68	67	67	67	67	67	66	66	66	66	66	66	66	66	61	57	57	60	62	62	62
46F	**168.70**	61	62	62	63	67	67	66	67	67	67	67	67	66	66	66	66	66	66	66	66	66	61	57	57	60	62	62	62
47F	**171.85**	61	62	62	63	67	67	66	67	67	67	67	66	66	66	66	66	66	66	66	66	66	61	57	57	60	62	62	62
Max. Noise Level		64	64	64	64	69	69	69	70	70	70	70	70	69	69	69	69	69	69	69	69	69	65	59	59	62	64	64	64
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0			0				0				0			0		0		0				0				0	
Total No. of Units		45			45				45				45			45		45		45				45				45	

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Base Case Scenario

AM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor

T3

Unit		A		B		C		D					E			F				G		H	I				J
Floor	mPD	T3-A-1	T3-A-2	T3-B-1	T3-B-2	T3-C-1	T3-C-2	T3-D-1	T3-D-2	T3-D-3	T3-D-4	T3-D-5	T3-E-1	T3-E-2	T3-E-3	T3-F-1	T3-F-2	T3-F-3	T3-F-4	T3-G-1	T3-G-2	T3-H-1	T3-I-1	T3-I-2	T3-I-3	T3-I-4	T3-J-1
1F	24.60	66	66	65	65	54	54	56	56	54	54	55	55	55	55	56	57	60	61	61	61	61	64	66	66	66	66
2F	27.75	66	66	65	65	54	54	56	57	55	55	55	55	55	55	57	58	60	62	61	61	61	65	66	66	66	66
3F	30.90	66	66	66	65	55	55	57	57	55	55	55	55	55	55	57	58	61	62	62	62	62	65	67	67	67	67
4F	34.05	67	66	66	65	56	55	58	58	55	55	55	55	55	55	57	58	61	62	62	62	63	66	67	67	67	67
5F	37.20	67	66	66	65	56	56	59	59	55	55	55	55	55	55	57	58	61	63	63	63	63	66	67	67	67	67
6F	40.35	67	66	66	65	57	57	59	59	55	55	55	55	55	55	57	58	61	63	63	63	64	66	67	67	67	67
7F	43.50	67	66	66	65	57	57	60	60	55	55	56	55	55	56	57	58	61	63	63	63	64	66	67	67	67	67
8F	46.65	67	66	66	65	58	58	60	60	55	55	56	55	56	56	57	58	61	63	63	64	64	66	67	67	67	67
9F	49.80	67	66	66	65	58	58	61	61	55	55	56	56	56	56	57	58	62	63	64	64	64	66	67	67	67	67
10F	52.95	67	66	66	65	58	58	61	61	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
11F	56.10	67	66	66	65	58	58	62	61	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
12F	59.25	67	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
13F	62.40	67	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
14F	65.55	66	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
15F	68.70	66	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
16F	71.85	66	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
17F	75.00	66	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	61	64	64	64	64	66	67	67	67	67
18F	78.15	66	66	66	65	58	58	62	62	55	55	56	55	56	56	57	58	61	64	64	64	64	66	67	67	67	67
19F	81.30	66	66	66	65	58	58	62	62	55	55	56	55	56	56	57	58	61	63	64	64	64	66	67	67	67	67
21F	89.95	66	66	65	65	58	58	61	61	55	55	56	55	55	55	56	58	61	63	63	64	64	66	67	67	67	66
22F	93.10	66	66	65	65	58	58	61	61	55	55	56	55	55	55	56	58	61	63	63	64	64	66	67	67	67	66
23F	96.25	66	66	65	65	57	58	61	61	55	55	56	55	55	55	56	58	61	63	63	64	64	66	67	67	67	66
24F	99.40	66	66	65	65	57	58	61	61	55	55	56	55	55	55	56	58	61	63	63	64	64	66	67	67	66	66
25F	102.55	66	66	65	65	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	64	64	66	67	67	66	66
26F	105.70	66	65	65	65	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	67	67	66	66
27F	108.85	66	65	65	65	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	67	66	66	66
28F	112.00	66	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	67	66	66	66
29F	115.15	66	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	67	66	66	66
30F	118.30	66	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	66	66	66	66
31F	121.45	65	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	66	66	66	66
32F	124.60	65	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	63	65	66	66	66	66
33F	127.75	65	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	63	65	66	66	66	66
34F	130.90	65	65	65	64	56	57	60	61	55	55	55	55	55	55	56	58	61	63	63	63	63	65	66	66	66	66
35F	134.05	65	65	64	64	56	57	60	60	55	55	55	55	55	55	56	58	61	63	63	63	63	65	66	66	66	66
36F	137.20	65	65	64	64	56	57	60	60	55	55	55	55	55	55	56	58	61	63	63	63	63	65	66	66	66	66
37F	140.35	65	65	64	64	56	56	60	60	55	55	55	55	55	55	56	57	61	63	63	63	63	65	66	66	66	65
38F	143.50	65	65	64	64	56	56	60	60	55	55	55	55	55	55	56	57	61	63	63	63	63	65	66	66	66	65
39F	146.65	65	65	64	64	56	56	60	60	55	55	55	55	55	55	56	57	61	63	63	63	63	65	66	66	66	65
40F	149.80	65	65	64	64	56	56	60	60	55	55	55	55	55	55	56	57	61	63	63	63	63	65	66	66	66	65
41F	152.95	65	65	64	64	56	56	60	60	55	55	55	55	55	55	56	57	61	63	63	63	63	65	66	66	66	65
42F	156.10	65	64	64	64	56	56	60	60	55	55	55	55	55	55	56	57	60	63	63	63	63	65	66	66	65	65
43F	159.25	65	64	64	63	56	56	60	60	54	55	55	55	55	55	56	57	60	63	63	63	63	65	66	66	65	65
44F	162.40	65	64	64	63	56	56	60	60	54	55	55	55	55	55	56	57	60	63	63	63	63	65	66	66	65	65
45F	165.55	65	64	64	63	56	56	60	60	54	55	55	55	55	55	56	57	60	62	63	63	63	65	66	65	65	65
46F	168.70	65	64	64	63	56	56	60	60	54	55	55	55	55	55	56	57	60	62	63	63	63	65	66	65	65	65
Max. Noise Level		67	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0		0		0		0					0			0				0		0	0				0
Total No. of Units		45		45		45		45					45			45				45		45	45				45

Road Traffic Noise Impact Assessment

Project No.: 2127

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Base Case Scenario

AM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor

T4

Unit		A			B				C		D				E			F					G		H		I	
Floor	**mPD**	**T4-A-1**	**T4-A-2**	**T4-A-3**	**T4-B-1**	**T4-B-2**	**T4-B-3**	**T4-B-4**	**T4-C-1**	**T4-C-2**	**T4-D-1**	**T4-D-2**	**T4-D-3**	**T4-D-4**	**T4-E-1**	**T4-E-2**	**T4-E-3**	**T4-F-1**	**T4-F-2**	**T4-F-3**	**T4-F-4**	**T4-F-5**	**T4-G-1**	**T4-G-2**	**T4-H-1**	**T4-H-2**	**T4-I-1**	**T4-I-2**
1F	**24.60**	66	67	69	70	***73***	***74***	***74***	***74***	***74***	***75***	***74***	***73***	***71***	68	67	66	66	59	63	63	55	52	53	64	65	65	66
2F	**27.75**	66	67	69	70	***73***	***73***	***73***	***74***	***74***	***74***	***74***	***73***	***72***	69	68	67	67	60	64	64	56	53	54	64	65	65	66
3F	**30.90**	66	67	69	70	***73***	***73***	***73***	***73***	***74***	***74***	***73***	***72***	***72***	70	70	69	68	62	65	65	57	53	55	65	65	65	66
4F	**34.05**	66	67	69	70	***72***	***73***	***73***	***73***	***73***	***73***	***73***	***72***	***71***	70	70	69	69	64	65	65	58	53	55	65	65	65	66
5F	**37.20**	66	67	69	70	***72***	***72***	***72***	***73***	***73***	***73***	***73***	***72***	***71***	70	70	70	69	65	66	66	59	53	56	65	65	65	66
6F	**40.35**	66	67	69	69	***72***	***72***	***72***	***72***	***73***	***73***	***72***	***71***	***71***	70	70	69	69	65	67	67	60	53	56	65	65	65	66
7F	**43.50**	66	67	69	69	***72***	***72***	***72***	***72***	***72***	***72***	***72***	***71***	***71***	69	70	69	69	65	67	67	60	53	57	65	65	65	66
8F	**46.65**	66	67	68	69	***71***	***72***	***72***	***72***	***72***	***72***	***72***	***71***	***71***	69	69	69	69	65	67	67	61	53	57	65	65	65	66
9F	**49.80**	66	67	68	69	***71***	***71***	***71***	***72***	***72***	***72***	***72***	***71***	70	69	69	69	69	65	67	67	61	53	57	65	65	65	66
10F	**52.95**	66	67	68	69	***71***	***71***	***71***	***71***	***72***	***72***	***71***	***71***	70	69	69	69	69	65	67	67	61	53	57	65	65	65	66
11F	**56.10**	66	67	68	69	***71***	***71***	***71***	***71***	***71***	***72***	***71***	70	70	69	69	69	69	65	67	67	61	53	57	65	65	65	65
12F	**59.25**	66	66	68	68	***71***	***71***	***71***	***71***	***71***	***71***	***71***	70	70	68	69	69	69	65	67	67	61	53	57	65	65	65	65
13F	**62.40**	66	66	68	68	70	***71***	***71***	***71***	***71***	***71***	***71***	70	70	68	69	69	69	65	67	67	61	53	57	65	65	65	65
14F	**65.55**	66	66	68	68	70	70	70	***71***	***71***	***71***	***71***	70	69	68	68	68	68	65	67	67	60	53	57	65	65	65	65
15F	**68.70**	65	66	67	68	70	70	70	***71***	***71***	***71***	70	70	69	68	68	68	68	64	67	67	60	53	57	65	65	65	65
16F	**71.85**	65	66	67	68	70	70	70	70	***71***	***71***	70	69	69	68	68	68	68	64	67	67	60	53	57	65	65	65	65
17F	**75.00**	65	66	67	68	70	70	70	70	70	***71***	70	69	69	68	68	68	68	64	66	67	60	53	56	65	65	65	65
18F	**78.15**	65	66	67	68	70	70	70	70	70	70	70	69	69	68	68	68	68	64	66	67	60	53	56	64	65	65	65
19F	**81.30**	65	66	67	67	70	70	70	70	70	70	70	69	69	67	68	68	68	64	66	67	60	53	56	64	64	65	65
21F	**89.95**	65	65	67	67	69	69	69	70	70	70	70	69	68	67	67	67	67	64	66	66	59	53	56	64	64	64	64
23F	**93.10**	65	65	67	67	69	69	69	70	70	70	69	69	68	67	67	67	67	63	66	66	59	53	56	64	64	64	64
24F	**96.25**	65	65	66	67	69	69	69	69	69	70	69	68	68	67	67	67	67	63	66	66	59	53	56	64	64	64	64
25F	**99.40**	64	65	66	67	69	69	69	69	69	70	69	68	68	67	67	67	67	63	66	66	59	53	56	64	64	64	64
26F	**102.55**	64	65	66	67	69	69	69	69	69	70	69	68	68	67	67	67	67	63	65	66	59	53	56	64	64	64	64
27F	**105.70**	64	65	66	67	69	69	69	69	69	69	69	68	68	66	67	67	67	63	65	66	59	53	56	64	64	64	64
28F	**108.85**	64	65	66	67	69	69	69	69	69	69	69	68	68	66	67	67	67	63	65	66	59	53	56	64	64	64	64
29F	**112.00**	64	65	66	66	68	69	69	69	69	69	69	68	68	66	67	67	67	63	65	66	59	53	56	64	64	64	64
30F	**115.15**	64	65	66	66	68	69	69	69	69	69	69	68	67	66	67	67	67	63	65	66	59	53	56	64	64	64	64
31F	**118.30**	64	65	66	66	68	68	68	69	69	69	69	68	67	66	67	67	66	62	65	65	59	53	55	64	64	64	64
32F	**121.45**	64	64	66	66	68	68	68	69	69	69	69	68	67	66	66	66	66	62	65	65	58	53	55	63	63	64	64
33F	**124.60**	64	64	66	66	68	68	68	68	69	69	68	68	67	66	66	66	66	62	65	65	58	53	55	63	63	63	64
34F	**127.75**	64	64	65	66	68	68	68	68	68	69	68	67	67	66	66	66	66	62	65	65	58	53	55	63	63	63	63
35F	**130.90**	64	64	65	66	68	68	68	68	68	69	68	67	67	66	66	66	66	62	65	65	58	53	55	63	63	63	63
36F	**134.05**	64	64	65	66	68	68	68	68	68	69	68	67	67	66	66	66	66	62	65	65	58	53	55	63	63	63	63
37F	**137.20**	63	64	65	66	68	68	68	68	68	68	68	67	67	66	66	66	66	62	64	65	58	53	55	63	63	63	63
38F	**140.35**	63	64	65	66	68	68	68	68	68	68	68	67	67	65	66	66	66	62	64	65	58	53	55	63	63	63	63
39F	**143.50**	63	64	65	66	68	68	68	68	68	68	68	67	67	65	66	66	66	62	64	65	58	53	55	63	63	63	63
40F	**146.65**	63	64	65	65	67	68	68	68	68	68	68	67	67	65	66	66	66	62	64	65	58	53	55	63	63	63	63
41F	**149.80**	63	64	65	65	67	68	68	68	68	68	68	67	67	65	66	66	66	62	64	65	58	53	55	63	63	63	63
42F	**152.95**	63	64	65	65	67	67	68	68	68	68	68	67	66	65	66	66	66	61	64	65	58	52	55	63	63	63	63
43F	**156.10**	63	64	65	65	67	67	67	68	68	68	68	67	66	65	65	65	65	61	64	64	58	52	55	63	63	63	63
44F	**159.25**	63	63	65	65	67	67	67	68	68	68	67	67	66	65	65	65	65	61	64	64	57	52	55	63	63	63	63
45F	**162.40**	63	63	65	65	67	67	67	67	68	68	67	67	66	65	65	65	65	61	64	64	57	52	55	63	63	63	63
46F	**165.55**	63	63	65	65	67	67	67	67	67	68	67	66	66	65	65	65	65	61	64	64	57	52	55	63	62	63	63
47F	**168.70**	63	63	64	65	67	67	67	67	67	68	67	66	66	65	65	65	65	61	64	64	57	53	55	62	62	62	63
Max. Noise Level		66	67	69	70	73	74	74	74	74	75	74	73	72	70	70	70	69	65	67	67	61	53	57	65	65	65	66
No. of exceedance		0	0	0	0	12	13	13	15	16	17	14	10	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0			13				16		17				0			0					0		0		0	
Total No. of Units		45			45				45		45				45			45					45		45		45	

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Base Case Scenario

AM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor

T5

Unit		A		B			C				D		E					F		G			H					I		J		K	
Floor	mPD	T5-A-1	T5-A-2	T5-B-1	T5-B-2	T5-B-3	T5-C-1	T5-C-2	T5-C-3	T5-C-4	T5-D-1	T5-D-2	T5-E-1	T5-E-2	T5-E-3	T5-E-4	T5-E-6	T5-F-1	T5-F-2	T5-G-1	T5-G-2	T5-G-3	T5-H-1	T5-H-2	T5-H-3	T5-H-4	T5-H-5	T5-I-1	T5-I-2	T5-J-1	T5-J-2	T5-K-1	T5-K-2
1F	24.58	63	63	63	63	63	63	62	60	60	59	58	60	58	60	59	59	59	59	59	60	61	62	60	62	64	64	64	65	62	63	63	63
2F	27.73	64	64	64	64	64	64	63	61	61	61	60	62	59	60	60	59	60	60	60	60	61	62	61	62	64	64	64	65	62	63	63	63
3F	30.88	64	64	64	64	64	64	63	62	62	61	60	62	59	61	60	60	60	60	60	60	61	62	61	62	64	65	65	65	62	63	63	63
4F	34.03	64	64	64	64	64	64	64	62	62	61	61	63	60	61	60	60	60	60	60	61	61	62	61	62	64	65	65	65	62	63	63	63
5F	37.18	64	64	64	64	64	64	64	62	62	62	61	63	60	61	60	60	60	60	60	61	61	62	61	62	65	65	65	66	62	63	63	63
6F	40.33	64	64	64	64	64	64	64	62	62	62	61	63	60	61	61	60	60	60	60	61	62	62	61	63	65	66	65	66	62	63	63	63
7F	43.48	64	64	64	64	64	64	64	62	62	62	61	63	60	61	61	60	60	60	60	61	62	63	61	63	65	66	66	66	62	63	63	63
8F	46.63	63	64	64	64	64	64	64	62	62	62	61	63	60	61	61	60	60	60	60	61	62	63	61	63	66	66	66	66	62	62	63	63
9F	49.78	63	64	64	64	64	64	64	62	62	62	61	63	60	61	61	60	60	60	60	61	62	63	61	63	66	67	66	67	62	62	63	63
10F	52.93	63	63	64	64	64	64	63	62	62	61	61	63	60	61	61	60	60	60	60	61	62	63	62	63	66	67	66	67	62	62	63	63
11F	56.08	63	63	64	64	64	64	63	62	62	61	61	63	60	61	61	60	60	60	60	61	62	63	62	63	66	67	66	67	62	62	62	63
12F	59.23	63	63	63	64	64	64	63	62	62	61	61	63	60	61	61	61	60	60	61	61	62	63	62	63	66	67	66	66	62	62	62	63
13F	62.38	63	63	63	64	64	64	63	62	62	61	61	63	60	61	61	61	60	60	61	61	62	63	62	64	66	67	66	66	61	62	62	63
14F	65.53	63	63	63	63	64	64	63	62	62	61	60	63	60	61	61	61	61	61	61	61	63	64	62	64	66	67	66	66	61	62	62	62
15F	68.68	63	63	63	63	64	64	63	62	62	61	60	63	60	61	61	61	61	61	61	61	63	64	62	63	66	67	66	66	61	62	62	62
16F	71.83	63	63	63	63	63	63	63	62	62	61	60	63	60	61	61	61	61	61	61	61	63	64	62	63	66	67	66	66	61	61	62	62
17F	74.98	62	63	63	63	63	63	63	62	62	61	60	63	60	61	61	61	61	61	61	61	63	63	62	63	66	67	66	66	61	61	62	62
18F	78.13	62	63	63	63	63	63	63	62	61	61	60	63	60	61	61	61	61	61	61	61	62	63	62	63	66	67	66	66	61	61	62	62
19F	81.28	62	62	63	63	63	63	63	62	61	61	60	63	60	61	61	61	61	61	61	61	62	63	62	63	66	67	66	66	61	61	62	62
21F	89.93	62	62	62	63	63	63	63	61	61	61	60	63	60	61	61	61	61	61	61	61	62	63	62	63	66	66	66	66	60	61	61	62
22F	93.08	62	62	62	63	63	63	62	61	61	61	60	62	60	61	61	61	61	60	61	61	62	63	62	63	66	66	66	66	60	61	61	62
23F	96.23	62	62	62	62	63	63	62	61	61	60	60	62	60	61	61	61	61	60	61	61	62	63	62	63	66	66	66	66	60	61	61	61
24F	99.38	62	62	62	62	63	63	62	61	61	60	60	62	60	61	61	60	60	60	61	61	62	63	62	63	66	66	65	65	60	61	61	61
25F	102.53	62	62	62	62	63	63	62	61	61	60	60	62	60	61	61	60	60	60	61	61	62	63	61	63	66	66	65	65	60	60	61	61
26F	105.68	61	62	62	62	62	63	62	61	61	60	60	62	60	61	61	60	60	60	60	61	62	63	61	63	65	66	65	65	60	60	61	61
27F	108.83	61	62	62	62	62	62	62	61	61	60	60	62	60	61	61	60	60	60	60	61	62	63	61	63	65	66	65	65	60	60	61	61
28F	111.98	61	62	62	62	62	62	62	61	61	60	59	62	60	61	61	60	60	60	60	61	62	63	61	63	65	66	65	65	60	60	61	61
29F	115.13	61	61	62	62	62	62	62	61	61	60	59	62	60	61	61	60	60	60	60	61	62	63	61	63	65	66	65	65	60	60	60	61
30F	118.28	61	61	62	62	62	62	62	61	61	60	59	62	60	61	61	60	60	60	60	61	62	63	61	62	65	66	65	65	60	60	60	61
31F	121.43	61	61	61	62	62	62	62	61	60	60	59	62	60	61	61	60	60	60	60	61	62	63	61	62	65	66	65	65	59	60	60	61
32F	124.58	61	61	61	62	62	62	62	61	60	60	59	62	60	61	61	60	60	60	60	61	62	63	61	62	65	66	65	65	59	60	60	61
33F	127.73	61	61	61	62	62	62	62	60	60	60	59	62	59	61	60	60	60	60	60	61	62	63	61	62	65	65	65	65	59	60	60	60
34F	130.88	61	61	61	62	62	62	61	60	60	60	59	62	59	61	60	60	60	60	60	61	62	62	61	62	65	65	65	65	59	60	60	60
35F	134.03	61	61	61	61	62	62	61	60	60	60	59	62	59	61	60	60	60	60	60	60	62	62	61	62	65	65	65	65	59	60	60	60
36F	137.18	61	61	61	61	62	62	61	60	60	60	59	62	59	61	60	60	60	60	60	60	61	62	61	62	65	65	65	65	59	59	60	60
37F	140.33	60	61	61	61	61	62	61	60	60	60	59	62	59	61	60	60	60	60	60	60	61	62	61	62	65	65	65	65	59	59	60	60
38F	143.48	60	61	61	61	61	62	61	60	60	59	59	62	59	61	60	60	60	60	60	60	61	62	61	62	65	65	64	64	59	59	60	60
39F	146.63	60	61	61	61	61	61	61	60	60	59	59	62	59	61	60	60	60	60	60	60	61	62	60	62	65	65	64	64	59	59	60	60
40F	149.78	60	60	61	61	61	61	61	60	60	59	59	61	59	61	60	60	60	60	60	60	61	62	60	62	65	65	64	64	59	59	60	60
41F	152.93	60	60	61	61	61	61	61	60	60	59	59	61	59	61	60	60	60	60	60	60	61	62	60	62	64	65	64	64	59	59	59	60
42F	156.08	60	60	61	61	61	61	61	60	60	59	58	61	59	61	60	60	60	59	60	60	61	62	60	62	64	65	64	64	59	59	59	60
43F	159.23	60	60	60	61	61	61	61	60	60	59	58	61	59	60	60	60	60	59	60	60	61	62	60	62	64	65	64	64	58	59	59	60
44F	162.38	60	60	60	61	61	61	61	60	60	59	58	61	59	60	60	60	59	59	59	60	61	62	60	62	64	65	64	64	58	59	59	60
45F	165.53	60	60	60	61	61	61	61	60	60	59	58	61	59	60	60	60	59	59	59	60	61	62	60	61	64	65	64	64	58	59	59	59
46F	168.68	60	60	60	61	61	61	61	60	59	59	58	61	59	60	60	59	59	59	59	60	61	62	60	62	64	65	64	64	58	59	59	59
Max. Noise Level		64	64	64	64	64	64	64	62	62	62	61	63	60	61	61	61	61	61	61	61	63	64	62	64	66	67	66	67	62	63	63	63
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0		0			0				0		0					0		0			0					0		0		0	
Total No. of Units		45		45			45				45		45					45		45			45					45		45		45	

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Base Case Scenario

AM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor

T6

Unit		A		B			C		D					E			F					G		H	I					J	
Floor	mPD	T6-A-1	T6-A-2	T6-B-1	T6-B-2	T6-C-1	T6-C-2	T6-C-3	T6-D-2	T6-D-3	T6-D-4	T6-D-5	T6-D-6	T6-E-1	T6-E-2	T6-E-3	T6-F-1	T6-F-3	T6-F-4	T6-F-5	T6-F-6	T6-G-1	T6-G-2	T6-H-1	T6-I-1	T6-I-2	T6-I-3	T6-I-4	T6-I-6	T6-J-1	T6-J-2
1F	24.58	63	62	62	62	62	65	64	67	69	69	69	*72*	*73*	*73*	*74*	*75*	*76*	*76*	*76*	*75*	69	*71*	*71*	*71*	*71*	68	65	64	63	63
2F	27.73	63	62	62	62	62	65	65	67	70	70	70	*73*	*73*	*74*	*74*	*75*	*75*	*76*	*76*	*75*	69	*71*	*71*	*71*	*71*	68	65	64	63	63
3F	30.88	63	62	62	62	62	65	65	68	*71*	*71*	*71*	*73*	*73*	*73*	*74*	*74*	*75*	*75*	*74*	*74*	69	70	*71*	*71*	70	67	65	64	63	63
4F	34.03	63	62	62	62	62	65	65	69	*71*	*71*	*71*	*73*	*73*	*73*	*73*	*74*	*74*	*74*	*74*	*73*	68	70	70	*71*	70	67	65	64	63	63
5F	37.18	63	62	62	62	62	66	66	69	*71*	*71*	*71*	*73*	*73*	*73*	*73*	*73*	*74*	*74*	*73*	*73*	68	70	70	*71*	70	67	65	64	63	63
6F	40.33	63	62	62	62	62	66	66	69	*71*	*71*	*71*	*72*	*72*	*72*	*73*	*73*	*73*	*74*	*73*	*73*	67	69	70	70	70	67	65	64	63	63
7F	43.48	63	62	62	62	62	67	66	69	*71*	*71*	*71*	*72*	*72*	*72*	*72*	*73*	*73*	*73*	*73*	*72*	67	69	69	70	70	67	65	64	63	63
8F	46.63	62	62	62	62	62	67	67	69	*71*	*71*	70	*72*	*72*	*72*	*72*	*72*	*73*	*73*	*72*	*72*	67	69	69	70	70	67	64	63	63	63
9F	49.78	62	62	62	62	62	67	67	69	*71*	*71*	70	*72*	*72*	*72*	*72*	*72*	*72*	*73*	*72*	*72*	66	69	69	70	69	66	64	63	63	63
10F	52.93	62	62	62	61	62	67	66	69	*71*	*71*	70	*71*	*72*	*72*	*72*	*72*	*72*	*73*	*72*	*72*	66	68	69	70	69	66	64	63	63	62
11F	56.08	62	62	62	61	61	67	66	68	*71*	*71*	70	*71*	*71*	*71*	*72*	*72*	*72*	*72*	*72*	*71*	66	68	69	69	69	66	64	63	63	62
12F	59.23	62	62	61	61	61	67	66	68	70	70	70	*71*	*71*	*71*	*71*	*72*	*72*	*72*	*71*	*71*	66	68	68	69	69	66	64	63	62	62
13F	62.38	62	61	61	61	61	67	66	68	70	70	70	*71*	*71*	*71*	*71*	*71*	*72*	*72*	*71*	*71*	65	68	68	69	69	65	64	63	62	62
14F	65.53	62	61	61	61	61	66	66	68	70	70	70	*71*	*71*	*71*	*71*	*71*	*71*	*72*	*71*	*71*	65	68	68	69	69	65	63	63	62	62
15F	68.68	61	61	61	61	61	66	66	68	70	70	69	*71*	*71*	*71*	*71*	*71*	*71*	*72*	*71*	*71*	65	67	68	69	69	65	63	62	62	62
16F	71.83	61	61	61	61	61	66	66	68	70	70	69	70	*71*	*71*	*71*	*71*	*71*	*71*	*71*	*71*	65	67	68	69	68	65	63	62	62	62
17F	74.98	61	61	61	61	61	66	66	68	70	70	69	70	70	70	70	*71*	*71*	*71*	*71*	70	64	67	68	68	68	65	63	62	62	61
18F	78.13	61	61	61	60	61	66	66	68	70	70	69	70	70	70	70	*71*	*71*	*71*	70	70	64	67	67	68	68	65	63	62	62	61
19F	81.28	61	61	61	60	60	66	66	67	69	69	69	70	70	70	70	70	*71*	*71*	70	70	64	67	67	68	68	64	63	62	61	61
21F	89.93	61	61	60	60	60	66	65	67	69	69	69	70	70	70	70	70	70	*71*	70	70	64	66	67	68	68	64	62	62	61	61
22F	93.08	61	60	60	60	60	66	65	67	69	69	69	70	70	70	70	70	70	70	70	70	63	66	67	68	68	64	62	61	61	61
23F	96.23	61	60	60	60	60	66	65	67	69	69	69	69	70	70	70	70	70	70	70	69	63	66	67	68	67	64	62	61	61	61
24F	99.38	60	60	60	60	60	66	65	67	69	69	68	69	69	69	70	70	70	70	70	69	63	66	66	67	67	64	62	61	61	61
25F	102.53	60	60	60	60	60	65	65	67	69	69	68	69	69	69	69	70	70	70	69	69	63	66	66	67	67	64	62	61	61	61
26F	105.68	60	60	60	60	60	65	65	67	69	69	68	69	69	69	69	69	70	70	69	69	63	66	66	67	67	63	62	61	61	60
27F	108.83	60	60	60	59	60	65	65	67	69	69	68	69	69	69	69	69	70	70	69	69	63	66	66	67	67	63	62	61	61	60
28F	111.98	60	60	60	59	60	65	65	67	68	68	68	69	69	69	69	69	69	70	69	69	63	65	66	67	67	63	61	61	60	60
29F	115.13	60	60	60	59	59	65	65	66	68	68	68	69	69	69	69	69	69	70	69	69	62	65	66	67	67	63	61	61	60	60
30F	118.28	60	60	59	59	59	65	65	66	68	68	68	69	69	69	69	69	69	70	69	69	62	65	66	67	67	63	61	61	60	60
31F	121.43	60	60	59	59	59	65	65	66	68	68	68	69	69	69	69	69	69	69	69	69	62	65	66	67	67	63	61	61	60	60
32F	124.58	60	59	59	59	59	65	64	66	68	68	68	69	69	69	69	69	69	69	69	68	62	65	66	67	67	63	61	60	60	60
33F	127.73	60	59	59	59	59	65	64	66	68	68	68	68	69	69	69	69	69	69	69	68	62	65	66	67	66	63	61	60	60	60
34F	130.88	60	59	59	59	59	65	64	66	68	68	68	68	68	68	69	69	69	69	69	68	62	65	65	66	66	63	61	60	60	60
35F	134.03	59	59	59	59	59	65	64	66	68	68	67	68	68	68	68	69	69	69	68	68	62	65	65	66	66	62	61	60	60	60
36F	137.18	59	59	59	59	59	65	64	66	68	68	67	68	68	68	68	68	69	69	68	68	62	65	65	66	66	62	61	60	60	60
37F	140.33	59	59	59	59	59	65	64	66	68	68	67	68	68	68	68	68	69	69	68	68	62	64	65	66	66	62	61	60	60	59
38F	143.48	59	59	59	59	59	64	64	66	68	68	67	68	68	68	68	68	68	69	68	68	61	64	65	66	66	62	61	60	60	59
39F	146.63	59	59	59	58	59	64	64	66	68	68	67	68	68	68	68	68	68	69	68	68	61	64	65	66	66	62	60	60	60	59
40F	149.78	59	59	59	58	58	64	64	66	67	67	67	68	68	68	68	68	68	69	68	68	61	64	65	66	66	62	60	60	59	59
41F	152.93	59	59	59	58	58	64	64	66	67	67	67	68	68	68	68	68	68	69	68	68	61	64	65	66	66	62	60	60	59	59
42F	156.08	59	59	59	58	58	64	64	65	67	67	67	68	68	68	68	68	68	68	68	68	61	64	65	66	66	62	60	60	59	59
43F	159.23	59	59	58	58	58	64	64	65	67	67	67	68	68	68	68	68	68	68	68	68	61	64	65	66	66	62	60	60	59	59
44F	162.38	59	59	58	58	58	64	64	65	67	67	67	68	68	68	68	68	68	68	68	67	61	64	65	66	66	62	60	59	59	59
45F	165.53	59	58	58	58	58	64	64	65	67	67	67	68	68	68	68	68	68	68	68	67	61	64	64	66	65	62	60	59	59	59
46F	168.68	59	58	58	58	58	64	64	65	67	67	67	67	67	68	68	68	68	68	68	67	61	64	64	65	65	62	60	59	59	59
Max. Noise Level		63	62	62	62	62	67	67	69	71	71	71	73	73	74	74	75	76	76	76	75	69	71	71	71	71	68	65	64	63	63
No. of exceedance		0	0	0	0	0	0	0	0	9	9	5	15	16	16	16	18	19	20	17	16	0	2	3	5	2	0	0	0	0	0
No. of unit with exceedance		0		0			0		15					16			20					2		3	5					0	
Total No. of Units		45		45			45		45					45			45					45		45	45					45	

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Base Case Scenario

AM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor

T2

Max Noise Level	70
Total No. of Unit with exceedance	0
Total No. of Units	405
Compliance rate	100%

T3

Max Noise Level	67
Total No. of Unit with exceedance	0
Total No. of Units	450
Compliance rate	100%

T4

Max Noise Level	75
Total No. of Unit with exceedance	46
Total No. of Units	405
Compliance rate	89%

T5

Max Noise Level	67
Total No. of Unit with exceedance	0
Total No. of Units	495
Compliance rate	100%

T6

Max Noise Level	76
Total No. of Unit with exceedance	61
Total No. of Units	450
Compliance rate	86%

OVERALL

Max Noise Level	76
Total No. of Unit with exceedance	107
Total No. of Units	2205
Compliance rate	95%

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Base Case Scenario

PM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor

T2

Unit		A			B				C				D			E		F		G				H				I	
Floor	mPD	T2-A-1	T2-A-2	T2-A-3	T2-B-1	T2-B-2	T2-B-3	T2-B-4	T2-C-1	T2-C-2	T2-C-3	T2-C-4	T2-D-1	T2-D-2	T2-D-3	T2-E-1	T2-E-2	T2-F-1	T2-F-2	T2-G-1	T2-G-2	T2-G-3	T2-G-4	T2-H-1	T2-H-2	T2-H-3	T2-H-4	T2-I-1	T2-I-2
2F	27.75	61	61	61	61	67	67	67	68	68	68	68	67	67	67	67	67	66	66	66	66	66	61	56	57	59	62	62	62
3F	30.90	62	62	62	62	68	68	68	69	69	69	68	68	68	68	68	68	68	67	67	67	67	63	58	58	60	62	62	62
4F	34.05	62	63	63	63	69	69	68	69	69	69	69	68	68	68	68	68	68	68	68	68	67	63	58	58	61	63	63	63
5F	37.20	63	63	63	63	69	69	68	69	69	69	69	69	68	68	68	68	68	68	68	68	68	64	58	58	61	63	63	63
6F	40.35	63	63	63	63	69	69	68	69	69	69	69	69	68	68	68	68	68	68	68	68	68	64	58	58	61	63	63	63
7F	43.50	63	64	63	63	69	69	68	69	69	69	69	69	68	68	68	68	68	68	68	68	68	64	58	58	61	63	63	63
8F	46.65	63	64	63	63	68	69	68	69	69	69	69	69	68	68	68	68	68	68	68	68	68	64	58	58	61	64	63	64
9F	49.80	63	63	63	63	68	68	68	70	69	69	69	69	69	68	68	68	68	68	68	68	68	64	58	58	61	64	63	64
10F	52.95	63	63	63	63	68	68	68	70	69	69	69	69	68	68	68	68	68	68	68	68	68	63	58	58	61	63	63	63
11F	56.10	63	63	63	63	68	68	68	70	69	69	69	69	68	68	68	68	68	68	68	68	68	63	58	58	61	63	63	63
12F	59.25	63	63	63	63	68	68	68	70	69	69	69	69	68	68	68	68	68	68	68	68	67	63	58	58	61	63	63	63
13F	62.40	62	63	63	63	68	68	68	70	69	69	69	69	68	68	68	68	68	68	68	68	67	63	58	58	61	63	63	63
14F	65.55	62	63	63	63	68	68	68	70	69	69	69	69	68	68	68	68	68	68	68	67	67	63	58	58	61	63	63	63
15F	68.70	62	63	63	63	68	68	68	70	69	69	69	69	68	68	68	68	68	68	68	67	67	63	58	58	61	63	63	63
16F	71.85	62	63	63	64	68	68	68	69	69	69	69	69	68	68	68	68	68	68	67	67	67	63	58	58	61	63	63	63
17F	75.00	62	63	63	64	68	68	68	69	69	69	69	68	68	68	68	68	68	68	67	67	67	63	58	58	61	63	63	63
18F	78.15	62	63	63	64	68	68	68	69	69	69	69	68	68	68	68	68	68	67	67	67	67	63	58	58	61	63	63	63
19F	81.30	62	63	63	64	68	68	68	69	69	69	68	68	68	68	68	68	68	67	67	67	67	63	58	58	61	63	63	63
20F	84.45	62	63	63	64	68	68	68	69	69	68	68	68	68	68	68	68	67	67	67	67	67	62	58	58	61	63	63	63
22F	93.10	62	63	63	63	68	68	68	69	68	68	68	68	68	68	67	67	67	67	67	67	67	62	57	57	60	63	63	63
23F	96.25	62	63	63	63	68	68	67	69	68	68	68	68	68	68	67	67	67	67	67	67	67	62	57	57	60	63	63	63
24F	99.40	62	63	63	63	68	68	67	69	68	68	68	68	68	67	67	67	67	67	67	67	67	62	57	57	60	63	63	63
25F	102.55	62	63	63	63	68	68	67	68	68	68	68	68	67	67	67	67	67	67	67	67	67	62	57	57	60	63	63	63
26F	105.70	61	63	63	63	68	68	67	68	68	68	68	67	67	67	67	67	67	67	67	67	66	62	57	57	60	63	63	63
27F	108.85	61	63	63	63	67	67	67	68	68	68	67	67	67	67	67	67	67	67	67	67	66	62	57	57	60	63	63	63
28F	112.00	61	63	63	63	67	67	67	68	68	67	67	67	67	67	67	67	67	67	66	66	66	62	57	57	60	63	63	63
29F	115.15	61	63	63	63	67	67	67	68	68	67	67	67	67	67	67	67	67	66	66	66	66	62	57	57	60	63	63	63
30F	118.30	61	63	63	63	67	67	67	68	67	67	67	67	67	67	67	67	67	66	66	66	66	61	57	57	60	63	62	62
31F	121.45	61	63	63	63	67	67	67	68	67	67	67	67	67	67	67	66	66	66	66	66	66	61	57	57	60	62	62	62
32F	124.60	61	62	62	63	67	67	67	68	67	67	67	67	67	67	67	66	66	66	66	66	66	61	57	57	60	62	62	62
33F	127.75	61	62	62	63	67	67	67	68	67	67	67	67	67	67	66	66	66	66	66	66	66	61	57	57	60	62	62	62
34F	130.90	61	62	62	63	67	67	66	68	67	67	67	67	67	66	66	66	66	66	66	66	66	61	57	57	60	62	62	62
35F	134.05	61	62	62	63	67	67	66	67	67	67	67	67	66	66	66	66	66	66	66	66	66	61	57	57	60	62	62	62
36F	137.20	61	62	62	63	67	67	66	67	67	67	67	66	66	66	66	66	66	66	66	66	66	61	57	57	60	62	62	62
37F	140.35	61	62	62	63	67	67	66	67	67	67	66	66	66	66	66	66	66	66	66	66	66	61	57	57	60	62	62	62
38F	143.50	61	62	62	63	67	67	66	67	67	67	66	66	66	66	66	66	66	66	66	66	66	61	57	57	60	62	62	62
39F	146.65	61	62	62	63	67	66	66	67	67	66	66	66	66	66	66	66	66	66	66	66	65	61	56	56	59	62	62	62
40F	149.80	61	62	62	62	66	66	66	67	67	66	66	66	66	66	66	66	66	66	65	65	65	61	56	56	59	62	62	62
41F	152.95	60	62	62	62	66	66	66	67	66	66	66	66	66	66	66	66	66	66	65	65	65	61	56	56	59	62	62	62
42F	156.10	60	62	62	62	66	66	66	67	66	66	66	66	66	66	66	66	65	65	65	65	65	60	56	56	59	62	62	62
43F	159.25	60	62	62	62	66	66	66	67	66	66	66	66	66	66	66	65	65	65	65	65	65	60	56	56	59	62	62	62
44F	162.40	60	62	62	62	66	66	66	67	66	66	66	66	66	66	66	65	65	65	65	65	65	60	56	56	59	62	62	62
45F	165.55	60	62	62	62	66	66	66	67	66	66	66	66	66	66	65	65	65	65	65	65	65	60	56	56	59	62	62	62
46F	168.70	60	62	62	62	66	66	66	67	66	66	66	66	66	65	65	65	65	65	65	65	65	60	56	56	59	62	62	62
47F	171.85	60	62	62	62	66	66	66	67	66	66	66	66	65	65	65	65	65	65	65	65	65	60	56	56	59	62	62	62
Max. Noise Level		63	64	63	64	69	69	68	70	69	69	69	69	69	68	68	68	68	68	68	68	68	64	58	58	61	64	63	64
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0			0				0				0			0		0		0				0				0	
Total No. of Units		45			45				45				45			45		45		45				45				45	

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Base Case Scenario

PM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor

T3

Unit		A		B		C		D					E			F				G		H	I				J
Floor	mPD	T3-A-1	T3-A-2	T3-B-1	T3-B-2	T3-C-1	T3-C-2	T3-D-1	T3-D-2	T3-D-3	T3-D-4	T3-D-5	T3-E-1	T3-E-2	T3-E-3	T3-F-1	T3-F-2	T3-F-3	T3-F-4	T3-G-1	T3-G-2	T3-H-1	T3-I-1	T3-I-2	T3-I-3	T3-I-4	T3-J-1
1F	24.60	65	65	64	64	52	52	54	55	53	53	53	53	53	53	55	56	59	60	60	60	60	63	65	65	65	65
2F	27.75	65	65	64	64	53	53	55	55	53	53	54	54	54	54	55	57	59	61	61	61	61	64	66	66	65	65
3F	30.90	65	65	65	64	54	53	56	56	53	53	54	54	54	54	55	57	60	61	61	61	61	64	66	66	66	66
4F	34.05	66	65	65	64	54	54	57	57	53	54	54	54	54	54	55	57	60	62	62	62	62	65	66	66	66	66
5F	37.20	66	65	65	64	55	55	58	58	53	54	54	54	54	54	55	57	60	62	62	62	63	65	66	66	66	66
6F	40.35	66	66	65	65	55	55	58	58	54	54	54	54	54	54	55	57	60	62	62	63	63	65	67	66	66	66
7F	43.50	66	66	65	65	56	56	59	59	54	54	54	54	54	54	55	57	60	62	63	63	63	65	67	67	66	66
8F	46.65	66	66	65	65	56	56	59	59	54	54	54	54	54	54	55	57	61	63	63	63	63	66	67	67	66	66
9F	49.80	66	66	65	65	56	56	60	59	54	54	54	54	54	54	55	57	61	63	63	63	63	66	67	67	66	66
10F	52.95	66	66	65	65	57	57	60	60	54	54	54	54	54	54	55	57	61	63	63	63	63	66	67	67	66	66
11F	56.10	66	65	65	65	57	57	60	60	54	54	54	54	54	54	55	57	61	63	63	63	63	66	67	67	66	66
12F	59.25	66	65	65	65	57	57	61	60	54	54	54	54	54	54	55	57	61	63	63	63	63	66	67	66	66	66
13F	62.40	66	65	65	64	57	57	61	61	54	54	54	54	54	54	55	57	61	63	63	63	63	66	67	66	66	66
14F	65.55	66	65	65	64	56	57	61	61	54	54	54	54	54	54	55	57	61	63	63	63	63	66	67	66	66	66
15F	68.70	66	65	65	64	56	57	61	61	54	54	54	54	54	54	55	57	61	63	63	63	63	65	66	66	66	66
16F	71.85	66	65	65	64	56	57	61	61	54	54	54	54	54	54	55	57	61	63	63	63	63	65	66	66	66	66
17F	75.00	65	65	65	64	56	57	61	61	54	54	54	54	54	54	55	57	61	63	63	63	63	65	66	66	66	66
18F	78.15	65	65	65	64	56	56	61	61	54	54	54	54	54	54	55	57	61	63	63	63	63	65	66	66	66	66
19F	81.30	65	65	65	64	56	56	60	60	54	54	54	54	54	54	55	57	60	63	63	63	63	65	66	66	66	66
21F	89.95	65	65	64	64	56	56	60	60	54	54	54	54	54	54	55	57	60	63	63	63	63	65	66	66	66	66
22F	93.10	65	65	64	64	56	56	60	60	54	54	54	54	54	54	55	57	60	63	63	63	63	65	66	66	66	66
23F	96.25	65	65	64	64	56	56	60	60	54	54	54	54	54	54	55	57	60	63	63	63	63	65	66	66	66	65
24F	99.40	65	65	64	64	56	56	60	60	54	54	54	54	54	54	55	57	60	63	63	63	63	65	66	66	66	65
25F	102.55	65	65	64	64	56	56	60	60	53	54	54	54	54	54	55	57	60	62	63	63	63	65	66	66	66	65
26F	105.70	65	65	64	64	55	56	60	60	53	54	54	54	54	54	55	57	60	62	63	63	63	65	66	66	66	65
27F	108.85	65	65	64	64	55	56	60	60	53	54	54	54	54	54	55	57	60	62	62	63	63	65	66	66	66	65
28F	112.00	65	64	64	64	55	56	60	60	53	54	54	54	54	54	55	57	60	62	62	63	63	65	66	66	65	65
29F	115.15	65	64	64	63	55	55	60	60	53	53	54	54	54	54	55	57	60	62	62	63	63	65	66	66	65	65
30F	118.30	65	64	64	63	55	55	60	60	53	53	54	54	54	54	55	57	60	62	62	63	63	65	66	66	65	65
31F	121.45	65	64	64	63	55	55	59	60	53	53	54	54	54	54	55	57	60	62	62	63	63	65	66	66	65	65
32F	124.60	65	64	64	63	55	55	59	59	53	53	54	54	54	54	55	57	60	62	62	62	63	65	66	65	65	65
33F	127.75	64	64	64	63	55	55	59	59	53	53	54	54	54	54	55	56	60	62	62	62	63	65	66	65	65	65
34F	130.90	64	64	64	63	55	55	59	59	53	53	54	54	54	54	55	56	60	62	62	62	63	65	65	65	65	65
35F	134.05	64	64	64	63	55	55	59	59	53	53	54	54	54	54	55	56	60	62	62	62	63	65	65	65	65	65
36F	137.20	64	64	64	63	55	55	59	59	53	53	54	54	54	54	55	56	60	62	62	62	63	65	65	65	65	65
37F	140.35	64	64	64	63	55	55	59	59	53	53	54	54	54	54	54	56	60	62	62	62	63	64	65	65	65	65
38F	143.50	64	64	63	63	55	55	59	59	53	53	54	53	54	54	54	56	60	62	62	62	62	64	65	65	65	65
39F	146.65	64	64	63	63	54	55	59	59	53	53	54	53	53	54	54	56	60	62	62	62	62	64	65	65	65	65
40F	149.80	64	64	63	63	54	55	59	59	53	53	54	53	53	53	54	56	60	62	62	62	62	64	65	65	65	64
41F	152.95	64	64	63	63	54	55	59	59	53	53	53	53	53	53	54	56	60	62	62	62	62	64	65	65	65	64
42F	156.10	64	64	63	63	54	54	59	59	53	53	53	53	53	53	54	56	60	62	62	62	62	64	65	65	65	64
43F	159.25	64	64	63	63	54	54	59	59	53	53	53	53	53	53	54	56	59	62	62	62	62	64	65	65	65	64
44F	162.40	64	63	63	63	54	54	59	59	53	53	53	53	53	53	54	56	59	62	62	62	62	64	65	65	65	64
45F	165.55	64	63	63	62	54	54	58	59	53	53	53	53	53	53	54	56	59	62	62	62	62	64	65	65	64	64
46F	168.70	64	63	63	62	54	54	58	59	53	53	53	53	53	53	54	56	59	62	62	62	62	64	65	65	64	64
Max. Noise Level		66	66	65	65	57	57	61	61	54	54	54	54	54	54	55	57	61	63	63	63	63	66	67	67	66	66
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0		0		0		0					0			0				0		0	0				0
Total No. of Units		45		45		45		45					45			45				45		45	45				45

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Base Case Scenario

PM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor

T4

Unit		A			B				C		D				E			F					G		H		I	
Floor	mPD	T4-A-1	T4-A-2	T4-A-3	T4-B-1	T4-B-2	T4-B-3	T4-B-4	T4-C-1	T4-C-2	T4-D-1	T4-D-2	T4-D-3	T4-D-4	T4-E-1	T4-E-2	T4-E-3	T4-F-1	T4-F-2	T4-F-3	T4-F-4	T4-F-5	T4-G-1	T4-G-2	T4-H-1	T4-H-2	T4-I-1	T4-I-2
1F	24.60	65	66	68	69	*72*	*72*	*72*	*73*	*73*	*73*	*73*	*71*	70	66	66	65	65	57	62	63	54	50	52	63	63	64	64
2F	27.75	65	66	68	69	*71*	*72*	*72*	*72*	*72*	*73*	*72*	*71*	70	68	67	66	66	59	63	63	55	51	52	63	64	64	64
3F	30.90	65	66	68	69	*71*	*72*	*72*	*72*	*72*	*72*	*72*	*71*	70	68	68	67	67	61	64	64	56	51	53	64	64	64	65
4F	34.05	65	66	68	69	*71*	*71*	*71*	*72*	*72*	*72*	*72*	*71*	70	68	68	68	67	62	64	64	57	51	54	64	64	64	65
5F	37.20	65	66	68	68	*71*	*71*	*71*	*71*	*71*	*72*	*71*	70	70	68	68	68	68	63	65	65	58	51	54	64	64	64	65
6F	40.35	65	66	68	68	*71*	*71*	*71*	*71*	*71*	*71*	*71*	70	70	68	68	68	68	64	66	66	58	52	55	64	64	64	65
7F	43.50	65	66	67	68	70	*71*	*71*	*71*	*71*	*71*	*71*	70	69	68	68	68	68	64	66	66	59	52	55	64	64	64	65
8F	46.65	65	66	67	68	70	70	70	*71*	*71*	*71*	*71*	70	69	68	68	68	68	64	66	66	59	52	55	64	64	64	65
9F	49.80	65	66	67	68	70	70	70	70	*71*	*71*	70	69	69	68	68	68	68	64	66	66	59	52	55	64	64	64	65
10F	52.95	65	66	67	68	70	70	70	70	70	*71*	70	69	69	68	68	68	68	64	66	66	59	52	55	64	64	64	65
11F	56.10	65	66	67	67	70	70	70	70	70	70	70	69	69	67	68	68	68	64	66	66	59	52	55	64	64	64	64
12F	59.25	65	65	67	67	69	70	70	70	70	70	70	69	69	67	68	68	67	64	66	66	59	52	55	64	64	64	64
13F	62.40	65	65	67	67	69	69	70	70	70	70	70	69	68	67	67	67	67	63	66	66	59	52	55	64	64	64	64
14F	65.55	65	65	66	67	69	69	69	70	70	70	70	69	68	67	67	67	67	63	66	66	59	52	55	64	64	64	64
15F	68.70	64	65	66	67	69	69	69	69	70	70	69	69	68	67	67	67	67	63	66	66	59	52	55	64	64	64	64
16F	71.85	64	65	66	67	69	69	69	69	69	70	69	68	68	67	67	67	67	63	65	66	58	52	55	64	64	64	64
17F	75.00	64	65	66	67	69	69	69	69	69	69	69	68	68	67	67	67	67	63	65	66	58	52	55	64	64	64	64
18F	78.15	64	65	66	67	69	69	69	69	69	69	69	68	68	66	67	67	67	63	65	66	58	52	55	64	64	64	64
19F	81.30	64	65	66	66	69	69	69	69	69	69	69	68	68	66	67	67	67	63	65	65	58	52	55	63	64	64	64
21F	89.95	64	64	66	66	68	68	68	69	69	69	69	68	67	66	66	66	66	62	65	65	58	52	54	63	63	63	64
23F	93.10	64	64	66	66	68	68	68	68	69	69	68	68	67	66	66	66	66	62	65	65	58	52	54	63	63	63	63
24F	96.25	64	64	65	66	68	68	68	68	68	69	68	67	67	66	66	66	66	62	65	65	58	52	54	63	63	63	63
25F	99.40	64	64	65	66	68	68	68	68	68	69	68	67	67	66	66	66	66	62	64	65	57	52	54	63	63	63	63
26F	102.55	63	64	65	66	68	68	68	68	68	68	68	67	67	66	66	66	66	62	64	65	57	52	54	63	63	63	63
27F	105.70	63	64	65	66	68	68	68	68	68	68	68	67	67	65	66	66	66	62	64	65	57	52	54	63	63	63	63
28F	108.85	63	64	65	66	68	68	68	68	68	68	68	67	67	65	66	66	66	62	64	65	57	52	54	63	63	63	63
29F	112.00	63	64	65	66	68	68	68	68	68	68	68	67	67	65	66	66	66	61	64	65	57	51	54	63	63	63	63
30F	115.15	63	64	65	65	67	68	68	68	68	68	68	67	66	65	66	66	66	61	64	64	57	51	54	63	63	63	63
31F	118.30	63	64	65	65	67	67	68	68	68	68	68	67	66	65	65	65	65	61	64	64	57	51	54	63	63	63	63
32F	121.45	63	63	65	65	67	67	67	68	68	68	68	67	66	65	65	65	65	61	64	64	57	51	54	63	63	63	63
33F	124.60	63	63	65	65	67	67	67	67	68	68	67	67	66	65	65	65	65	61	64	64	57	51	54	62	62	63	63
34F	127.75	63	63	65	65	67	67	67	67	67	68	67	66	66	65	65	65	65	61	64	64	57	51	54	62	62	62	63
35F	130.90	63	63	64	65	67	67	67	67	67	68	67	66	66	65	65	65	65	61	64	64	57	51	54	62	62	62	62
36F	134.05	63	63	64	65	67	67	67	67	67	67	67	66	66	65	65	65	65	61	63	64	56	51	53	62	62	62	62
37F	137.20	63	63	64	65	67	67	67	67	67	67	67	66	66	64	65	65	65	61	63	64	56	51	53	62	62	62	62
38F	140.35	62	63	64	65	67	67	67	67	67	67	67	66	66	64	65	65	65	61	63	64	56	51	53	62	62	62	62
39F	143.50	62	63	64	65	67	67	67	67	67	67	67	66	66	64	65	65	65	60	63	64	56	51	53	62	62	62	62
40F	146.65	62	63	64	65	67	67	67	67	67	67	67	66	66	64	65	65	65	60	63	64	56	51	53	62	62	62	62
41F	149.80	62	63	64	64	66	67	67	67	67	67	67	66	65	64	65	65	65	60	63	64	56	51	53	62	62	62	62
42F	152.95	62	63	64	64	66	67	67	67	67	67	67	66	65	64	65	65	65	60	63	64	56	51	53	62	62	62	62
43F	156.10	62	63	64	64	66	66	66	67	67	67	67	66	65	64	64	64	64	60	63	63	56	51	53	62	62	62	62
44F	159.25	62	63	64	64	66	66	66	67	67	67	66	66	65	64	64	64	64	60	63	63	56	51	53	62	62	62	62
45F	162.40	62	63	64	64	66	66	66	67	67	67	66	66	65	64	64	64	64	60	63	63	56	51	53	62	62	62	62
46F	165.55	62	62	64	64	66	66	66	66	66	67	66	65	65	64	64	64	64	60	63	63	56	51	53	62	62	62	62
47F	168.70	62	62	64	64	66	66	66	66	66	67	66	65	65	64	64	64	64	60	63	63	56	51	53	62	62	62	62
Max. Noise Level		65	66	68	69	72	72	72	73	73	73	73	71	70	68	68	68	68	64	66	66	59	52	55	64	64	64	65
No. of exceedance		0	0	0	0	6	7	7	8	9	10	8	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0			7				9		10				0			0					0		0		0	
Total No. of Units		45			45				45		45				45			45					45		45		45	

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Base Case Scenario

PM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor

T5

Unit		A		B			C				D		E					F		G			H					I		J		K	
Floor	mPD	T5-A-1	T5-A-2	T5-B-1	T5-B-2	T5-B-3	T5-C-1	T5-C-2	T5-C-3	T5-C-4	T5-D-1	T5-D-2	T5-E-1	T5-E-2	T5-E-3	T5-E-4	T5-E-6	T5-F-1	T5-F-2	T5-G-1	T5-G-2	T5-G-3	T5-H-1	T5-H-2	T5-H-3	T5-H-4	T5-H-5	T5-I-1	T5-I-2	T5-J-1	T5-J-2	T5-K-1	T5-K-2
1F	**24.58**	62	62	61	62	62	61	61	59	58	58	56	59	57	59	58	58	58	58	59	59	60	61	60	61	63	64	64	64	61	61	61	61
2F	**27.73**	62	62	62	62	62	62	61	60	59	59	58	60	58	59	59	59	59	59	59	60	61	62	60	61	63	64	64	64	61	61	61	62
3F	**30.88**	62	62	62	62	62	62	62	60	60	60	59	61	58	60	59	59	59	59	59	60	61	62	60	61	63	64	64	64	61	61	61	62
4F	**34.03**	62	62	62	62	63	62	62	60	60	60	59	61	58	60	59	59	59	59	59	60	61	62	60	62	64	64	64	64	61	61	61	62
5F	**37.18**	62	62	62	62	63	62	62	61	60	60	59	61	59	60	60	59	59	59	59	60	61	62	60	62	64	64	64	65	61	61	61	62
6F	**40.33**	62	62	62	62	62	62	62	61	60	60	59	62	59	60	60	59	59	59	59	60	61	62	60	62	64	65	65	65	60	61	61	62
7F	**43.48**	62	62	62	62	62	62	62	61	60	60	59	62	59	60	60	59	59	59	59	60	61	62	60	62	64	65	65	65	60	61	61	61
8F	**46.63**	62	62	62	62	62	62	62	61	60	60	59	62	59	60	60	60	59	59	59	60	61	62	61	62	65	66	65	65	60	61	61	61
9F	**49.78**	62	62	62	62	62	62	62	61	60	60	59	62	59	60	60	60	59	59	59	60	61	62	61	62	65	66	65	66	60	61	61	61
10F	**52.93**	61	62	62	62	62	62	62	60	60	60	59	62	59	60	60	60	59	59	60	60	61	62	61	62	65	66	65	66	60	61	61	61
11F	**56.08**	61	62	62	62	62	62	62	60	60	60	59	62	59	60	60	60	60	59	60	60	61	62	61	63	65	66	65	66	60	60	61	61
12F	**59.23**	61	62	62	62	62	62	62	60	60	60	59	62	59	60	60	60	60	59	60	60	61	62	61	63	65	66	65	65	60	60	61	61
13F	**62.38**	61	61	62	62	62	62	62	60	60	60	59	62	59	60	60	60	60	60	60	60	61	63	61	63	65	66	65	65	60	60	61	61
14F	**65.53**	61	61	61	62	62	62	61	60	60	59	59	62	59	60	60	60	60	60	60	60	62	63	61	63	65	66	65	65	60	60	60	61
15F	**68.68**	61	61	61	62	62	62	61	60	60	59	59	62	59	60	60	60	60	60	60	60	62	63	61	62	65	66	65	65	59	60	60	61
16F	**71.83**	61	61	61	62	62	62	61	60	60	59	59	61	59	60	60	60	60	60	60	60	62	63	61	62	65	66	65	65	59	60	60	61
17F	**74.98**	61	61	61	61	62	62	61	60	60	59	59	61	59	60	60	60	60	60	60	60	62	63	61	62	65	66	65	65	59	60	60	60
18F	**78.13**	61	61	61	61	62	62	61	60	60	59	58	61	59	60	60	60	60	60	60	60	61	62	61	62	65	66	65	65	59	60	60	60
19F	**81.28**	60	61	61	61	61	61	61	60	60	59	58	61	59	60	60	60	60	60	60	60	61	62	61	62	65	66	65	65	59	59	60	60
21F	**89.93**	60	60	61	61	61	61	61	60	60	59	58	61	59	60	60	60	60	60	60	60	61	62	61	62	65	65	65	65	59	59	60	60
22F	**93.08**	60	60	61	61	61	61	61	60	59	59	58	61	59	60	60	60	60	59	60	60	61	62	61	62	65	65	65	65	59	59	59	60
23F	**96.23**	60	60	60	61	61	61	61	60	59	59	58	61	59	60	60	60	60	59	60	60	61	62	61	62	65	65	65	65	58	59	59	60
24F	**99.38**	60	60	60	61	61	61	61	59	59	59	58	61	59	60	60	60	59	59	60	60	61	62	61	62	65	65	65	65	58	59	59	60
25F	**102.53**	60	60	60	61	61	61	60	59	59	59	58	61	59	60	60	59	59	59	60	60	61	62	61	62	65	65	64	64	58	59	59	59
26F	**105.68**	60	60	60	60	61	61	60	59	59	59	58	61	59	60	60	59	59	59	59	60	61	62	60	62	65	65	64	64	58	59	59	59
27F	**108.83**	60	60	60	60	61	61	60	59	59	59	58	61	59	60	60	59	59	59	59	60	61	62	60	62	64	65	64	64	58	59	59	59
28F	**111.98**	60	60	60	60	61	61	60	59	59	58	58	61	59	60	60	59	59	59	59	60	61	62	60	62	64	65	64	64	58	58	59	59
29F	**115.13**	59	60	60	60	60	61	60	59	59	58	58	61	59	60	60	59	59	59	59	60	61	62	60	62	64	65	64	64	58	58	59	59
30F	**118.28**	59	60	60	60	60	60	60	59	59	58	58	61	59	60	60	59	59	59	59	60	61	62	60	62	64	65	64	64	58	58	59	59
31F	**121.43**	59	59	60	60	60	60	60	59	59	58	58	61	58	60	60	59	59	59	59	60	61	62	60	61	64	65	64	64	58	58	59	59
32F	**124.58**	59	59	60	60	60	60	60	59	59	58	57	61	58	60	60	59	59	59	59	60	61	62	60	61	64	65	64	64	58	58	58	59
33F	**127.73**	59	59	60	60	60	60	60	59	59	58	57	60	58	60	59	59	59	59	59	60	61	62	60	61	64	65	64	64	58	58	58	59
34F	**130.88**	59	59	59	60	60	60	60	59	59	58	57	60	58	60	59	59	59	59	59	59	60	61	60	61	64	65	64	64	57	58	58	59
35F	**134.03**	59	59	59	60	60	60	60	59	59	58	57	60	58	60	59	59	59	59	59	60	61	61	60	61	64	64	64	64	57	58	58	59
36F	**137.18**	59	59	59	60	60	60	60	59	58	58	57	60	58	60	59	59	59	59	59	59	60	61	60	61	64	64	64	64	57	58	58	58
37F	**140.33**	59	59	59	60	60	60	60	59	58	58	57	60	58	60	59	59	59	59	59	59	60	61	60	61	64	64	64	64	57	58	58	58
38F	**143.48**	59	59	59	59	60	60	59	58	58	58	57	60	58	60	59	59	59	59	59	59	60	61	60	61	64	64	64	64	57	58	58	58
39F	**146.63**	59	59	59	59	60	60	59	58	58	58	57	60	58	60	59	59	59	59	59	59	60	61	60	61	64	64	63	63	57	58	58	58
40F	**149.78**	58	59	59	59	60	60	59	58	58	58	57	60	58	60	59	59	59	59	59	59	60	61	60	61	64	64	63	63	57	57	58	58
41F	**152.93**	58	59	59	59	59	60	59	58	58	58	57	60	58	60	59	59	59	59	59	59	60	61	59	61	64	64	63	63	57	57	58	58
42F	**156.08**	58	59	59	59	59	59	59	58	58	57	57	60	58	60	59	59	59	59	59	59	60	61	59	61	63	64	63	63	57	57	58	58
43F	**159.23**	58	59	59	59	59	59	59	58	58	57	57	60	58	59	59	59	59	58	59	59	60	61	59	61	63	64	63	63	57	57	58	58
44F	**162.38**	58	58	59	59	59	59	59	58	58	57	57	60	58	59	59	59	58	58	58	59	60	61	59	61	63	64	63	63	57	57	57	58
45F	**165.53**	58	58	59	59	59	59	59	58	58	57	57	60	58	59	59	59	58	58	58	59	60	61	59	61	63	64	63	63	57	57	57	58
46F	**168.68**	58	58	59	59	59	59	59	58	58	57	57	60	58	59	59	58	58	58	58	59	60	61	59	61	63	64	63	63	57	57	57	58
Max. Noise Level		62	62	62	62	63	62	62	61	60	60	59	62	59	60	60	60	60	60	60	60	62	63	61	63	65	66	65	66	61	61	61	62
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0		0			0				0		0					0		0			0					0		0		0	
Total No. of Units		45		45			45				45		45					45		45			45					45		45		45	

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Base Case Scenario

PM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor

T6

Unit		A		B			C		D					E			F					G		H	I					J	
Floor	mPD	T6-A-1	T6-A-2	T6-B-1	T6-B-2	T6-C-1	T6-C-2	T6-C-3	T6-D-2	T6-D-3	T6-D-4	T6-D-5	T6-D-6	T6-E-1	T6-E-2	T6-E-3	T6-F-1	T6-F-3	T6-F-4	T6-F-5	T6-F-6	T6-G-1	T6-G-2	T6-H-1	T6-I-1	T6-I-2	T6-I-3	T6-I-4	T6-I-6	T6-J-1	T6-J-2
1F	24.58	61	61	60	60	60	64	64	66	68	68	68	***71***	***71***	***72***	***72***	***73***	***74***	***75***	***74***	***73***	68	69	69	69	69	66	63	62	62	61
2F	27.73	61	61	60	60	60	64	64	66	69	69	69	***72***	***72***	***72***	***72***	***73***	***74***	***74***	***73***	***73***	67	69	69	69	69	66	63	62	62	61
3F	30.88	61	61	60	60	60	64	64	67	70	70	69	***72***	***72***	***72***	***72***	***73***	***73***	***73***	***73***	***72***	67	69	69	69	69	66	63	62	62	61
4F	34.03	61	61	60	60	60	65	65	68	70	70	70	***71***	***71***	***72***	***72***	***72***	***72***	***73***	***72***	***72***	67	68	69	69	69	66	63	62	62	61
5F	37.18	61	61	60	60	60	65	65	68	70	70	69	***71***	***71***	***71***	***71***	***72***	***72***	***72***	***72***	***71***	66	68	68	69	69	65	63	62	62	61
6F	40.33	61	61	60	60	60	65	65	68	70	70	69	***71***	***71***	***71***	***71***	***71***	***72***	***72***	***71***	***71***	66	68	68	69	68	65	63	62	62	61
7F	43.48	61	61	60	60	60	66	65	68	70	70	69	***71***	***71***	***71***	***71***	***71***	***71***	***72***	***71***	***71***	65	67	68	69	68	65	63	62	61	61
8F	46.63	61	60	60	60	60	66	65	68	70	70	69	70	***71***	***71***	***71***	***71***	***71***	***72***	***71***	***71***	65	67	68	68	68	65	63	62	61	61
9F	49.78	61	60	60	60	60	66	65	67	70	70	69	70	70	70	***71***	***71***	***71***	***71***	***71***	70	65	67	67	68	68	65	63	62	61	61
10F	52.93	60	60	60	60	60	66	65	67	69	69	69	70	70	70	70	***71***	***71***	***71***	***71***	70	64	67	67	68	68	64	62	61	61	61
11F	56.08	60	60	60	60	60	66	65	67	69	69	69	70	70	70	70	70	***71***	***71***	70	70	64	67	67	68	68	64	62	61	61	61
12F	59.23	60	60	60	59	60	66	65	67	69	69	69	70	70	70	70	70	70	***71***	70	70	64	66	67	68	68	64	62	61	61	60
13F	62.38	60	60	60	59	59	66	65	67	69	69	69	70	70	70	70	70	70	***71***	70	70	64	66	67	68	67	64	62	61	61	60
14F	65.53	60	60	59	59	59	65	65	67	69	69	68	70	70	70	70	70	70	70	70	70	63	66	67	68	67	64	62	61	60	60
15F	68.68	60	60	59	59	59	65	65	67	69	69	68	69	69	69	70	70	70	70	70	69	63	66	66	67	67	63	61	61	60	60
16F	71.83	60	59	59	59	59	65	65	67	69	69	68	69	69	69	69	70	70	70	69	69	63	66	66	67	67	63	61	61	60	60
17F	74.98	60	59	59	59	59	65	65	67	69	69	68	69	69	69	69	69	70	70	69	69	63	66	66	67	67	63	61	60	60	60
18F	78.13	59	59	59	59	59	65	65	67	69	68	68	69	69	69	69	69	69	70	69	69	63	65	66	67	67	63	61	60	60	60
19F	81.28	59	59	59	59	59	65	65	66	68	68	68	69	69	69	69	69	69	70	69	69	62	65	66	67	67	63	61	60	60	60
21F	89.93	59	59	59	58	58	65	64	66	68	68	68	69	69	69	69	69	69	69	69	68	62	65	65	67	66	62	61	60	59	59
22F	93.08	59	59	59	58	58	65	64	66	68	68	68	68	68	69	69	69	69	69	69	68	62	65	65	66	66	62	60	60	59	59
23F	96.23	59	59	58	58	58	65	64	66	68	68	67	68	68	68	68	69	69	69	68	68	62	65	65	66	66	62	60	60	59	59
24F	99.38	59	59	58	58	58	65	64	66	68	68	67	68	68	68	68	68	69	69	68	68	61	64	65	66	66	62	60	60	59	59
25F	102.53	59	58	58	58	58	65	64	66	68	68	67	68	68	68	68	68	69	69	68	68	61	64	65	66	66	62	60	59	59	59
26F	105.68	59	58	58	58	58	64	64	66	68	68	67	68	68	68	68	68	68	69	68	68	61	64	65	66	66	62	60	59	59	59
27F	108.83	58	58	58	58	58	64	64	66	68	67	67	68	68	68	68	68	68	69	68	68	61	64	65	66	66	62	60	59	59	59
28F	111.98	58	58	58	58	58	64	64	66	67	67	67	68	68	68	68	68	68	69	68	68	61	64	65	66	66	61	60	59	59	59
29F	115.13	58	58	58	58	58	64	64	65	67	67	67	68	68	68	68	68	68	68	68	68	61	64	65	66	66	61	60	59	59	58
30F	118.28	58	58	58	58	58	64	64	65	67	67	67	68	68	68	68	68	68	68	68	67	61	64	64	66	65	61	60	59	59	58
31F	121.43	58	58	58	57	58	64	64	65	67	67	67	68	68	68	68	68	68	68	68	67	60	64	64	65	65	61	59	59	59	58
32F	124.58	58	58	58	57	57	64	64	65	67	67	67	68	68	68	68	68	68	68	68	67	60	64	64	65	65	61	59	59	58	58
33F	127.73	58	58	58	57	57	64	63	65	67	67	67	67	67	67	68	68	68	68	67	67	60	63	64	65	65	61	59	59	58	58
34F	130.88	58	58	57	57	57	64	63	65	67	67	67	67	67	67	67	68	68	68	67	67	60	63	64	65	65	61	59	59	58	58
35F	134.03	58	58	57	57	57	64	63	65	67	67	66	67	67	67	67	67	68	68	67	67	60	63	64	65	65	61	59	58	58	58
36F	137.18	58	57	57	57	57	64	63	65	67	67	66	67	67	67	67	67	68	68	67	67	60	63	64	65	65	61	59	58	58	58
37F	140.33	58	57	57	57	57	64	63	65	67	67	66	67	67	67	67	67	67	68	67	67	60	63	64	65	65	61	59	58	58	58
38F	143.48	58	57	57	57	57	64	63	65	67	67	66	67	67	67	67	67	67	68	67	67	60	63	64	65	65	60	59	58	58	58
39F	146.63	57	57	57	57	57	64	63	65	67	67	66	67	67	67	67	67	67	68	67	67	60	63	64	65	65	60	59	58	58	58
40F	149.78	57	57	57	57	57	63	63	65	66	66	66	67	67	67	67	67	67	68	67	67	60	63	64	65	65	60	59	58	58	58
41F	152.93	57	57	57	57	57	63	63	65	66	66	66	67	67	67	67	67	67	67	67	67	59	63	63	65	64	60	59	58	58	57
42F	156.08	57	57	57	57	57	63	63	65	66	66	66	67	67	67	67	67	67	67	67	66	59	63	63	65	64	60	59	58	58	57
43F	159.23	57	57	57	57	57	63	63	64	66	66	66	67	67	67	67	67	67	67	67	66	59	63	63	64	64	60	58	58	58	57
44F	162.38	57	57	57	56	57	63	63	64	66	66	66	67	67	67	67	67	67	67	67	66	59	62	63	64	64	60	58	58	57	57
45F	165.53	57	57	57	56	56	63	63	64	66	66	66	66	67	67	67	67	67	67	67	66	59	62	63	64	64	60	58	58	57	57
46F	168.68	57	57	57	56	56	63	63	64	66	66	66	66	66	66	67	67	67	67	67	66	59	62	63	64	64	60	58	58	57	57
Max. Noise Level		61	61	60	60	60	66	65	68	70	70	70	72	72	72	72	73	74	75	74	73	68	69	69	69	69	66	63	62	62	61
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	7	8	8	9	10	11	13	10	8	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0		0			0		7					9			13					0		0	0					0	
Total No. of Units		45		45			45		45					45			45					45		45	45					45	

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Base Case Scenario

PM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor

T2

Max Noise Level	70
Total No. of Unit with exceedance	0
Total No. of Units	405
Compliance rate	100%

T3

Max Noise Level	67
Total No. of Unit with exceedance	0
Total No. of Units	450
Compliance rate	100%

T4

Max Noise Level	73
Total No. of Unit with exceedance	26
Total No. of Units	405
Compliance rate	94%

T5

Max Noise Level	66
Total No. of Unit with exceedance	0
Total No. of Units	495
Compliance rate	100%

T6

Max Noise Level	75
Total No. of Unit with exceedance	29
Total No. of Units	450
Compliance rate	94%

OVERALL

Max Noise Level	75
Total No. of Unit with exceedance	55
Total No. of Units	2205
Compliance rate	98%

Appendix 6.3

Traffic Noise Impact Assessment Result (Mitigated Case) and Schedule of Road Traffic Noise Mitigation Measures

Road Traffic Noise Impact Assessment

Project No.: 2127

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Mitigated Scenario

AM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor
	Fixed Window
	Baffle Tupe Acoustic Window (Configuration 1)
	Baffle Tupe Acoustic Window (Configuration 2)

T2

Unit		A			B				C				D			E		F		G				H				I	
Floor	**mPD**	**T2-A-1**	**T2-A-2**	**T2-A-3**	**T2-B-1**	**T2-B-2**	**T2-B-3**	**T2-B-4**	**T2-C-1**	**T2-C-2**	**T2-C-3**	**T2-C-4**	**T2-D-1**	**T2-D-2**	**T2-D-3**	**T2-E-1**	**T2-E-2**	**T2-F-1**	**T2-F-2**	**T2-G-1**	**T2-G-2**	**T2-G-3**	**T2-G-4**	**T2-H-1**	**T2-H-2**	**T2-H-3**	**T2-H-4**	**T2-I-1**	**T2-I-2**
2F	**27.75**	61	62	62	62	68	68	67	69	69	69	68	68	68	67	67	67	67	67	67	66	66	62	57	58	60	63	62	62
3F	**30.90**	63	63	63	63	69	69	68	70	70	69	69	69	69	69	69	69	68	68	68	68	68	64	58	59	61	63	63	63
4F	**34.05**	63	64	64	64	69	69	69	70	70	70	69	69	69	69	69	69	69	69	69	68	68	64	59	59	61	64	63	64
5F	**37.20**	63	64	64	64	69	69	69	70	70	70	69	69	69	69	69	69	69	69	69	69	69	65	59	59	62	64	64	64
6F	**40.35**	64	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	69	69	65	59	59	62	64	64	64
7F	**43.50**	64	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	69	69	65	59	59	62	64	64	64
8F	**46.65**	64	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	69	68	65	59	59	62	64	64	64
9F	**49.80**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	69	68	65	59	59	62	64	64	64
10F	**52.95**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	68	68	65	59	59	62	64	64	64
11F	**56.10**	63	64	64	64	69	69	69	70	70	70	70	70	69	69	69	69	69	69	69	68	68	64	59	59	62	64	64	64
12F	**59.25**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	68	68	64	59	59	62	64	64	64
13F	**62.40**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	68	68	68	64	59	59	62	64	64	64
14F	**65.55**	63	64	64	64	69	69	69	70	70	70	70	70	69	69	69	69	69	69	68	68	68	64	59	59	62	64	64	64
15F	**68.70**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	68	68	68	68	64	59	59	62	64	64	64
16F	**71.85**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	68	68	68	68	64	59	59	62	64	64	64
17F	**75.00**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	68	68	68	68	68	64	59	59	62	64	64	64
18F	**78.15**	63	64	64	64	69	69	69	70	70	70	69	69	69	69	69	69	68	68	68	68	68	64	59	59	62	64	64	64
19F	**81.30**	63	64	64	64	69	69	69	70	70	70	69	69	69	69	69	69	68	68	68	68	68	64	59	59	62	64	64	64
20F	**84.45**	63	64	64	64	69	69	69	70	70	69	69	69	69	69	69	68	68	68	68	68	68	63	58	58	61	64	64	64
22F	**93.10**	62	64	64	64	69	69	68	70	69	69	69	69	69	69	68	68	68	68	68	68	68	63	58	58	61	64	64	64
23F	**96.25**	62	64	64	64	69	69	68	70	69	69	69	69	69	68	68	68	68	68	68	68	68	63	58	58	61	64	64	64
24F	**99.40**	62	64	64	64	68	68	68	69	69	69	69	69	68	68	68	68	68	68	68	68	68	63	58	58	61	64	63	64
25F	**102.55**	62	63	64	64	68	68	68	69	69	69	69	68	68	68	68	68	68	68	68	68	67	63	58	58	61	64	63	63
26F	**105.70**	62	63	63	64	68	68	68	69	69	69	69	68	68	68	68	68	68	68	68	67	67	63	58	58	61	63	63	63
27F	**108.85**	62	63	63	64	68	68	68	69	69	69	68	68	68	68	68	68	68	68	67	67	67	63	58	58	61	63	63	63
28F	**112.00**	62	63	63	64	68	68	68	69	69	68	68	68	68	68	68	68	68	67	67	67	67	63	58	58	61	63	63	63
29F	**115.15**	62	63	63	64	68	68	68	69	68	68	68	68	68	68	68	68	68	67	67	67	67	63	58	58	61	63	63	63
30F	**118.30**	62	63	63	64	68	68	68	69	68	68	68	68	68	68	68	68	67	67	67	67	67	62	58	58	61	63	63	63
31F	**121.45**	62	63	63	64	68	68	68	69	68	68	68	68	68	68	68	67	67	67	67	67	67	62	58	58	61	63	63	63
32F	**124.60**	62	63	63	64	68	68	67	69	68	68	68	68	68	68	67	67	67	67	67	67	67	62	58	58	61	63	63	63
33F	**127.75**	62	63	63	64	68	68	67	68	68	68	68	68	68	67	67	67	67	67	67	67	67	62	58	58	61	63	63	63
34F	**130.90**	62	63	63	63	68	68	67	68	68	68	68	68	67	67	67	67	67	67	67	67	67	62	58	58	61	63	63	63
35F	**134.05**	62	63	63	63	68	68	67	68	68	68	68	67	67	67	67	67	67	67	67	67	67	62	58	58	61	63	63	63
36F	**137.20**	61	63	63	63	67	67	67	68	68	68	68	67	67	67	67	67	67	67	67	67	67	62	58	58	60	63	63	63
37F	**140.35**	61	63	63	63	67	67	67	68	68	68	67	67	67	67	67	67	67	67	67	67	67	62	57	57	60	63	63	63
38F	**143.50**	61	63	63	63	67	67	67	68	68	67	67	67	67	67	67	67	67	67	67	66	66	62	57	57	60	63	63	63
39F	**146.65**	61	63	63	63	67	67	67	68	67	67	67	67	67	67	67	67	67	67	66	66	66	62	57	57	60	63	63	63
40F	**149.80**	61	63	63	63	67	67	67	68	67	67	67	67	67	67	67	67	67	66	66	66	66	62	57	57	60	63	63	63
41F	**152.95**	61	63	63	63	67	67	67	68	67	67	67	67	67	67	67	67	66	66	66	66	66	62	57	57	60	63	63	63
42F	**156.10**	61	63	63	63	67	67	67	68	67	67	67	67	67	67	67	66	66	66	66	66	66	61	57	57	60	63	63	63
43F	**159.25**	61	62	63	63	67	67	67	68	67	67	67	67	67	67	66	66	66	66	66	66	66	61	57	57	60	63	62	63
44F	**162.40**	61	62	62	63	67	67	66	68	67	67	67	67	67	67	66	66	66	66	66	66	66	61	57	57	60	63	62	62
45F	**165.55**	61	62	62	63	67	67	66	68	67	67	67	67	67	66	66	66	66	66	66	66	66	61	57	57	60	62	62	62
46F	**168.70**	61	62	62	63	67	67	66	67	67	67	67	67	66	66	66	66	66	66	66	66	66	61	57	57	60	62	62	62
47F	**171.85**	61	62	62	63	67	67	66	67	67	67	67	66	66	66	66	66	66	66	66	66	66	61	57	57	60	62	62	62
Max. Noise Level		64	64	64	64	69	69	69	70	70	70	70	70	69	69	69	69	69	69	69	69	69	65	59	59	62	64	64	64
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0			0				0				0			0		0		0				0				0	
Total No. of Units		45			45				45				45			45		45		45				45				45	

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Mitigated Scenario

AM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor
	Fixed Window
	Baffle Tupe Acoustic Window (Configuration 1)
	Baffle Tupe Acoustic Window (Configuration 2)

T3

Unit		A		B		C		D					E			F				G		H	I				J
Floor	**mPD**	**T3-A-1**	**T3-A-2**	**T3-B-1**	**T3-B-2**	**T3-C-1**	**T3-C-2**	**T3-D-1**	**T3-D-2**	**T3-D-3**	**T3-D-4**	**T3-D-5**	**T3-E-1**	**T3-E-2**	**T3-E-3**	**T3-F-1**	**T3-F-2**	**T3-F-3**	**T3-F-4**	**T3-G-1**	**T3-G-2**	**T3-H-1**	**T3-I-1**	**T3-I-2**	**T3-I-3**	**T3-I-4**	**T3-J-1**
1F	**24.60**	66	66	65	65	54	54	56	56	54	54	55	55	55	55	56	57	60	61	61	61	61	64	66	66	66	66
2F	**27.75**	66	66	65	65	54	54	56	57	55	55	55	55	55	55	57	58	60	62	61	61	61	65	66	66	66	66
3F	**30.90**	66	66	66	65	55	55	57	57	55	55	55	55	55	55	57	58	61	62	62	62	62	65	67	67	67	67
4F	**34.05**	67	66	66	65	56	55	58	58	55	55	55	55	55	55	57	58	61	62	62	62	63	66	67	67	67	67
5F	**37.20**	67	66	66	65	56	56	59	59	55	55	55	55	55	55	57	58	61	63	63	63	63	66	67	67	67	67
6F	**40.35**	67	66	66	65	57	57	59	59	55	55	55	55	55	55	57	58	61	63	63	63	64	66	67	67	67	67
7F	**43.50**	67	66	66	65	57	57	60	60	55	55	56	55	55	56	57	58	61	63	63	63	64	66	67	67	67	67
8F	**46.65**	67	66	66	65	58	58	60	60	55	55	56	55	56	56	57	58	61	63	63	64	64	66	67	67	67	67
9F	**49.80**	67	66	66	65	58	58	61	61	55	55	56	56	56	56	57	58	62	63	64	64	64	66	67	67	67	67
10F	**52.95**	67	66	66	65	58	58	61	61	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
11F	**56.10**	67	66	66	65	58	58	62	61	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
12F	**59.25**	67	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
13F	**62.40**	67	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
14F	**65.55**	66	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
15F	**68.70**	66	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
16F	**71.85**	66	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
17F	**75.00**	66	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	61	64	64	64	64	66	67	67	67	67
18F	**78.15**	66	66	66	65	58	58	62	62	55	55	56	55	56	56	57	58	61	64	64	64	64	66	67	67	67	67
19F	**81.30**	66	66	66	65	58	58	62	62	55	55	56	55	56	56	57	58	61	63	64	64	64	66	67	67	67	67
21F	**89.95**	66	66	65	65	58	58	61	61	55	55	56	55	55	55	56	58	61	63	63	64	64	66	67	67	67	66
22F	**93.10**	66	66	65	65	58	58	61	61	55	55	56	55	55	55	56	58	61	63	63	64	64	66	67	67	67	66
23F	**96.25**	66	66	65	65	57	58	61	61	55	55	56	55	55	55	56	58	61	63	63	64	64	66	67	67	67	66
24F	**99.40**	66	66	65	65	57	58	61	61	55	55	56	55	55	55	56	58	61	63	63	64	64	66	67	67	66	66
25F	**102.55**	66	66	65	65	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	64	64	66	67	67	66	66
26F	**105.70**	66	65	65	65	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	67	67	66	66
27F	**108.85**	66	65	65	65	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	67	66	66	66
28F	**112.00**	66	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	67	66	66	66
29F	**115.15**	66	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	67	66	66	66
30F	**118.30**	66	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	66	66	66	66
31F	**121.45**	65	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	66	66	66	66
32F	**124.60**	65	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	63	65	66	66	66	66
33F	**127.75**	65	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	63	65	66	66	66	66
34F	**130.90**	65	65	65	64	56	57	60	61	55	55	55	55	55	55	56	58	61	63	63	63	63	65	66	66	66	66
35F	**134.05**	65	65	64	64	56	57	60	60	55	55	55	55	55	55	56	58	61	63	63	63	63	65	66	66	66	66
36F	**137.20**	65	65	64	64	56	57	60	60	55	55	55	55	55	55	56	58	61	63	63	63	63	65	66	66	66	66
37F	**140.35**	65	65	64	64	56	56	60	60	55	55	55	55	55	55	56	57	61	63	63	63	63	65	66	66	66	65
38F	**143.50**	65	65	64	64	56	56	60	60	55	55	55	55	55	55	56	57	61	63	63	63	63	65	66	66	66	65
39F	**146.65**	65	65	64	64	56	56	60	60	55	55	55	55	55	55	56	57	61	63	63	63	63	65	66	66	66	65
40F	**149.80**	65	65	64	64	56	56	60	60	55	55	55	55	55	55	56	57	61	63	63	63	63	65	66	66	66	65
41F	**152.95**	65	65	64	64	56	56	60	60	55	55	55	55	55	55	56	57	61	63	63	63	63	65	66	66	66	65
42F	**156.10**	65	64	64	64	56	56	60	60	55	55	55	55	55	55	56	57	60	63	63	63	63	65	66	66	65	65
43F	**159.25**	65	64	64	63	56	56	60	60	54	55	55	55	55	55	56	57	60	63	63	63	63	65	66	66	65	65
44F	**162.40**	65	64	64	63	56	56	60	60	54	55	55	55	55	55	56	57	60	63	63	63	63	65	66	66	65	65
45F	**165.55**	65	64	64	63	56	56	60	60	54	55	55	55	55	55	56	57	60	62	63	63	63	65	66	65	65	65
46F	**168.70**	65	64	64	63	56	56	60	60	54	55	55	55	55	55	56	57	60	62	63	63	63	65	66	65	65	65
Max. Noise Level		67	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0		0		0		0					0			0				0		0	0				0
Total No. of Units		45		45		45		45					45			45				45		45	45				45

Road Traffic Noise Impact Assessment

Project No.: 2127

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Mitigated Scenario

AM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor
	Fixed Window
	Baffle Tupe Acoustic Window (Configuration 1)
	Baffle Tupe Acoustic Window (Configuration 2)

T4

Unit		A			B				C		D				E			F					G		H		I	
Floor	**mPD**	**T4-A-1**	**T4-A-2**	**T4-A-3**	**T4-B-1**	**T4-B-2**	**T4-B-3**	**T4-B-4**	**T4-C-1**	**T4-C-2**	**T4-D-1**	**T4-D-2**	**T4-D-3**	**T4-D-4**	**T4-E-1**	**T4-E-2**	**T4-E-3**	**T4-F-1**	**T4-F-2**	**T4-F-3**	**T4-F-4**	**T4-F-5**	**T4-G-1**	**T4-G-2**	**T4-H-1**	**T4-H-2**	**T4-I-1**	**T4-I-2**
1F	**24.60**	66	67	69	70	0	68	69	69	68	0	68	68	66	68	67	66	66	59	63	63	55	52	53	64	65	65	66
2F	**27.75**	66	67	69	70	0	68	69	69	68	0	68	67	66	69	68	67	67	60	64	64	56	53	54	64	65	65	66
3F	**30.90**	66	67	69	70	0	68	69	68	68	0	67	67	66	70	70	69	68	62	65	65	57	53	55	65	65	65	66
4F	**34.05**	66	67	69	70	0	67	68	68	67	0	67	67	66	70	70	69	69	64	65	65	58	53	55	65	65	65	66
5F	**37.20**	66	67	69	70	0	67	68	67	67	0	67	66	66	70	70	70	69	65	66	66	59	53	56	65	65	65	66
6F	**40.35**	66	67	69	69	0	67	68	67	67	0	66	66	66	70	70	69	69	65	67	67	60	53	56	65	65	65	66
7F	**43.50**	66	67	69	69	0	66	67	67	66	0	66	66	65	69	70	69	69	65	67	67	60	53	57	65	65	65	66
8F	**46.65**	66	67	68	69	0	66	67	67	66	0	66	66	65	69	69	69	69	65	67	67	61	53	57	65	65	65	66
9F	**49.80**	66	67	68	69	0	66	67	66	66	0	66	65	70	69	69	69	69	65	67	67	61	53	57	65	65	65	66
10F	**52.95**	66	67	68	69	0	66	67	66	66	0	65	65	70	69	69	69	69	65	67	67	61	53	57	65	65	65	66
11F	**56.10**	66	67	68	69	0	66	66	66	65	0	65	70	70	69	69	69	69	65	67	67	61	53	57	65	65	65	65
12F	**59.25**	66	66	68	68	0	65	66	66	65	0	65	70	70	68	69	69	69	65	67	67	61	53	57	65	65	65	65
13F	**62.40**	66	66	68	68	70	65	66	66	65	0	65	70	70	68	69	69	69	65	67	67	61	53	57	65	65	65	65
14F	**65.55**	66	66	68	68	70	70	70	66	65	0	65	70	69	68	68	68	68	65	67	67	60	53	57	65	65	65	65
15F	**68.70**	65	66	67	68	70	70	70	65	65	0	70	70	69	68	68	68	68	64	67	67	60	53	57	65	65	65	65
16F	**71.85**	65	66	67	68	70	70	70	70	65	0	70	69	69	68	68	68	68	64	67	67	60	53	57	65	65	65	65
17F	**75.00**	65	66	67	68	70	70	70	70	70	0	70	69	69	68	68	68	68	64	66	67	60	53	56	65	65	65	65
18F	**78.15**	65	66	67	68	70	70	70	70	70	70	70	69	69	68	68	68	68	64	66	67	60	53	56	64	65	65	65
19F	**81.30**	65	66	67	67	70	70	70	70	70	70	70	69	69	67	68	68	68	64	66	67	60	53	56	64	64	65	65
21F	**89.95**	65	65	67	67	69	69	69	70	70	70	70	69	68	67	67	67	67	64	66	66	59	53	56	64	64	64	64
23F	**93.10**	65	65	67	67	69	69	69	70	70	70	69	69	68	67	67	67	67	63	66	66	59	53	56	64	64	64	64
24F	**96.25**	65	65	66	67	69	69	69	69	69	70	69	68	68	67	67	67	67	63	66	66	59	53	56	64	64	64	64
25F	**99.40**	64	65	66	67	69	69	69	69	69	70	69	68	68	67	67	67	67	63	66	66	59	53	56	64	64	64	64
26F	**102.55**	64	65	66	67	69	69	69	69	69	70	69	68	68	67	67	67	67	63	65	66	59	53	56	64	64	64	64
27F	**105.70**	64	65	66	67	69	69	69	69	69	69	69	68	68	66	67	67	67	63	65	66	59	53	56	64	64	64	64
28F	**108.85**	64	65	66	67	69	69	69	69	69	69	69	68	68	66	67	67	67	63	65	66	59	53	56	64	64	64	64
29F	**112.00**	64	65	66	66	68	69	69	69	69	69	69	68	68	66	67	67	67	63	65	66	59	53	56	64	64	64	64
30F	**115.15**	64	65	66	66	68	69	69	69	69	69	69	68	67	66	67	67	67	63	65	66	59	53	56	64	64	64	64
31F	**118.30**	64	65	66	66	68	68	68	69	69	69	69	68	67	66	67	67	66	62	65	65	59	53	55	64	64	64	64
32F	**121.45**	64	64	66	66	68	68	68	69	69	69	69	68	67	66	66	66	66	62	65	65	58	53	55	63	63	64	64
33F	**124.60**	64	64	66	66	68	68	68	68	69	69	68	68	67	66	66	66	66	62	65	65	58	53	55	63	63	63	64
34F	**127.75**	64	64	65	66	68	68	68	68	68	69	68	67	67	66	66	66	66	62	65	65	58	53	55	63	63	63	63
35F	**130.90**	64	64	65	66	68	68	68	68	68	69	68	67	67	66	66	66	66	62	65	65	58	53	55	63	63	63	63
36F	**134.05**	64	64	65	66	68	68	68	68	68	69	68	67	67	66	66	66	66	62	65	65	58	53	55	63	63	63	63
37F	**137.20**	63	64	65	66	68	68	68	68	68	68	68	67	67	66	66	66	66	62	64	65	58	53	55	63	63	63	63
38F	**140.35**	63	64	65	66	68	68	68	68	68	68	68	67	67	65	66	66	66	62	64	65	58	53	55	63	63	63	63
39F	**143.50**	63	64	65	66	68	68	68	68	68	68	68	67	67	65	66	66	66	62	64	65	58	53	55	63	63	63	63
40F	**146.65**	63	64	65	65	67	68	68	68	68	68	68	67	67	65	66	66	66	62	64	65	58	53	55	63	63	63	63
41F	**149.80**	63	64	65	65	67	68	68	68	68	68	68	67	67	65	66	66	66	62	64	65	58	53	55	63	63	63	63
42F	**152.95**	63	64	65	65	67	67	68	68	68	68	68	67	66	65	66	66	66	61	64	65	58	52	55	63	63	63	63
43F	**156.10**	63	64	65	65	67	67	67	68	68	68	68	67	66	65	65	65	65	61	64	64	58	52	55	63	63	63	63
44F	**159.25**	63	63	65	65	67	67	67	68	68	68	67	67	66	65	65	65	65	61	64	64	57	52	55	63	63	63	63
45F	**162.40**	63	63	65	65	67	67	67	67	68	68	67	67	66	65	65	65	65	61	64	64	57	52	55	63	63	63	63
46F	**165.55**	63	63	65	65	67	67	67	67	67	68	67	66	66	65	65	65	65	61	64	64	57	52	55	63	62	63	63
47F	**168.70**	63	63	64	65	67	67	67	67	67	68	67	66	66	65	65	65	65	61	64	64	57	53	55	62	62	62	63
Max. Noise Level		66	67	69	70	70	70	70	70	70	70	70	70	70	70	70	70	69	65	67	67	61	53	57	65	65	65	66
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0			0				0		0				0			0					0		0		0	
Total No. of Units		45			45				45		45				45			45					45		45		45	

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Mitigated Scenario

AM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor
	Fixed Window
	Baffle Tupe Acoustic Window (Configuration 1)
	Baffle Tupe Acoustic Window (Configuration 2)

T5

Unit		A		B			C				D		E					F		G			H					I		J		K	
Floor	mPD	T5-A-1	T5-A-2	T5-B-1	T5-B-2	T5-B-3	T5-C-1	T5-C-2	T5-C-3	T5-C-4	T5-D-1	T5-D-2	T5-E-1	T5-E-2	T5-E-3	T5-E-4	T5-E-6	T5-F-1	T5-F-2	T5-G-1	T5-G-2	T5-G-3	T5-H-1	T5-H-2	T5-H-3	T5-H-4	T5-H-5	T5-I-1	T5-I-2	T5-J-1	T5-J-2	T5-K-1	T5-K-2
1F	24.58	63	63	63	63	63	63	62	60	60	59	58	60	58	60	59	59	59	59	59	60	61	62	60	62	64	64	64	65	62	63	63	63
2F	27.73	64	64	64	64	64	64	63	61	61	61	60	62	59	60	60	59	60	60	60	60	61	62	61	62	64	64	64	65	62	63	63	63
3F	30.88	64	64	64	64	64	64	63	62	62	61	60	62	59	61	60	60	60	60	60	60	61	62	61	62	64	65	65	65	62	63	63	63
4F	34.03	64	64	64	64	64	64	64	62	62	61	61	63	60	61	60	60	60	60	60	61	61	62	61	62	64	65	65	65	62	63	63	63
5F	37.18	64	64	64	64	64	64	64	62	62	62	61	63	60	61	60	60	60	60	60	61	61	62	61	62	65	65	65	66	62	63	63	63
6F	40.33	64	64	64	64	64	64	64	62	62	62	61	63	60	61	61	60	60	60	60	61	62	62	61	63	65	66	65	66	62	63	63	63
7F	43.48	64	64	64	64	64	64	64	62	62	62	61	63	60	61	61	60	60	60	60	61	62	63	61	63	65	66	66	66	62	63	63	63
8F	46.63	63	64	64	64	64	64	64	62	62	62	61	63	60	61	61	60	60	60	60	61	62	63	61	63	66	66	66	66	62	62	63	63
9F	49.78	63	64	64	64	64	64	64	62	62	62	61	63	60	61	61	60	60	60	60	61	62	63	61	63	66	67	66	67	62	62	63	63
10F	52.93	63	63	64	64	64	64	63	62	62	61	61	63	60	61	61	60	60	60	60	61	62	63	62	63	66	67	66	67	62	62	63	63
11F	56.08	63	63	64	64	64	64	63	62	62	61	61	63	60	61	61	60	60	60	60	61	62	63	62	63	66	67	66	67	62	62	62	63
12F	59.23	63	63	63	64	64	64	63	62	62	61	61	63	60	61	61	61	60	60	61	61	62	63	62	63	66	67	66	66	62	62	62	63
13F	62.38	63	63	63	64	64	64	63	62	62	61	61	63	60	61	61	61	60	60	61	61	62	63	62	64	66	67	66	66	61	62	62	63
14F	65.53	63	63	63	63	64	64	63	62	62	61	60	63	60	61	61	61	61	61	61	61	63	64	62	64	66	67	66	66	61	62	62	62
15F	68.68	63	63	63	63	64	64	63	62	62	61	60	63	60	61	61	61	61	61	61	61	63	64	62	63	66	67	66	66	61	62	62	62
16F	71.83	63	63	63	63	63	63	63	62	62	61	60	63	60	61	61	61	61	61	61	61	63	64	62	63	66	67	66	66	61	61	62	62
17F	74.98	62	63	63	63	63	63	63	62	62	61	60	63	60	61	61	61	61	61	61	61	63	63	62	63	66	67	66	66	61	61	62	62
18F	78.13	62	63	63	63	63	63	63	62	61	61	60	63	60	61	61	61	61	61	61	61	62	63	62	63	66	67	66	66	61	61	62	62
19F	81.28	62	62	63	63	63	63	63	62	61	61	60	63	60	61	61	61	61	61	61	61	62	63	62	63	66	67	66	66	61	61	62	62
21F	89.93	62	62	62	63	63	63	63	61	61	61	60	63	60	61	61	61	61	61	61	61	62	63	62	63	66	66	66	66	60	61	61	62
22F	93.08	62	62	62	63	63	63	62	61	61	61	60	62	60	61	61	61	61	60	61	61	62	63	62	63	66	66	66	66	60	61	61	62
23F	96.23	62	62	62	62	63	63	62	61	61	60	60	62	60	61	61	61	61	60	61	61	62	63	62	63	66	66	66	66	60	61	61	61
24F	99.38	62	62	62	62	63	63	62	61	61	60	60	62	60	61	61	60	60	60	61	61	62	63	62	63	66	66	65	65	60	61	61	61
25F	102.53	62	62	62	62	63	63	62	61	61	60	60	62	60	61	61	60	60	60	61	61	62	63	61	63	66	66	65	65	60	60	61	61
26F	105.68	61	62	62	62	62	63	62	61	61	60	60	62	60	61	61	60	60	60	60	61	62	63	61	63	65	66	65	65	60	60	61	61
27F	108.83	61	62	62	62	62	62	62	61	61	60	60	62	60	61	61	60	60	60	60	61	62	63	61	63	65	66	65	65	60	60	61	61
28F	111.98	61	62	62	62	62	62	62	61	61	60	59	62	60	61	61	60	60	60	60	61	62	63	61	63	65	66	65	65	60	60	61	61
29F	115.13	61	61	62	62	62	62	62	61	61	60	59	62	60	61	61	60	60	60	60	61	62	63	61	63	65	66	65	65	60	60	60	61
30F	118.28	61	61	62	62	62	62	62	61	61	60	59	62	60	61	61	60	60	60	60	61	62	63	61	62	65	66	65	65	60	60	60	61
31F	121.43	61	61	61	62	62	62	62	61	60	60	59	62	60	61	61	60	60	60	60	61	62	63	61	62	65	66	65	65	59	60	60	61
32F	124.58	61	61	61	62	62	62	62	61	60	60	59	62	60	61	61	60	60	60	60	61	62	63	61	62	65	66	65	65	59	60	60	61
33F	127.73	61	61	61	62	62	62	62	60	60	60	59	62	59	61	60	60	60	60	60	61	62	63	61	62	65	65	65	65	59	60	60	60
34F	130.88	61	61	61	62	62	62	61	60	60	60	59	62	59	61	60	60	60	60	60	61	62	62	61	62	65	65	65	65	59	60	60	60
35F	134.03	61	61	61	61	62	62	61	60	60	60	59	62	59	61	60	60	60	60	60	60	62	62	61	62	65	65	65	65	59	60	60	60
36F	137.18	61	61	61	61	62	62	61	60	60	60	59	62	59	61	60	60	60	60	60	60	61	62	61	62	65	65	65	65	59	59	60	60
37F	140.33	60	61	61	61	61	62	61	60	60	60	59	62	59	61	60	60	60	60	60	60	61	62	61	62	65	65	65	65	59	59	60	60
38F	143.48	60	61	61	61	61	62	61	60	60	59	59	62	59	61	60	60	60	60	60	60	61	62	61	62	65	65	64	64	59	59	60	60
39F	146.63	60	61	61	61	61	61	61	60	60	59	59	62	59	61	60	60	60	60	60	60	61	62	60	62	65	65	64	64	59	59	60	60
40F	149.78	60	60	61	61	61	61	61	60	60	59	59	61	59	61	60	60	60	60	60	60	61	62	60	62	65	65	64	64	59	59	60	60
41F	152.93	60	60	61	61	61	61	61	60	60	59	59	61	59	61	60	60	60	60	60	60	61	62	60	62	64	65	64	64	59	59	59	60
42F	156.08	60	60	61	61	61	61	61	60	60	59	58	61	59	61	60	60	60	59	60	60	61	62	60	62	64	65	64	64	59	59	59	60
43F	159.23	60	60	60	61	61	61	61	60	60	59	58	61	59	60	60	60	60	59	60	60	61	62	60	62	64	65	64	64	58	59	59	60
44F	162.38	60	60	60	61	61	61	61	60	60	59	58	61	59	60	60	60	59	59	59	60	61	62	60	62	64	65	64	64	58	59	59	60
45F	165.53	60	60	60	61	61	61	61	60	60	59	58	61	59	60	60	60	59	59	59	60	61	62	60	61	64	65	64	64	58	59	59	59
46F	168.68	60	60	60	61	61	61	61	60	59	59	58	61	59	60	60	59	59	59	59	60	61	62	60	62	64	65	64	64	58	59	59	59
Max. Noise Level		64	64	64	64	64	64	64	62	62	62	61	63	60	61	61	61	61	61	61	61	63	64	62	64	66	67	66	67	62	63	63	63
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0		0			0				0		0					0		0			0					0		0		0	
Total No. of Units		45		45			45				45		45					45		45			45					45		45		45	

Road Traffic Noise Impact Assessment

Project No.: 2127

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Mitigated Scenario

AM Peak (Year 2047)

Note:

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-	Non-NAP at this floor
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	Baffle Tupe Acoustic Window (Configuration 1)
	Baffle Tupe Acoustic Window (Configuration 2)

T6

Unit		A		B			C		D					E			F					G		H	I					J	
Floor	mPD	T6-A-1	T6-A-2	T6-B-1	T6-B-2	T6-C-1	T6-C-2	T6-C-3	T6-D-2	T6-D-3	T6-D-4	T6-D-5	T6-D-6	T6-E-1	T6-E-2	T6-E-3	T6-F-1	T6-F-3	T6-F-4	T6-F-5	T6-F-6	T6-G-1	T6-G-2	T6-H-1	T6-I-1	T6-I-2	T6-I-3	T6-I-4	T6-I-6	T6-J-1	T6-J-2
1F	24.58	63	62	62	62	62	65	64	67	69	69	69	66	67	67	68	69	70	0	70	0	69	66	67	65	0	68	65	64	63	63
2F	27.73	63	62	62	62	62	65	65	67	70	70	70	67	67	68	68	69	70	0	70	0	69	66	66	65	0	68	65	64	63	63
3F	30.88	63	62	62	62	62	65	65	68	0	65	65	67	67	67	68	68	69	0	69	0	69	70	66	65	70	67	65	64	63	63
4F	34.03	63	62	62	62	62	65	65	69	0	65	65	67	67	67	68	68	69	0	68	0	68	70	70	65	70	67	65	64	63	63
5F	37.18	63	62	62	62	62	66	66	69	0	65	65	67	67	67	67	67	68	0	68	0	68	70	70	65	70	67	65	64	63	63
6F	40.33	63	62	62	62	62	66	66	69	0	65	65	66	66	66	67	67	68	0	68	0	67	69	70	70	70	67	65	64	63	63
7F	43.48	63	62	62	62	62	67	66	69	0	65	65	66	66	66	67	67	68	0	67	0	67	69	69	70	70	67	65	64	63	63
8F	46.63	62	62	62	62	62	67	67	69	0	65	70	66	66	66	66	66	67	0	67	0	67	69	69	70	70	67	64	63	63	63
9F	49.78	62	62	62	62	62	67	67	69	0	65	70	66	66	66	66	66	67	0	67	0	66	69	69	70	69	66	64	63	63	63
10F	52.93	62	62	62	61	62	67	66	69	0	65	70	65	66	66	66	66	67	0	67	0	66	68	69	70	69	66	64	63	63	62
11F	56.08	62	62	62	61	61	67	66	68	0	65	70	65	65	65	66	66	67	0	66	0	66	68	69	69	69	66	64	63	63	62
12F	59.23	62	62	61	61	61	67	66	68	70	70	70	65	65	65	65	66	66	0	66	0	66	68	68	69	69	66	64	63	62	62
13F	62.38	62	61	61	61	61	67	66	68	70	70	70	65	65	65	65	65	66	0	66	0	65	68	68	69	69	65	64	63	62	62
14F	65.53	62	61	61	61	61	66	66	68	70	70	70	65	65	65	65	65	66	0	66	0	65	68	68	69	69	65	63	63	62	62
15F	68.68	61	61	61	61	61	66	66	68	70	70	69	65	65	65	65	65	66	0	66	0	65	67	68	69	69	65	63	62	62	62
16F	71.83	61	61	61	61	61	66	66	68	70	70	69	70	65	65	65	65	66	0	65	0	65	67	68	69	68	65	63	62	62	62
17F	74.98	61	61	61	61	61	66	66	68	70	70	69	70	70	70	70	65	65	0	65	70	64	67	68	68	68	65	63	62	62	61
18F	78.13	61	61	61	60	61	66	66	68	70	70	69	70	70	70	70	65	65	0	70	70	64	67	67	68	68	65	63	62	62	61
19F	81.28	61	61	61	60	60	66	66	67	69	69	69	70	70	70	70	70	65	0	70	70	64	67	67	68	68	64	63	62	61	61
21F	89.93	61	61	60	60	60	66	65	67	69	69	69	70	70	70	70	70	70	0	70	70	64	66	67	68	68	64	62	62	61	61
22F	93.08	61	60	60	60	60	66	65	67	69	69	69	70	70	70	70	70	70	70	70	70	63	66	67	68	68	64	62	61	61	61
23F	96.23	61	60	60	60	60	66	65	67	69	69	69	69	70	70	70	70	70	70	70	69	63	66	67	68	67	64	62	61	61	61
24F	99.38	60	60	60	60	60	66	65	67	69	69	68	69	69	69	70	70	70	70	70	69	63	66	66	67	67	64	62	61	61	61
25F	102.53	60	60	60	60	60	65	65	67	69	69	68	69	69	69	69	70	70	70	69	69	63	66	66	67	67	64	62	61	61	61
26F	105.68	60	60	60	60	60	65	65	67	69	69	68	69	69	69	69	69	70	70	69	69	63	66	66	67	67	63	62	61	61	60
27F	108.83	60	60	60	59	60	65	65	67	69	69	68	69	69	69	69	69	70	70	69	69	63	66	66	67	67	63	62	61	61	60
28F	111.98	60	60	60	59	60	65	65	67	68	68	68	69	69	69	69	69	69	70	69	69	63	65	66	67	67	63	61	61	60	60
29F	115.13	60	60	60	59	59	65	65	66	68	68	68	69	69	69	69	69	69	70	69	69	62	65	66	67	67	63	61	61	60	60
30F	118.28	60	60	59	59	59	65	65	66	68	68	68	69	69	69	69	69	69	70	69	69	62	65	66	67	67	63	61	61	60	60
31F	121.43	60	60	59	59	59	65	65	66	68	68	68	69	69	69	69	69	69	69	69	69	62	65	66	67	67	63	61	61	60	60
32F	124.58	60	59	59	59	59	65	64	66	68	68	68	69	69	69	69	69	69	69	69	68	62	65	66	67	67	63	61	60	60	60
33F	127.73	60	59	59	59	59	65	64	66	68	68	68	68	69	69	69	69	69	69	69	68	62	65	66	67	66	63	61	60	60	60
34F	130.88	60	59	59	59	59	65	64	66	68	68	68	68	68	68	69	69	69	69	69	68	62	65	65	66	66	63	61	60	60	60
35F	134.03	59	59	59	59	59	65	64	66	68	68	67	68	68	68	68	69	69	69	68	68	62	65	65	66	66	62	61	60	60	60
36F	137.18	59	59	59	59	59	65	64	66	68	68	67	68	68	68	68	68	69	69	68	68	62	65	65	66	66	62	61	60	60	60
37F	140.33	59	59	59	59	59	65	64	66	68	68	67	68	68	68	68	68	69	69	68	68	62	64	65	66	66	62	61	60	60	59
38F	143.48	59	59	59	59	59	64	64	66	68	68	67	68	68	68	68	68	68	69	68	68	61	64	65	66	66	62	61	60	60	59
39F	146.63	59	59	59	58	59	64	64	66	68	68	67	68	68	68	68	68	68	69	68	68	61	64	65	66	66	62	60	60	60	59
40F	149.78	59	59	59	58	58	64	64	66	67	67	67	68	68	68	68	68	68	69	68	68	61	64	65	66	66	62	60	60	59	59
41F	152.93	59	59	59	58	58	64	64	66	67	67	67	68	68	68	68	68	68	69	68	68	61	64	65	66	66	62	60	60	59	59
42F	156.08	59	59	59	58	58	64	64	65	67	67	67	68	68	68	68	68	68	68	68	68	61	64	65	66	66	62	60	60	59	59
43F	159.23	59	59	58	58	58	64	64	65	67	67	67	68	68	68	68	68	68	68	68	68	61	64	65	66	66	62	60	60	59	59
44F	162.38	59	59	58	58	58	64	64	65	67	67	67	68	68	68	68	68	68	68	68	67	61	64	65	66	66	62	60	59	59	59
45F	165.53	59	58	58	58	58	64	64	65	67	67	67	68	68	68	68	68	68	68	68	67	61	64	64	66	65	62	60	59	59	59
46F	168.68	59	58	58	58	58	64	64	65	67	67	67	67	67	68	68	68	68	68	68	67	61	64	64	65	65	62	60	59	59	59
Max. Noise Level		63	62	62	62	62	67	67	69	70	70	70	70	70	70	70	70	70	70	70	70	69	70	70	70	70	68	65	64	63	63
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0		0			0		0					0			0					0		0	0					0	
Total No. of Units		45		45			45		45					45			45					45		45	45					45	

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Mitigated Scenario

AM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor
	Fixed Window
	Baffle Tupe Acoustic Window (Configuration 1)
	Baffle Tupe Acoustic Window (Configuration 2)

T2

Max Noise Level	70
Total No. of Unit with exceedance	0
Total No. of Units	405
Compliance rate	100%

T3

Max Noise Level	67
Total No. of Unit with exceedance	0
Total No. of Units	450
Compliance rate	100%

T4

Max Noise Level	70
Total No. of Unit with exceedance	0
Total No. of Units	405
Compliance rate	100%

T5

Max Noise Level	67
Total No. of Unit with exceedance	0
Total No. of Units	495
Compliance rate	100%

T6

Max Noise Level	70
Total No. of Unit with exceedance	0
Total No. of Units	450
Compliance rate	100%

OVERALL

Max Noise Level	70
Total No. of Unit with exceedance	0
Total No. of Units	2205
Compliance rate	100%

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Mitigated Scenario

PM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor
	Fixed Window
	Baffle Tupe Acoustic Window (Configuration 1)
	Baffle Tupe Acoustic Window (Configuration 2)

T2

Unit		A			B				C				D			E		F		G				H				I	
Floor	**mPD**	**T2-A-1**	**T2-A-2**	**T2-A-3**	**T2-B-1**	**T2-B-2**	**T2-B-3**	**T2-B-4**	**T2-C-1**	**T2-C-2**	**T2-C-3**	**T2-C-4**	**T2-D-1**	**T2-D-2**	**T2-D-3**	**T2-E-1**	**T2-E-2**	**T2-F-1**	**T2-F-2**	**T2-G-1**	**T2-G-2**	**T2-G-3**	**T2-G-4**	**T2-H-1**	**T2-H-2**	**T2-H-3**	**T2-H-4**	**T2-I-1**	**T2-I-2**
2F	**27.75**	61	62	62	62	68	68	67	69	69	69	68	68	68	67	67	67	67	67	67	66	66	62	57	58	60	63	62	62
3F	**30.90**	63	63	63	63	69	69	68	70	70	69	69	69	69	69	69	69	68	68	68	68	68	64	58	59	61	63	63	63
4F	**34.05**	63	64	64	64	69	69	69	70	70	70	69	69	69	69	69	69	69	69	69	68	68	64	59	59	61	64	63	64
5F	**37.20**	63	64	64	64	69	69	69	70	70	70	69	69	69	69	69	69	69	69	69	69	69	65	59	59	62	64	64	64
6F	**40.35**	64	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	69	69	65	59	59	62	64	64	64
7F	**43.50**	64	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	69	69	65	59	59	62	64	64	64
8F	**46.65**	64	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	69	68	65	59	59	62	64	64	64
9F	**49.80**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	69	68	65	59	59	62	64	64	64
10F	**52.95**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	68	68	65	59	59	62	64	64	64
11F	**56.10**	63	64	64	64	69	69	69	70	70	70	70	70	69	69	69	69	69	69	69	68	68	64	59	59	62	64	64	64
12F	**59.25**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	69	68	68	64	59	59	62	64	64	64
13F	**62.40**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	69	68	68	68	64	59	59	62	64	64	64
14F	**65.55**	63	64	64	64	69	69	69	70	70	70	70	70	69	69	69	69	69	69	68	68	68	64	59	59	62	64	64	64
15F	**68.70**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	68	68	68	68	64	59	59	62	64	64	64
16F	**71.85**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	69	68	68	68	68	64	59	59	62	64	64	64
17F	**75.00**	63	64	64	64	69	69	69	70	70	70	70	69	69	69	69	69	68	68	68	68	68	64	59	59	62	64	64	64
18F	**78.15**	63	64	64	64	69	69	69	70	70	70	69	69	69	69	69	69	68	68	68	68	68	64	59	59	62	64	64	64
19F	**81.30**	63	64	64	64	69	69	69	70	70	70	69	69	69	69	69	69	68	68	68	68	68	64	59	59	62	64	64	64
20F	**84.45**	63	64	64	64	69	69	69	70	70	69	69	69	69	69	69	68	68	68	68	68	68	63	58	58	61	64	64	64
22F	**93.10**	62	64	64	64	69	69	68	70	69	69	69	69	69	69	68	68	68	68	68	68	68	63	58	58	61	64	64	64
23F	**96.25**	62	64	64	64	69	69	68	70	69	69	69	69	69	68	68	68	68	68	68	68	68	63	58	58	61	64	64	64
24F	**99.40**	62	64	64	64	68	68	68	69	69	69	69	69	68	68	68	68	68	68	68	68	68	63	58	58	61	64	63	64
25F	**102.55**	62	63	64	64	68	68	68	69	69	69	69	68	68	68	68	68	68	68	68	68	67	63	58	58	61	64	63	63
26F	**105.70**	62	63	63	64	68	68	68	69	69	69	69	68	68	68	68	68	68	68	68	67	67	63	58	58	61	63	63	63
27F	**108.85**	62	63	63	64	68	68	68	69	69	69	68	68	68	68	68	68	68	68	67	67	67	63	58	58	61	63	63	63
28F	**112.00**	62	63	63	64	68	68	68	69	69	68	68	68	68	68	68	68	68	67	67	67	67	63	58	58	61	63	63	63
29F	**115.15**	62	63	63	64	68	68	68	69	68	68	68	68	68	68	68	68	68	67	67	67	67	63	58	58	61	63	63	63
30F	**118.30**	62	63	63	64	68	68	68	69	68	68	68	68	68	68	68	68	67	67	67	67	67	62	58	58	61	63	63	63
31F	**121.45**	62	63	63	64	68	68	68	69	68	68	68	68	68	68	68	67	67	67	67	67	67	62	58	58	61	63	63	63
32F	**124.60**	62	63	63	64	68	68	67	69	68	68	68	68	68	68	67	67	67	67	67	67	67	62	58	58	61	63	63	63
33F	**127.75**	62	63	63	64	68	68	67	68	68	68	68	68	68	67	67	67	67	67	67	67	67	62	58	58	61	63	63	63
34F	**130.90**	62	63	63	63	68	68	67	68	68	68	68	68	67	67	67	67	67	67	67	67	67	62	58	58	61	63	63	63
35F	**134.05**	62	63	63	63	68	68	67	68	68	68	68	67	67	67	67	67	67	67	67	67	67	62	58	58	61	63	63	63
36F	**137.20**	61	63	63	63	67	67	67	68	68	68	68	67	67	67	67	67	67	67	67	67	67	62	58	58	60	63	63	63
37F	**140.35**	61	63	63	63	67	67	67	68	68	68	67	67	67	67	67	67	67	67	67	67	67	62	57	57	60	63	63	63
38F	**143.50**	61	63	63	63	67	67	67	68	68	67	67	67	67	67	67	67	67	67	67	66	66	62	57	57	60	63	63	63
39F	**146.65**	61	63	63	63	67	67	67	68	67	67	67	67	67	67	67	67	67	67	66	66	66	62	57	57	60	63	63	63
40F	**149.80**	61	63	63	63	67	67	67	68	67	67	67	67	67	67	67	67	67	66	66	66	66	62	57	57	60	63	63	63
41F	**152.95**	61	63	63	63	67	67	67	68	67	67	67	67	67	67	67	67	66	66	66	66	66	62	57	57	60	63	63	63
42F	**156.10**	61	63	63	63	67	67	67	68	67	67	67	67	67	67	67	66	66	66	66	66	66	61	57	57	60	63	63	63
43F	**159.25**	61	62	63	63	67	67	67	68	67	67	67	67	67	67	66	66	66	66	66	66	66	61	57	57	60	63	62	63
44F	**162.40**	61	62	62	63	67	67	66	68	67	67	67	67	67	67	66	66	66	66	66	66	66	61	57	57	60	63	62	62
45F	**165.55**	61	62	62	63	67	67	66	68	67	67	67	67	67	66	66	66	66	66	66	66	66	61	57	57	60	62	62	62
46F	**168.70**	61	62	62	63	67	67	66	67	67	67	67	67	66	66	66	66	66	66	66	66	66	61	57	57	60	62	62	62
47F	**171.85**	61	62	62	63	67	67	66	67	67	67	67	66	66	66	66	66	66	66	66	66	66	61	57	57	60	62	62	62
Max. Noise Level		64	64	64	64	69	69	69	70	70	70	70	70	69	69	69	69	69	69	69	69	69	65	59	59	62	64	64	64
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0			0				0				0			0		0		0				0				0	
Total No. of Units		45			45				45				45			45		45		45				45				45	

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Mitigated Scenario

PM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor
	Fixed Window
	Baffle Tupe Acoustic Window (Configuration 1)
	Baffle Tupe Acoustic Window (Configuration 2)

T3

Unit		A		B		C		D					E			F				G		H	I				J
Floor	mPD	T3-A-1	T3-A-2	T3-B-1	T3-B-2	T3-C-1	T3-C-2	T3-D-1	T3-D-2	T3-D-3	T3-D-4	T3-D-5	T3-E-1	T3-E-2	T3-E-3	T3-F-1	T3-F-2	T3-F-3	T3-F-4	T3-G-1	T3-G-2	T3-H-1	T3-I-1	T3-I-2	T3-I-3	T3-I-4	T3-J-1
1F	24.60	66	66	65	65	54	54	56	56	54	54	55	55	55	55	56	57	60	61	61	61	61	64	66	66	66	66
2F	27.75	66	66	65	65	54	54	56	57	55	55	55	55	55	55	57	58	60	62	61	61	61	65	66	66	66	66
3F	30.90	66	66	66	65	55	55	57	57	55	55	55	55	55	55	57	58	61	62	62	62	62	65	67	67	67	67
4F	34.05	67	66	66	65	56	55	58	58	55	55	55	55	55	55	57	58	61	62	62	62	63	66	67	67	67	67
5F	37.20	67	66	66	65	56	56	59	59	55	55	55	55	55	55	57	58	61	63	63	63	63	66	67	67	67	67
6F	40.35	67	66	66	65	57	57	59	59	55	55	55	55	55	55	57	58	61	63	63	63	64	66	67	67	67	67
7F	43.50	67	66	66	65	57	57	60	60	55	55	56	55	55	56	57	58	61	63	63	63	64	66	67	67	67	67
8F	46.65	67	66	66	65	58	58	60	60	55	55	56	55	56	56	57	58	61	63	63	64	64	66	67	67	67	67
9F	49.80	67	66	66	65	58	58	61	61	55	55	56	56	56	56	57	58	62	63	64	64	64	66	67	67	67	67
10F	52.95	67	66	66	65	58	58	61	61	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
11F	56.10	67	66	66	65	58	58	62	61	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
12F	59.25	67	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
13F	62.40	67	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
14F	65.55	66	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
15F	68.70	66	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
16F	71.85	66	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
17F	75.00	66	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	61	64	64	64	64	66	67	67	67	67
18F	78.15	66	66	66	65	58	58	62	62	55	55	56	55	56	56	57	58	61	64	64	64	64	66	67	67	67	67
19F	81.30	66	66	66	65	58	58	62	62	55	55	56	55	56	56	57	58	61	63	64	64	64	66	67	67	67	67
21F	89.95	66	66	65	65	58	58	61	61	55	55	56	55	55	55	56	58	61	63	63	64	64	66	67	67	67	66
22F	93.10	66	66	65	65	58	58	61	61	55	55	56	55	55	55	56	58	61	63	63	64	64	66	67	67	67	66
23F	96.25	66	66	65	65	57	58	61	61	55	55	56	55	55	55	56	58	61	63	63	64	64	66	67	67	67	66
24F	99.40	66	66	65	65	57	58	61	61	55	55	56	55	55	55	56	58	61	63	63	64	64	66	67	67	66	66
25F	102.55	66	66	65	65	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	64	64	66	67	67	66	66
26F	105.70	66	65	65	65	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	67	67	66	66
27F	108.85	66	65	65	65	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	67	66	66	66
28F	112.00	66	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	67	66	66	66
29F	115.15	66	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	67	66	66	66
30F	118.30	66	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	66	66	66	66
31F	121.45	65	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	64	66	66	66	66	66
32F	124.60	65	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	63	65	66	66	66	66
33F	127.75	65	65	65	64	57	57	61	61	55	55	55	55	55	55	56	58	61	63	63	63	63	65	66	66	66	66
34F	130.90	65	65	65	64	56	57	60	61	55	55	55	55	55	55	56	58	61	63	63	63	63	65	66	66	66	66
35F	134.05	65	65	64	64	56	57	60	60	55	55	55	55	55	55	56	58	61	63	63	63	63	65	66	66	66	66
36F	137.20	65	65	64	64	56	57	60	60	55	55	55	55	55	55	56	58	61	63	63	63	63	65	66	66	66	66
37F	140.35	65	65	64	64	56	56	60	60	55	55	55	55	55	55	56	57	61	63	63	63	63	65	66	66	66	65
38F	143.50	65	65	64	64	56	56	60	60	55	55	55	55	55	55	56	57	61	63	63	63	63	65	66	66	66	65
39F	146.65	65	65	64	64	56	56	60	60	55	55	55	55	55	55	56	57	61	63	63	63	63	65	66	66	66	65
40F	149.80	65	65	64	64	56	56	60	60	55	55	55	55	55	55	56	57	61	63	63	63	63	65	66	66	66	65
41F	152.95	65	65	64	64	56	56	60	60	55	55	55	55	55	55	56	57	61	63	63	63	63	65	66	66	66	65
42F	156.10	65	64	64	64	56	56	60	60	55	55	55	55	55	55	56	57	60	63	63	63	63	65	66	66	65	65
43F	159.25	65	64	64	63	56	56	60	60	54	55	55	55	55	55	56	57	60	63	63	63	63	65	66	66	65	65
44F	162.40	65	64	64	63	56	56	60	60	54	55	55	55	55	55	56	57	60	63	63	63	63	65	66	66	65	65
45F	165.55	65	64	64	63	56	56	60	60	54	55	55	55	55	55	56	57	60	62	63	63	63	65	66	65	65	65
46F	168.70	65	64	64	63	56	56	60	60	54	55	55	55	55	55	56	57	60	62	63	63	63	65	66	65	65	65
Max. Noise Level		67	66	66	65	58	58	62	62	55	55	56	56	56	56	57	58	62	64	64	64	64	66	67	67	67	67
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0		0		0		0					0			0				0		0	0				0
Total No. of Units		45		45		45		45					45			45				45		45	45				45

Road Traffic Noise Impact Assessment

Project No.: 2127

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Mitigated Scenario

PM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor
	Fixed Window
	Baffle Tupe Acoustic Window (Configuration 1)
	Baffle Tupe Acoustic Window (Configuration 2)

T4

Unit		A			B				C		D				E			F					G		H		I	
Floor	**mPD**	**T4-A-1**	**T4-A-2**	**T4-A-3**	**T4-B-1**	**T4-B-2**	**T4-B-3**	**T4-B-4**	**T4-C-1**	**T4-C-2**	**T4-D-1**	**T4-D-2**	**T4-D-3**	**T4-D-4**	**T4-E-1**	**T4-E-2**	**T4-E-3**	**T4-F-1**	**T4-F-2**	**T4-F-3**	**T4-F-4**	**T4-F-5**	**T4-G-1**	**T4-G-2**	**T4-H-1**	**T4-H-2**	**T4-I-1**	**T4-I-2**
1F	**24.60**	66	67	69	70	0	67	68	68	67	0	67	66	64	68	67	66	66	59	63	63	55	52	53	64	65	65	66
2F	**27.75**	66	67	69	70	0	67	68	67	66	0	66	66	65	69	68	67	67	60	64	64	56	53	54	64	65	65	66
3F	**30.90**	66	67	69	70	0	66	67	67	66	0	66	66	65	70	70	69	68	62	65	65	57	53	55	65	65	65	66
4F	**34.05**	66	67	69	70	0	66	67	66	66	0	66	65	65	70	70	69	69	64	65	65	58	53	55	65	65	65	66
5F	**37.20**	66	67	69	70	0	66	67	66	65	0	65	65	64	70	70	70	69	65	66	66	59	53	56	65	65	65	66
6F	**40.35**	66	67	69	69	0	65	66	66	65	0	65	65	64	70	70	69	69	65	67	67	60	53	56	65	65	65	66
7F	**43.50**	66	67	69	69	0	65	66	66	65	0	65	64	64	69	70	69	69	65	67	67	60	53	57	65	65	65	66
8F	**46.65**	66	67	68	69	0	65	66	65	65	0	65	64	64	69	69	69	69	65	67	67	61	53	57	65	65	65	66
9F	**49.80**	66	67	68	69	0	65	66	65	65	0	64	64	70	69	69	69	69	65	67	67	61	53	57	65	65	65	66
10F	**52.95**	66	67	68	69	0	65	66	65	64	0	64	64	70	69	69	69	69	65	67	67	61	53	57	65	65	65	66
11F	**56.10**	66	67	68	69	0	64	65	65	64	0	64	70	70	69	69	69	69	65	67	67	61	53	57	65	65	65	65
12F	**59.25**	66	66	68	68	0	64	65	65	64	0	64	70	70	68	69	69	69	65	67	67	61	53	57	65	65	65	65
13F	**62.40**	66	66	68	68	70	64	65	65	64	0	64	70	70	68	69	69	69	65	67	67	61	53	57	65	65	65	65
14F	**65.55**	66	66	68	68	70	70	70	64	64	0	64	70	69	68	68	68	68	65	67	67	60	53	57	65	65	65	65
15F	**68.70**	65	66	67	68	70	70	70	64	64	0	70	70	69	68	68	68	68	64	67	67	60	53	57	65	65	65	65
16F	**71.85**	65	66	67	68	70	70	70	70	63	0	70	69	69	68	68	68	68	64	67	67	60	53	57	65	65	65	65
17F	**75.00**	65	66	67	68	70	70	70	70	70	0	70	69	69	68	68	68	68	64	66	67	60	53	56	65	65	65	65
18F	**78.15**	65	66	67	68	70	70	70	70	70	70	70	69	69	68	68	68	68	64	66	67	60	53	56	64	65	65	65
19F	**81.30**	65	66	67	67	70	70	70	70	70	70	70	69	69	67	68	68	68	64	66	67	60	53	56	64	64	65	65
21F	**89.95**	65	65	67	67	69	69	69	70	70	70	70	69	68	67	67	67	67	64	66	66	59	53	56	64	64	64	64
23F	**93.10**	65	65	67	67	69	69	69	70	70	70	69	69	68	67	67	67	67	63	66	66	59	53	56	64	64	64	64
24F	**96.25**	65	65	66	67	69	69	69	69	69	70	69	68	68	67	67	67	67	63	66	66	59	53	56	64	64	64	64
25F	**99.40**	64	65	66	67	69	69	69	69	69	70	69	68	68	67	67	67	67	63	66	66	59	53	56	64	64	64	64
26F	**102.55**	64	65	66	67	69	69	69	69	69	70	69	68	68	67	67	67	67	63	65	66	59	53	56	64	64	64	64
27F	**105.70**	64	65	66	67	69	69	69	69	69	69	69	68	68	66	67	67	67	63	65	66	59	53	56	64	64	64	64
28F	**108.85**	64	65	66	67	69	69	69	69	69	69	69	68	68	66	67	67	67	63	65	66	59	53	56	64	64	64	64
29F	**112.00**	64	65	66	66	68	69	69	69	69	69	69	68	68	66	67	67	67	63	65	66	59	53	56	64	64	64	64
30F	**115.15**	64	65	66	66	68	69	69	69	69	69	69	68	67	66	67	67	67	63	65	66	59	53	56	64	64	64	64
31F	**118.30**	64	65	66	66	68	68	68	69	69	69	69	68	67	66	67	67	66	62	65	65	59	53	55	64	64	64	64
32F	**121.45**	64	64	66	66	68	68	68	69	69	69	69	68	67	66	66	66	66	62	65	65	58	53	55	63	63	64	64
33F	**124.60**	64	64	66	66	68	68	68	68	69	69	68	68	67	66	66	66	66	62	65	65	58	53	55	63	63	63	64
34F	**127.75**	64	64	65	66	68	68	68	68	68	69	68	67	67	66	66	66	66	62	65	65	58	53	55	63	63	63	63
35F	**130.90**	64	64	65	66	68	68	68	68	68	69	68	67	67	66	66	66	66	62	65	65	58	53	55	63	63	63	63
36F	**134.05**	64	64	65	66	68	68	68	68	68	69	68	67	67	66	66	66	66	62	65	65	58	53	55	63	63	63	63
37F	**137.20**	63	64	65	66	68	68	68	68	68	68	68	67	67	66	66	66	66	62	64	65	58	53	55	63	63	63	63
38F	**140.35**	63	64	65	66	68	68	68	68	68	68	68	67	67	65	66	66	66	62	64	65	58	53	55	63	63	63	63
39F	**143.50**	63	64	65	66	68	68	68	68	68	68	68	67	67	65	66	66	66	62	64	65	58	53	55	63	63	63	63
40F	**146.65**	63	64	65	65	67	68	68	68	68	68	68	67	67	65	66	66	66	62	64	65	58	53	55	63	63	63	63
41F	**149.80**	63	64	65	65	67	68	68	68	68	68	68	67	67	65	66	66	66	62	64	65	58	53	55	63	63	63	63
42F	**152.95**	63	64	65	65	67	67	68	68	68	68	68	67	66	65	66	66	66	61	64	65	58	52	55	63	63	63	63
43F	**156.10**	63	64	65	65	67	67	67	68	68	68	68	67	66	65	65	65	65	61	64	64	58	52	55	63	63	63	63
44F	**159.25**	63	63	65	65	67	67	67	68	68	68	67	67	66	65	65	65	65	61	64	64	57	52	55	63	63	63	63
45F	**162.40**	63	63	65	65	67	67	67	67	68	68	67	67	66	65	65	65	65	61	64	64	57	52	55	63	63	63	63
46F	**165.55**	63	63	65	65	67	67	67	67	67	68	67	66	66	65	65	65	65	61	64	64	57	52	55	63	62	63	63
47F	**168.70**	63	63	64	65	67	67	67	67	67	68	67	66	66	65	65	65	65	61	64	64	57	53	55	62	62	62	63
Max. Noise Level		66	67	69	70	70	70	70	70	70	70	70	70	70	70	70	70	69	65	67	67	61	53	57	65	65	65	66
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0			0				0		0				0			0					0		0		0	
Total No. of Units		45			45				45		45				45			45					45		45		45	

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Mitigated Scenario

PM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor
	Fixed Window
	Baffle Tupe Acoustic Window (Configuration 1)
	Baffle Tupe Acoustic Window (Configuration 2)

T5

Unit		A		B			C				D		E					F		G			H					I		J		K	
Floor	mPD	T5-A-1	T5-A-2	T5-B-1	T5-B-2	T5-B-3	T5-C-1	T5-C-2	T5-C-3	T5-C-4	T5-D-1	T5-D-2	T5-E-1	T5-E-2	T5-E-3	T5-E-4	T5-E-6	T5-F-1	T5-F-2	T5-G-1	T5-G-2	T5-G-3	T5-H-1	T5-H-2	T5-H-3	T5-H-4	T5-H-5	T5-I-1	T5-I-2	T5-J-1	T5-J-2	T5-K-1	T5-K-2
1F	24.58	63	63	63	63	63	63	62	60	60	59	58	60	58	60	59	59	59	59	59	60	61	62	60	62	64	64	64	65	62	63	63	63
2F	27.73	64	64	64	64	64	64	63	61	61	61	60	62	59	60	60	59	60	60	60	60	61	62	61	62	64	64	64	65	62	63	63	63
3F	30.88	64	64	64	64	64	64	63	62	62	61	60	62	59	61	60	60	60	60	60	60	61	62	61	62	64	65	65	65	62	63	63	63
4F	34.03	64	64	64	64	64	64	64	62	62	61	61	63	60	61	60	60	60	60	60	61	61	62	61	62	64	65	65	65	62	63	63	63
5F	37.18	64	64	64	64	64	64	64	62	62	62	61	63	60	61	60	60	60	60	60	61	61	62	61	62	65	65	65	66	62	63	63	63
6F	40.33	64	64	64	64	64	64	64	62	62	62	61	63	60	61	61	60	60	60	60	61	62	62	61	63	65	66	65	66	62	63	63	63
7F	43.48	64	64	64	64	64	64	64	62	62	62	61	63	60	61	61	60	60	60	60	61	62	63	61	63	65	66	66	66	62	63	63	63
8F	46.63	63	64	64	64	64	64	64	62	62	62	61	63	60	61	61	60	60	60	60	61	62	63	61	63	66	66	66	66	62	62	63	63
9F	49.78	63	64	64	64	64	64	64	62	62	62	61	63	60	61	61	60	60	60	60	61	62	63	61	63	66	67	66	67	62	62	63	63
10F	52.93	63	63	64	64	64	64	63	62	62	61	61	63	60	61	61	60	60	60	60	61	62	63	62	63	66	67	66	67	62	62	63	63
11F	56.08	63	63	64	64	64	64	63	62	62	61	61	63	60	61	61	60	60	60	60	61	62	63	62	63	66	67	66	67	62	62	62	63
12F	59.23	63	63	63	64	64	64	63	62	62	61	61	63	60	61	61	61	60	60	61	61	62	63	62	63	66	67	66	66	62	62	62	63
13F	62.38	63	63	63	64	64	64	63	62	62	61	61	63	60	61	61	61	60	60	61	61	62	63	62	64	66	67	66	66	61	62	62	63
14F	65.53	63	63	63	63	64	64	63	62	62	61	60	63	60	61	61	61	61	61	61	61	63	64	62	64	66	67	66	66	61	62	62	62
15F	68.68	63	63	63	63	64	64	63	62	62	61	60	63	60	61	61	61	61	61	61	61	63	64	62	63	66	67	66	66	61	62	62	62
16F	71.83	63	63	63	63	63	63	63	62	62	61	60	63	60	61	61	61	61	61	61	61	63	64	62	63	66	67	66	66	61	61	62	62
17F	74.98	62	63	63	63	63	63	63	62	62	61	60	63	60	61	61	61	61	61	61	61	63	63	62	63	66	67	66	66	61	61	62	62
18F	78.13	62	63	63	63	63	63	63	62	61	61	60	63	60	61	61	61	61	61	61	61	62	63	62	63	66	67	66	66	61	61	62	62
19F	81.28	62	62	63	63	63	63	63	62	61	61	60	63	60	61	61	61	61	61	61	61	62	63	62	63	66	67	66	66	61	61	62	62
21F	89.93	62	62	62	63	63	63	63	61	61	61	60	63	60	61	61	61	61	61	61	61	62	63	62	63	66	66	66	66	60	61	61	62
22F	93.08	62	62	62	63	63	63	62	61	61	61	60	62	60	61	61	61	61	60	61	61	62	63	62	63	66	66	66	66	60	61	61	62
23F	96.23	62	62	62	62	63	63	62	61	61	60	60	62	60	61	61	61	61	60	61	61	62	63	62	63	66	66	66	66	60	61	61	61
24F	99.38	62	62	62	62	63	63	62	61	61	60	60	62	60	61	61	60	60	60	61	61	62	63	62	63	66	66	65	65	60	61	61	61
25F	102.53	62	62	62	62	63	63	62	61	61	60	60	62	60	61	61	60	60	60	61	61	62	63	61	63	66	66	65	65	60	60	61	61
26F	105.68	61	62	62	62	62	63	62	61	61	60	60	62	60	61	61	60	60	60	60	61	62	63	61	63	65	66	65	65	60	60	61	61
27F	108.83	61	62	62	62	62	62	62	61	61	60	60	62	60	61	61	60	60	60	60	61	62	63	61	63	65	66	65	65	60	60	61	61
28F	111.98	61	62	62	62	62	62	62	61	61	60	59	62	60	61	61	60	60	60	60	61	62	63	61	63	65	66	65	65	60	60	61	61
29F	115.13	61	61	62	62	62	62	62	61	61	60	59	62	60	61	61	60	60	60	60	61	62	63	61	63	65	66	65	65	60	60	60	61
30F	118.28	61	61	62	62	62	62	62	61	61	60	59	62	60	61	61	60	60	60	60	61	62	63	61	62	65	66	65	65	60	60	60	61
31F	121.43	61	61	61	62	62	62	62	61	60	60	59	62	60	61	61	60	60	60	60	61	62	63	61	62	65	66	65	65	59	60	60	61
32F	124.58	61	61	61	62	62	62	62	61	60	60	59	62	60	61	61	60	60	60	60	61	62	63	61	62	65	66	65	65	59	60	60	61
33F	127.73	61	61	61	62	62	62	62	60	60	60	59	62	59	61	60	60	60	60	60	61	62	63	61	62	65	65	65	65	59	60	60	60
34F	130.88	61	61	61	62	62	62	61	60	60	60	59	62	59	61	60	60	60	60	60	61	62	62	61	62	65	65	65	65	59	60	60	60
35F	134.03	61	61	61	61	62	62	61	60	60	60	59	62	59	61	60	60	60	60	60	60	62	62	61	62	65	65	65	65	59	60	60	60
36F	137.18	61	61	61	61	62	62	61	60	60	60	59	62	59	61	60	60	60	60	60	60	61	62	61	62	65	65	65	65	59	59	60	60
37F	140.33	60	61	61	61	61	62	61	60	60	60	59	62	59	61	60	60	60	60	60	60	61	62	61	62	65	65	65	65	59	59	60	60
38F	143.48	60	61	61	61	61	62	61	60	60	59	59	62	59	61	60	60	60	60	60	60	61	62	61	62	65	65	64	64	59	59	60	60
39F	146.63	60	61	61	61	61	61	61	60	60	59	59	62	59	61	60	60	60	60	60	60	61	62	60	62	65	65	64	64	59	59	60	60
40F	149.78	60	60	61	61	61	61	61	60	60	59	59	61	59	61	60	60	60	60	60	60	61	62	60	62	65	65	64	64	59	59	60	60
41F	152.93	60	60	61	61	61	61	61	60	60	59	59	61	59	61	60	60	60	60	60	60	61	62	60	62	64	65	64	64	59	59	59	60
42F	156.08	60	60	61	61	61	61	61	60	60	59	58	61	59	61	60	60	60	59	60	60	61	62	60	62	64	65	64	64	59	59	59	60
43F	159.23	60	60	60	61	61	61	61	60	60	59	58	61	59	60	60	60	60	59	60	60	61	62	60	62	64	65	64	64	58	59	59	60
44F	162.38	60	60	60	61	61	61	61	60	60	59	58	61	59	60	60	60	59	59	59	60	61	62	60	62	64	65	64	64	58	59	59	60
45F	165.53	60	60	60	61	61	61	61	60	60	59	58	61	59	60	60	60	59	59	59	60	61	62	60	61	64	65	64	64	58	59	59	59
46F	168.68	60	60	60	61	61	61	61	60	59	59	58	61	59	60	60	59	59	59	59	60	61	62	60	62	64	65	64	64	58	59	59	59
Max. Noise Level		64	64	64	64	64	64	64	62	62	62	61	63	60	61	61	61	61	61	61	61	63	64	62	64	66	67	66	67	62	63	63	63
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0		0			0				0		0					0		0			0					0		0		0	
Total No. of Units		45		45			45				45		45					45		45			45					45		45		45	

Road Traffic Noise Impact Assessment

Project No.: 2127

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Mitigated Scenario

PM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor
	Fixed Window
	Baffle Tupe Acoustic Window (Configuration 1)
	Baffle Tupe Acoustic Window (Configuration 2)

T6

Unit		A		B			C		D					E			F					G		H	I					J	
Floor	mPD	T6-A-1	T6-A-2	T6-B-1	T6-B-2	T6-C-1	T6-C-2	T6-C-3	T6-D-2	T6-D-3	T6-D-4	T6-D-5	T6-D-6	T6-E-1	T6-E-2	T6-E-3	T6-F-1	T6-F-3	T6-F-4	T6-F-5	T6-F-6	T6-G-1	T6-G-2	T6-H-1	T6-I-1	T6-I-2	T6-I-3	T6-I-4	T6-I-6	T6-J-1	T6-J-2
1F	24.58	63	62	62	62	62	65	64	67	69	69	69	65	65	66	67	67	69	0	69	0	69	64	65	63	0	68	65	64	63	63
2F	27.73	63	62	62	62	62	65	65	67	70	70	70	66	66	66	67	67	68	0	68	0	69	64	65	63	0	68	65	64	63	63
3F	30.88	63	62	62	62	62	65	65	68	0	64	63	66	66	66	66	67	68	0	67	0	69	70	64	63	70	67	65	64	63	63
4F	34.03	63	62	62	62	62	65	65	69	0	64	64	65	65	66	66	66	67	0	67	0	68	70	70	63	70	67	65	64	63	63
5F	37.18	63	62	62	62	62	66	66	69	0	64	63	65	65	65	66	66	67	0	66	0	68	70	70	63	70	67	65	64	63	63
6F	40.33	63	62	62	62	62	66	66	69	0	64	63	65	65	65	65	65	66	0	66	0	67	69	70	70	70	67	65	64	63	63
7F	43.48	63	62	62	62	62	67	66	69	0	64	63	65	65	65	65	65	66	0	66	0	67	69	69	70	70	67	65	64	63	63
8F	46.63	62	62	62	62	62	67	67	69	0	64	70	64	65	65	65	65	66	0	66	0	67	69	69	70	70	67	64	63	63	63
9F	49.78	62	62	62	62	62	67	67	69	0	64	70	64	64	64	65	65	66	0	65	0	66	69	69	70	69	66	64	63	63	63
10F	52.93	62	62	62	61	62	67	66	69	0	63	70	64	64	64	65	65	65	0	65	0	66	68	69	70	69	66	64	63	63	62
11F	56.08	62	62	62	61	61	67	66	68	0	63	70	64	64	64	64	64	65	0	65	0	66	68	69	69	69	66	64	63	63	62
12F	59.23	62	62	61	61	61	67	66	68	70	70	70	64	64	64	64	64	65	0	65	0	66	68	68	69	69	66	64	63	62	62
13F	62.38	62	61	61	61	61	67	66	68	70	70	70	64	64	64	64	64	65	0	65	0	65	68	68	69	69	65	64	63	62	62
14F	65.53	62	61	61	61	61	66	66	68	70	70	70	64	64	64	64	64	65	0	64	0	65	68	68	69	69	65	63	63	62	62
15F	68.68	61	61	61	61	61	66	66	68	70	70	69	63	63	63	64	64	65	0	64	0	65	67	68	69	69	65	63	62	62	62
16F	71.83	61	61	61	61	61	66	66	68	70	70	69	70	63	63	64	64	64	0	64	0	65	67	68	69	68	65	63	62	62	62
17F	74.98	61	61	61	61	61	66	66	68	70	70	69	70	70	70	70	63	64	0	64	70	64	67	68	68	68	65	63	62	62	61
18F	78.13	61	61	61	60	61	66	66	68	70	70	69	70	70	70	70	63	64	0	70	70	64	67	67	68	68	65	63	62	62	61
19F	81.28	61	61	61	60	60	66	66	67	69	69	69	70	70	70	70	70	64	0	70	70	64	67	67	68	68	64	63	62	61	61
21F	89.93	61	61	60	60	60	66	65	67	69	69	69	70	70	70	70	70	70	0	70	70	64	66	67	68	68	64	62	62	61	61
22F	93.08	61	60	60	60	60	66	65	67	69	69	69	70	70	70	70	70	70	70	70	70	63	66	67	68	68	64	62	61	61	61
23F	96.23	61	60	60	60	60	66	65	67	69	69	69	69	70	70	70	70	70	70	70	69	63	66	67	68	67	64	62	61	61	61
24F	99.38	60	60	60	60	60	66	65	67	69	68	69	69	69	69	70	70	70	70	70	69	63	66	66	67	67	64	62	61	61	61
25F	102.53	60	60	60	60	60	65	65	67	69	69	68	69	69	69	69	70	70	70	69	69	63	66	66	67	67	64	62	61	61	61
26F	105.68	60	60	60	60	60	65	65	67	69	69	68	69	69	69	69	69	70	70	69	69	63	66	66	67	67	63	62	61	61	60
27F	108.83	60	60	60	59	60	65	65	67	69	69	68	69	69	69	69	69	70	70	69	69	63	66	66	67	67	63	62	61	61	60
28F	111.98	60	60	60	59	60	65	65	67	68	68	68	69	69	69	69	69	69	70	69	69	63	65	66	67	67	63	61	61	60	60
29F	115.13	60	60	60	59	59	65	65	66	68	68	68	69	69	69	69	69	69	70	69	69	62	65	66	67	67	63	61	61	60	60
30F	118.28	60	60	59	59	59	65	65	66	68	68	68	69	69	69	69	69	69	70	69	69	62	65	66	67	67	63	61	61	60	60
31F	121.43	60	60	59	59	59	65	65	66	68	68	68	69	69	69	69	69	69	69	69	69	62	65	66	67	67	63	61	61	60	60
32F	124.58	60	59	59	59	59	65	64	66	68	68	68	69	69	69	69	69	69	69	69	68	62	65	66	67	67	63	61	60	60	60
33F	127.73	60	59	59	59	59	65	64	66	68	68	68	68	69	69	69	69	69	69	69	68	62	65	66	67	66	63	61	60	60	60
34F	130.88	60	59	59	59	59	65	64	66	68	68	68	68	68	68	69	69	69	69	69	68	62	65	65	66	66	63	61	60	60	60
35F	134.03	59	59	59	59	59	65	64	66	68	68	67	68	68	68	68	69	69	69	68	68	62	65	65	66	66	62	61	60	60	60
36F	137.18	59	59	59	59	59	65	64	66	68	68	67	68	68	68	68	68	69	69	68	68	62	65	65	66	66	62	61	60	60	60
37F	140.33	59	59	59	59	59	65	64	66	68	68	67	68	68	68	68	68	69	69	68	68	62	64	65	66	66	62	61	60	60	59
38F	143.48	59	59	59	59	59	64	64	66	68	68	67	68	68	68	68	68	68	69	68	68	61	64	65	66	66	62	61	60	60	59
39F	146.63	59	59	59	58	59	64	64	66	68	68	67	68	68	68	68	68	68	69	68	68	61	64	65	66	66	62	60	60	60	59
40F	149.78	59	59	59	58	58	64	64	66	67	67	67	68	68	68	68	68	68	69	68	68	61	64	65	66	66	62	60	60	59	59
41F	152.93	59	59	59	58	58	64	64	66	67	67	67	68	68	68	68	68	68	69	68	68	61	64	65	66	66	62	60	60	59	59
42F	156.08	59	59	59	58	58	64	64	65	67	67	67	68	68	68	68	68	68	68	68	68	61	64	65	66	66	62	60	60	59	59
43F	159.23	59	59	58	58	58	64	64	65	67	67	67	68	68	68	68	68	68	68	68	68	61	64	65	66	66	62	60	60	59	59
44F	162.38	59	59	58	58	58	64	64	65	67	67	67	68	68	68	68	68	68	68	68	67	61	64	65	66	66	62	60	59	59	59
45F	165.53	59	58	58	58	58	64	64	65	67	67	67	68	68	68	68	68	68	68	68	67	61	64	64	66	65	62	60	59	59	59
46F	168.68	59	58	58	58	58	64	64	65	67	67	67	67	67	68	68	68	68	68	68	67	61	64	64	65	65	62	60	59	59	59
Max. Noise Level		63	62	62	62	62	67	67	69	70	70	70	70	70	70	70	70	70	70	70	70	69	70	70	70	70	68	65	64	63	63
No. of exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. of unit with exceedance		0		0			0		0					0			0					0		0	0					0	
Total No. of Units		45		45			45		45					45			45					45		45	45					45	

Road Traffic Noise Impact Assessment

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories

Mitigated Scenario

PM Peak (Year 2047)

Note:

71	Predicted Noise Level Exceed Noise Criteria recommended in HKPSG, 70dB(A) for residential development
-	Non-NAP at this floor
	Fixed Window
	Baffle Tupe Acoustic Window (Configuration 1)
	Baffle Tupe Acoustic Window (Configuration 2)

T2

Max Noise Level	70
Total No. of Unit with exceedance	0
Total No. of Units	405
Compliance rate	100%

T3

Max Noise Level	67
Total No. of Unit with exceedance	0
Total No. of Units	450
Compliance rate	100%

T4

Max Noise Level	70
Total No. of Unit with exceedance	0
Total No. of Units	405
Compliance rate	100%

T5

Max Noise Level	67
Total No. of Unit with exceedance	0
Total No. of Units	495
Compliance rate	100%

T6

Max Noise Level	70
Total No. of Unit with exceedance	0
Total No. of Units	450
Compliance rate	100%

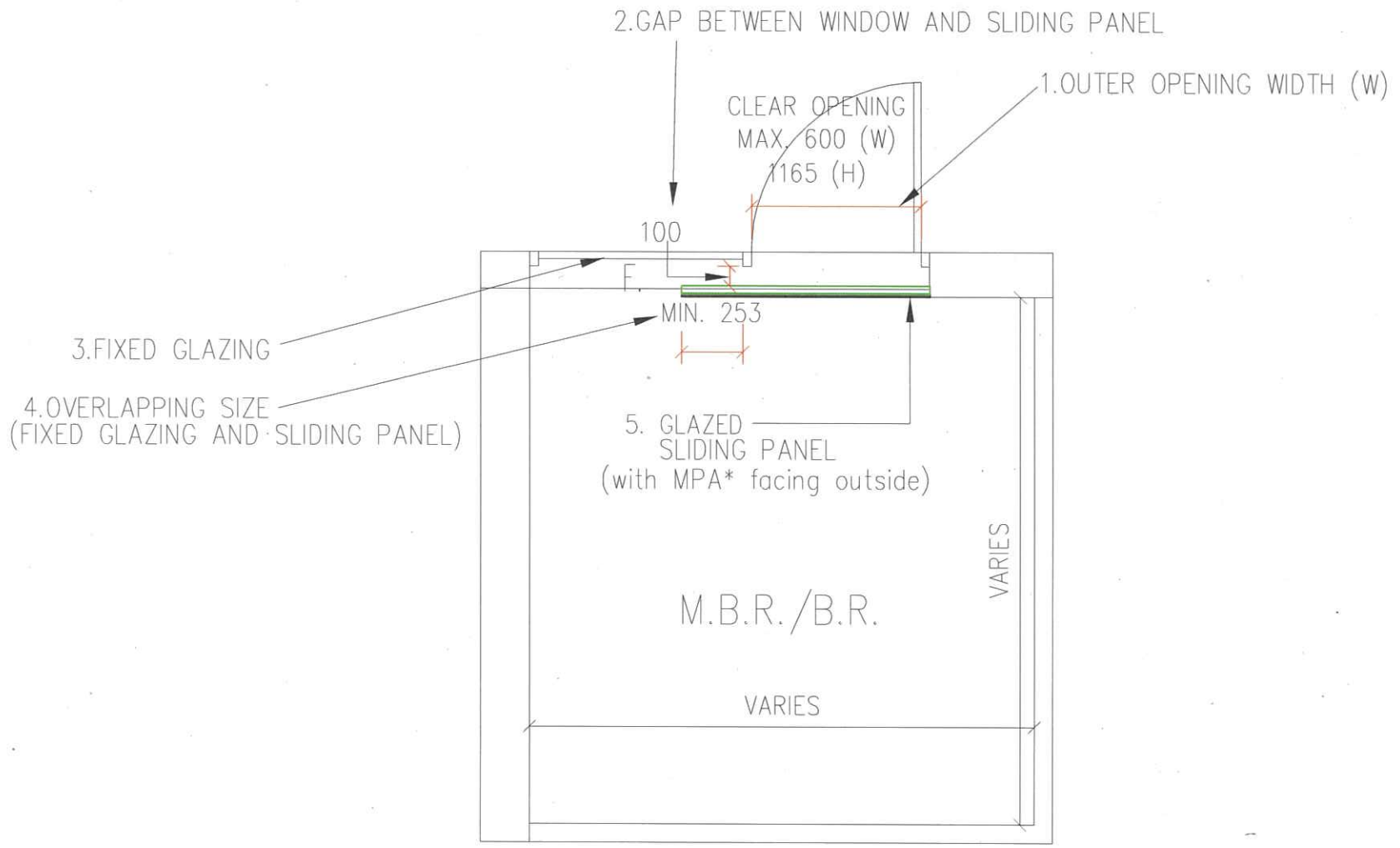
OVERALL

Max Noise Level	70
Total No. of Unit with exceedance	0
Total No. of Units	2205
Compliance rate	100%

Appendix 6.4

Indicative Design for Acoustic Window (Baffle Type)

INDICATIVE DESIGN OF BAFFLE TYPE ACOUSTIC WINDOW FOR BEDROOM (REFERENCED FROM EX-NORTH POINT ESTATE REDEVELOPMENT)



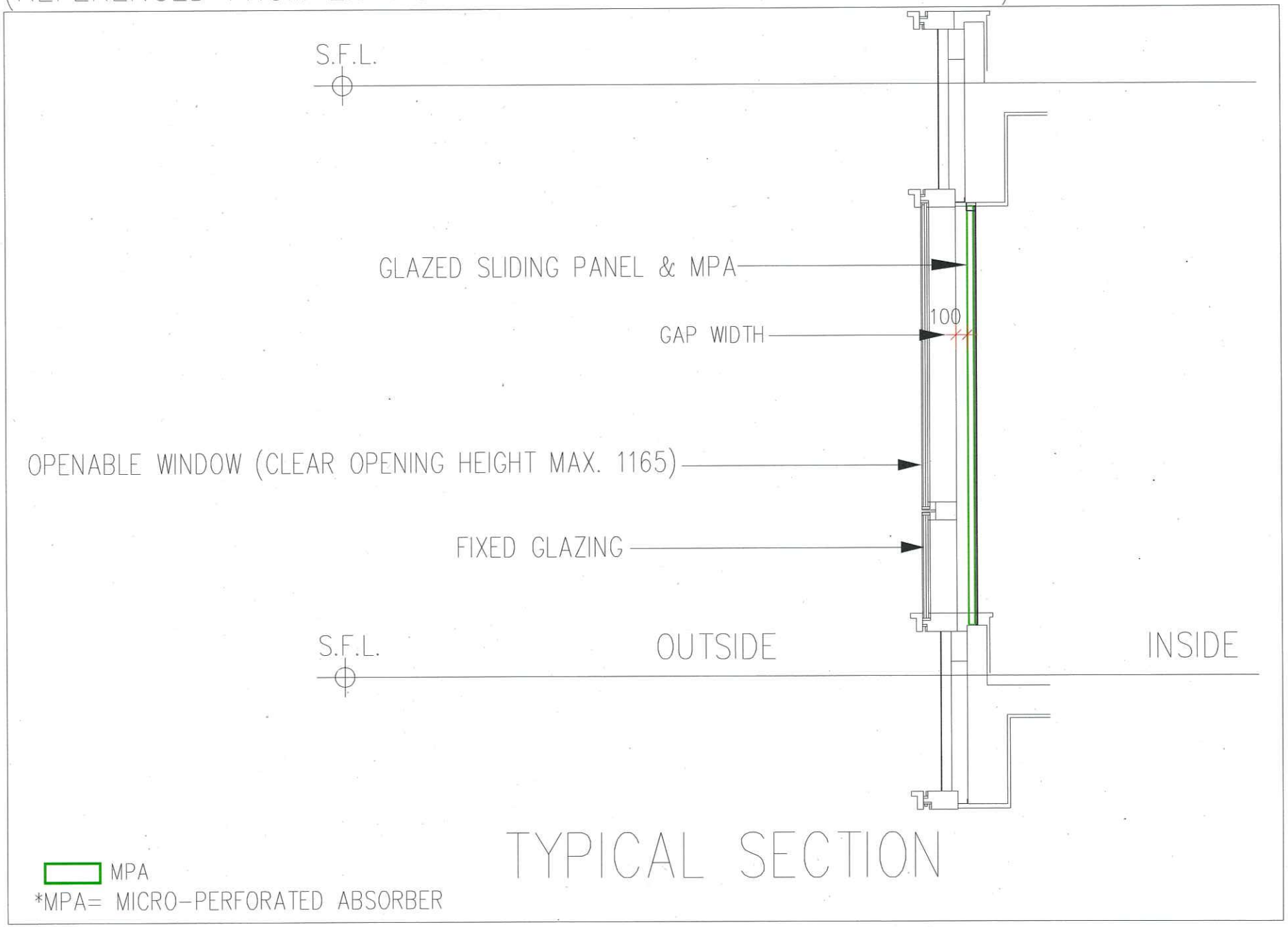
TYPICAL PLAN

MPA

*MPA= MICRO-PERFORATED ABSORBER

F.= FIXED GLAZING

INDICATIVE DESIGN OF BAFFLE TYPE ACOUSTIC WINDOW FOR BEDROOM (REFERENCED FROM EX-NORTH POINT ESTATE REDEVELOPMENT)

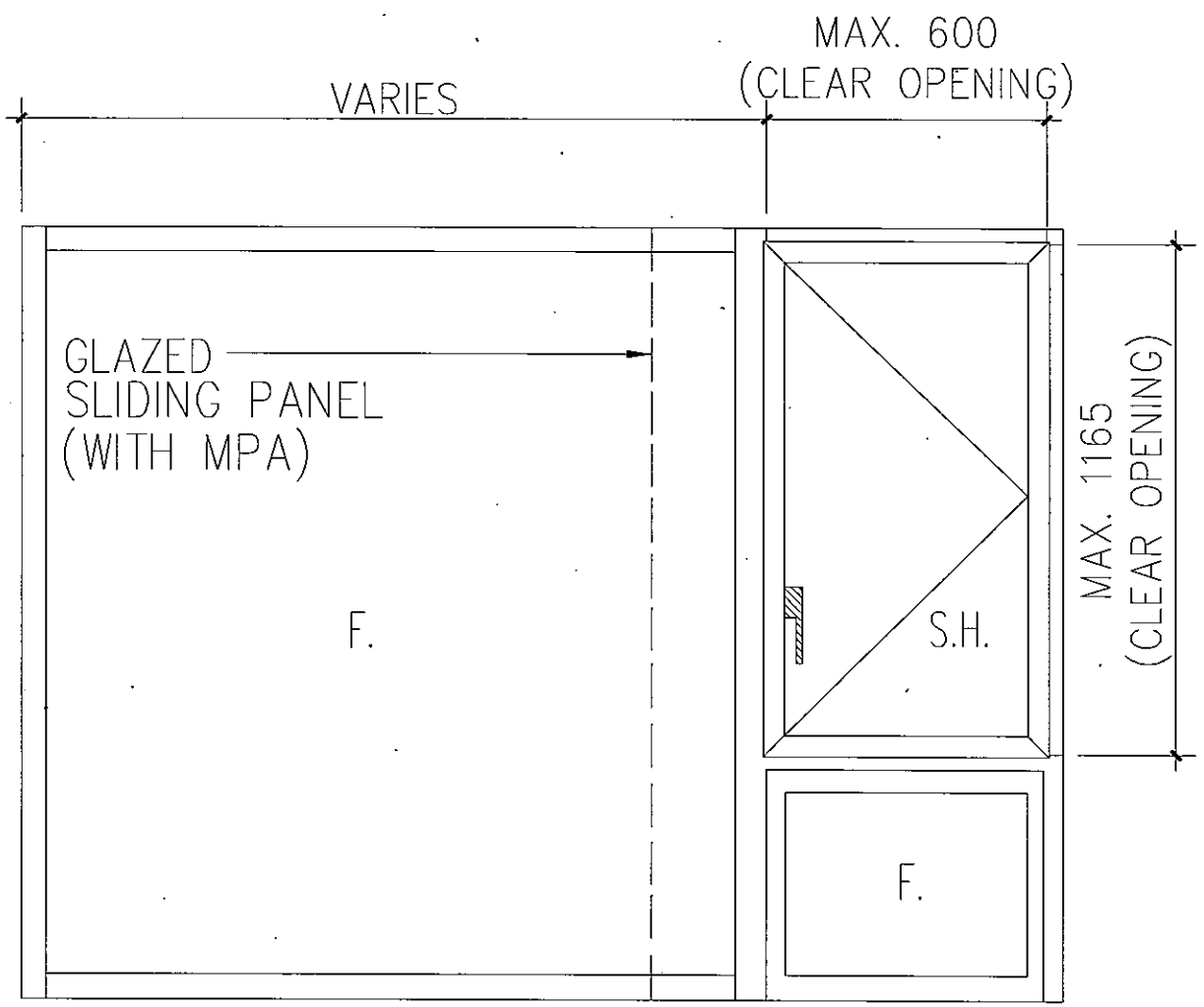


TYPICAL SECTION

MPA

*MPA= MICRO-PERFORATED ABSORBER

INDICATIVE DESIGN OF BAFFLE TYPE ACOUSTIC WINDOW FOR BEDROOM (REFERENCED FROM EX-NORTH POINT ESTATE REDEVELOPMENT)

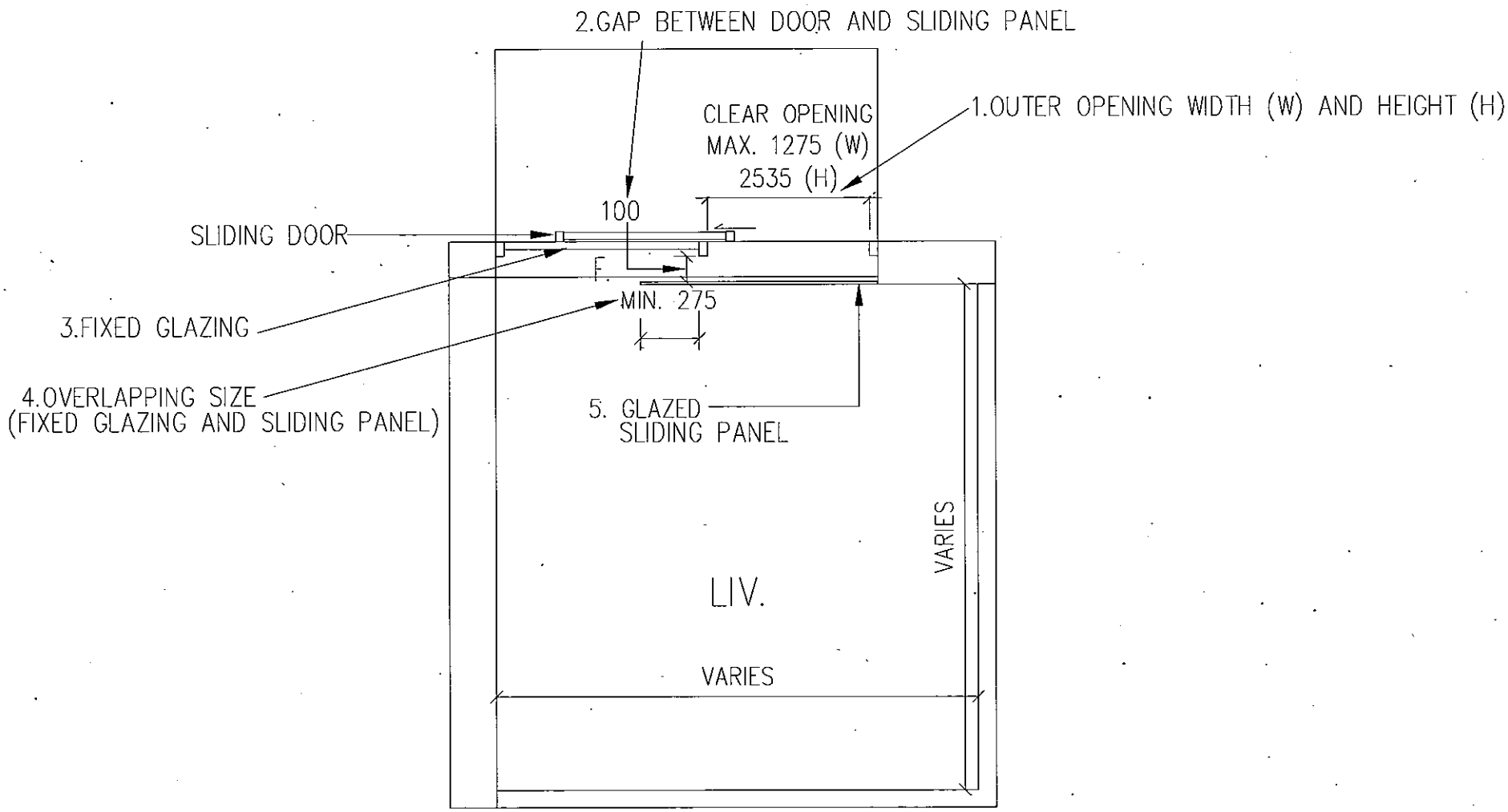


TYPICAL ELEVATION

*MPA= MICRO-PERFORATED ABSORBER

F.= FIXED GLAZING

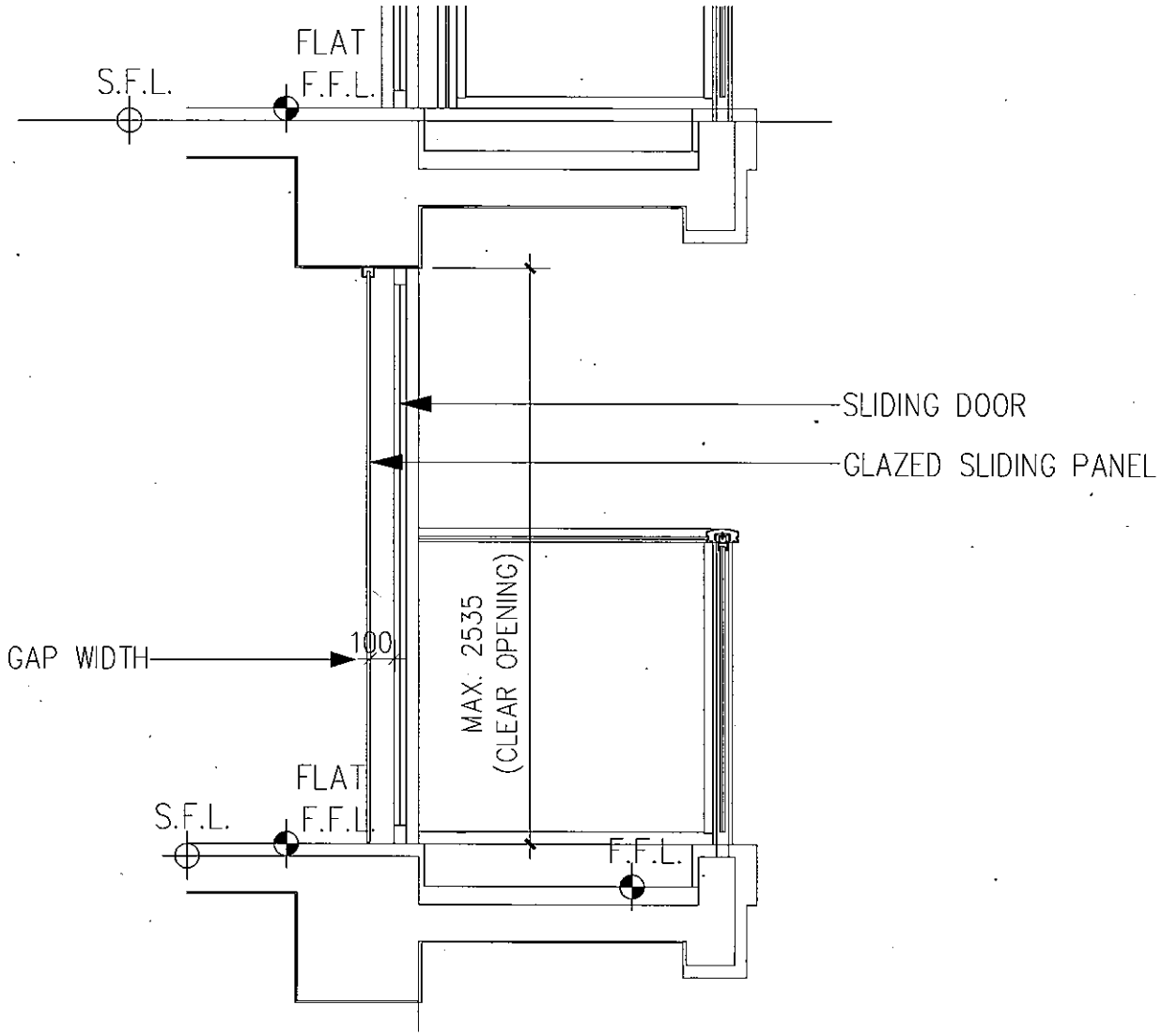
INDICATIVE DESIGN OF BAFFLE TYPE ACOUSTIC DOOR FOR LIVING ROOM (REFERENCED FROM EX-NORTH POINT ESTATE REDEVELOPMENT)



TYPICAL PLAN

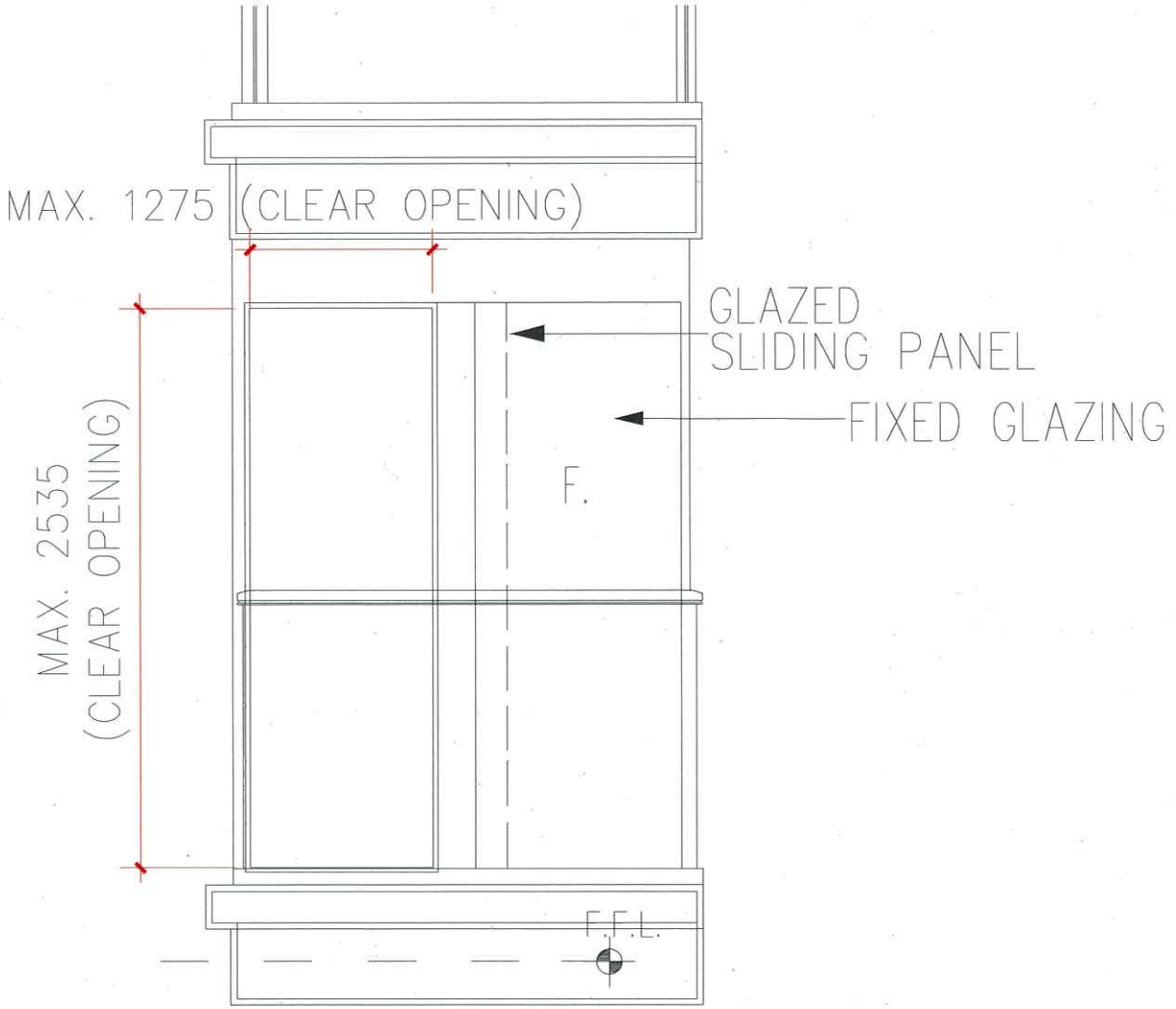
F.= FIXED GLAZING

INDICATIVE DESIGN OF BAFFLE TYPE ACOUSTIC DOOR FOR LIVING ROOM (REFERENCED FROM EX-NORTH POINT ESTATE REDEVELOPMENT)



TYPICAL SECTION

INDICATIVE DESIGN OF BAFFLE TYPE ACOUSTIC DOOR FOR LIVING ROOM (REFERENCED FROM EX-NORTH POINT ESTATE REDEVELOPMENT)



TYPICAL ELEVATION

Appendix 6.5

Room Size Correction

Project No.: 2127

Project: Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories Ling, New Territories

Room Size Correction and Schedule of Road Traffic Noise Mitigation Measures
BAW

NAP	Design Parameter					Noise Reduction Performance			
	Outer Opening Area, m2	Air Gap, mm	Overlapping Length (excluding mullion), mm	Room Size, m2	Sound Absorption Material	Room Size Correction, dB(A) (10*log(NAP room size/Reference case room size))	Corrected Noise Reduction, dB(A)	Required Noise Reduction, dB(A)	Sufficient?
	smaller / same as	smaller / same as	greater / same as		same as				
Configuration 1 Reference Case: Redevelopment Project of ex-North Point Estate (NPE) for Bedroom with Baffle Type Acoustic Window									
	0.7	100	253	6.8	Y		6.9		
T4-B-3	0.7	100	253	4.831	Y	-1.5	5.4	3.3	YES
T4-C-2	0.7	100	253	7.26	Y	0.3	7.2	3.9	YES*
T4-D-2	0.7	100	253	9.84	Y	1.6	8.5	3.8	YES*
T4-D-3	0.7	100	253	4.842	Y	-1.5	5.4	2.5	YES
T6-D-4	0.7	100	253	6.815	Y	0.0	6.9	1.0	YES*
T6-D-6	0.7	100	253	10.21	Y	1.8	8.7	2.7	YES*
T6-E-1	0.7	100	253	9.564	Y	1.5	8.4	2.9	YES*
T6-E-2	0.7	100	253	7.145	Y	0.2	7.1	3.2	YES*
T6-F-3	0.7	100	253	4.84	Y	-1.5	5.4	5.4	YES
T6-F-5	0.7	100	253	4.842	Y	-1.5	5.4	5.2	YES
T6-I-1	0.7	100	253	9.299	Y	1.4	8.3	0.7	YES*
Configuration 2 Reference Case: Redevelopment Project of ex-North Point Estate (NPE) for Living room with Baffle Type Sliding Door									
	3.2	100	275	38.3	N		8.8		
T4-B-4	3.2	100	275	14.156	N	-4.3	4.5	3.5	YES
T4-C-1	3.2	100	275	16.536	N	-3.6	5.2	3.8	YES
T4-D-4	3.2	100	275	17.553	N	-3.4	5.4	1.3	YES
T6-D-5	3.2	100	275	22.272	N	-2.4	6.4	0.4	YES*
T6-E-3	3.2	100	275	19.152	N	-3.0	5.8	3.6	YES
T6-F-1	3.2	100	275	20.268	N	-2.8	6.0	4.5	YES
T6-G-2	3.2	100	275	16.34	N	-3.7	5.1	0.5	YES
T6-H-1	3.2	100	275	14.033	N	-4.4	4.4	0.5	YES

*Noise Reduction capped at 6dB as a conservative approach.

Appendix 6.6

Measurement Details of the Corrected Sound Power Level of Fixed Noise Sources

Measurement Detail of the Corrected Sound Power Level of Fixed Noise Sources

Project No.:	2127
Project Name:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories
Measurement Date:	Thursday, August 17, 2023
Measurement Time:	16:13
Measurement Equipment:	Class 1 Sound Level Meter NTi XL2
Sound Source:	Ho Cheung Scrap metal recycling

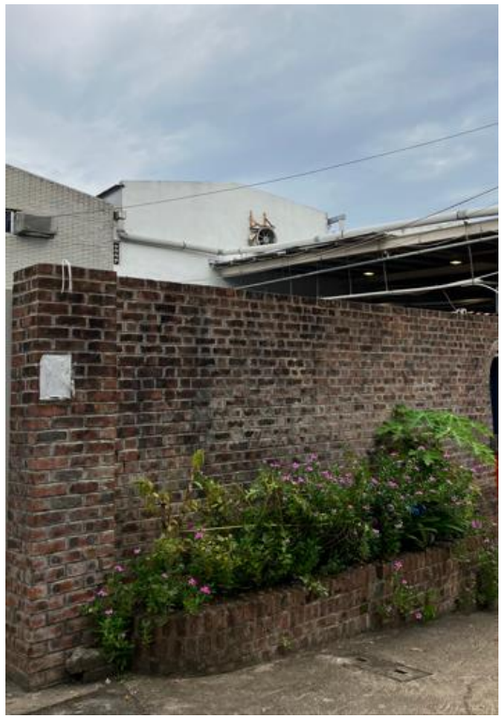
Noise Source ID	Noise Source Location	Measured Sound Pressure Level, dB(A)	Distance from Noise Source, m	Distance Correction, dB(A)	Corrected Sound Power Level, dB(A)
S02	Ho Cheung Scrap metal recycling	62.8	30	37.5	100.3



Measurement Detail of the Corrected Sound Power Level of Fixed Noise Sources

Project No.:	2127
Project Name:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories
Measurement Date:	Thursday, August 17, 2023
Measurement Time:	15:58
Measurement Equipment:	Class 1 Sound Level Meter NTi XL2
Sound Source:	Laundry Workshop

Noise Source ID	Noise Source Location	Measured Sound Pressure Level, dB(A)	Distance from Noise Source, m	Distance Correction, dB(A)	Corrected Sound Power Level, dB(A)
S05	Laundry Workshop	64.3	21	34.4	98.7



Measurement Detail of the Corrected Sound Power Level of Fixed Noise Sources

Project No.:	2127
Project Name:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories
Measurement Date:	Thursday, August 17, 2023
Measurement Time:	16:30
Measurement Equipment:	Class 1 Sound Level Meter NTi XL2
Sound Source:	Bosa Technology (Manufacturing & warehouse)

Noise Source ID	Noise Source Location	Measured Sound Pressure Level, dB(A)	Distance from Noise Source, m	Distance Correction, dB(A)	Corrected Sound Power Level, dB(A)
S13	Bosa Technology (Manufacturing & warehouse)	70.5	3	17.5	88



Measurement Detail of the Corrected Sound Power Level of Fixed Noise Sources

Project No.:	2127
Project Name:	Application for Amendment of Plan under Section 12A for the Town Planning Ordinance (Cap. 131) for Mixed Use Development at Lots 796 and 1008RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories
Measurement Date:	Tuesday, June 20, 2023
Measurement Time:	19:49
Measurement Equipment:	Class 1 Sound Level Meter NTi XL2
Sound Source:	Chewy warehouse

Noise Source ID	Noise Source Location	Measured Sound Pressure Level, dB(A)	Distance from Noise Source, m	Distance Correction, dB(A)	Corrected Sound Power Level, dB(A)
S15	Chewy warehouse	65	1	8	73



Appendix 6.7

Fixed Plant Noise Impact Assessment Calculation

Project: **APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE**

Subject: **Results of Prevailing Background Noise Surveys**

Date: 14-Sep-23

Time: Daytime/Evening 1315-1645
Nighttime 1800-1830

Survey Personnel: Ms. Conny Lam
Weather Condition: Fine
Field Operation: Nil
Instrumentation: Sound Level Meters (NT1 XL2)/ Calibrator (RION NC-73)



Figure - Location of NSRs and Background Noise Measurement Point

Represented NMP	Session	Date	Time	Measured Background Noise Level	Type of Measurement	Applicable Façade Correction	Corrected Background Noise Level
				L90 (1hr), dB(A)		dB(A)	dB(A), L90 (1hr)
1	Daytime/Evening	14-Sep-23	1315-1645	49.6	Free-field	3	52.6
	Nighttime	14-Sep-23	1800-1830	49.9	Free-field	3	52.9
	Calibration	14-Sep-23	1645-1645	94.3	Free-field	/	/

Note:

[1] L90 (1 hour) is used as a measure of the background noise level.

[2] As the measurements were conducted in free-field condition, +3.0 dB(A) have been added to the measured noise levels to represent the measurement at 1m from a building façade.

Project: **APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE**

Subject: **Photos of Background Noise Measurement**

Date: 14-Sep-23

Time: Daytime/Evening 1315-1645
Nighttime 1800-1830

Survey Personnel: Ms Conny Lam
Weather Condition: Fine
Instrumentation: Sound Level Meters (NT1 XL2)/ Calibrator (RION NC-73)





Fixed Plant Noise Impact Assessment Calculation

Project No.: 2127

Project: Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) for Mix Use Development (Residential & Commercial) at Lot 796 & 1008 RP and Adjoining Government land in Ping Che, Ta Kwu Ling, New Territories

NSR ID T2-C-2

Daytime Criterion: 70 dB(A)

Fixed Plant Noise Source					SWL	Remark	Quantity	NSR Location			Horizontal Distance	Vertical Distance	Slant Distance	% on time over 30mins	Correction								Resultant Noise Level
															Distance	Quantity	Façade	Tonality	Impulsive	Intermittency	Barrier	% on time	
ID	Name	X-coordinate	Y-coordinate	Height of FPN (mPD)	dB(A)		(nos.)	X-coordinate	Y-coordinate	Height of NSR (mPD)	(m)	(m)	(m)	%	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
S01	Tin Wing Vehicle Services	834558.207	842842.2468	16	99	[4]	3	834686.3	842532.7	27.8	335.0	11.8	335.2	100%	59	5	3	0	0	0	10	0	22.7
S02	Ho Cheung Scrap metal recycling	834573.2434	842849.3084	16	100.3	[1]	1	834686.3	842532.7	27.8	336.2	11.8	336.4	100%	59	0	3	0	0	0	10	0	28.8
S03	Chewy Logistics	834696.614	842687.133	16	99	[4]	4	834686.3	842532.7	27.8	154.8	11.8	155.2	100%	52	6	3	0	0	0	0	0	38.2
S04	Open storage	834710.5102	842659.2478	16	99	[4]	1	834686.3	842532.7	27.8	128.8	11.8	129.4	100%	50	0	3	0	0	0	10	0	35.8
S04	Open storage	834710.5102	842659.2478	16	112	[6]	1	834686.3	842532.7	27.8	128.8	11.8	129.4	100%	50	0	3	0	0	0	10	0	48.8
S05	Laundry Workshop	834873.8386	842704.2574	16	98.7	[1]	1	834686.3	842532.7	27.8	254.2	11.8	254.4	100%	56	0	3	0	0	0	10	0	29.6
S09	Fat Lee Company Limited	834773.0303	842407.9832	16	91	[3]	1	834686.3	842532.7	27.8	151.9	11.8	152.4	100%	52	0	3	0	0	0	0	0	36.3
S11	Wo Lee Steel logistic & distribution centre	834850.7133	842332.2819	16	91	[3]	1	834686.3	842532.7	27.8	259.2	11.8	259.5	100%	56	0	3	0	0	0	0	0	31.7
S12	Hong Kong United Recycling Company Limited	834692.2714	842332.7136	16	83.8	[2]	1	834686.3	842532.7	27.8	200.1	11.8	200.4	100%	54	0	3	0	0	0	0	0	26.8
S13	Bosa Technology (Manufacturing & warehouse)	834686.2596	842227.8035	16	88	[1]	1	834686.3	842532.7	27.8	304.9	11.8	305.1	100%	58	0	3	0	0	0	0	0	27.3
S14	Shun Cheong Warehouse	834715.3179	842277.4956	16	91	[3]	1	834686.3	842532.7	27.8	256.8	11.8	257.1	10%	56	0	3	0	0	0	10	10	11.8
S15	Chewy warehouse	834640.7939	842303.5789	16	73	[1]	1	834686.3	842532.7	27.8	233.6	11.8	233.9	100%	55	0	3	0	0	0	10	0	4.6
S17	Vehicle repair shop	834567.9762	842335.0342	16	100	[5]	1	834686.3	842532.7	27.8	230.4	11.8	230.7	16%	55	0	3	0	0	0	10	8	23.7
S18	Castco Warehouse	834480.9689	842425.8793	16	94.1	[2]	1	834686.3	842532.7	27.8	231.5	11.8	231.8	100%	55	0	3	0	0	0	10	0	25.8
S19	Wei Cheng Bus Engineering Company	834415.9141	842407.886	16	100	[5]	2	834686.3	842532.7	27.8	297.8	11.8	298.0	16%	58	3	3	0	0	0	10	8	18.5
S20	Swire Motors repair and maintenance workshop	834566.5368	842643.8691	16	99	[4]	2	834686.3	842532.7	27.8	163.4	11.8	163.8	20%	52	3	3	0	0	0	10	7	23.7
S21	Bang Jie Company (Warehouse / Logistics)	834593.6443	842693.2713	16	91	[3]	1	834686.3	842532.7	27.8	185.4	11.8	185.8	100%	53	0	3	0	0	0	10	0	24.6
																						Overall	49.8

Night-time Criterion: 60 dB(A)

Fixed Plant Noise Source					SWL	Remark	Quantity	NSR Location			Horizontal Distance	Vertical Distance	Slant Distance	% on time over 30mins	Correction								Resultant Noise Level
															Distance	Quantity	Façade	Tonality	Impulsive	Intermittency	Barrier	% on time	
ID	Name	X-coordinate	Y-coordinate	Height of Noise Source (mPD)	dB(A)		(nos.)	X-coordinate	Y-coordinate	Height of NSR (mPD)	(m)	(m)	(m)	%	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
S15	Chewy warehouse	834640.7939	842303.5789	16	73	[1]	1	834686.3	842532.7	27.8	233.5964118	11.8	233.8942573	100%	55	0	3	0	0	0	10	0	4.6
S21	Bang Jie Company (Warehouse / Logistics)	834593.6443	842693.2713	16	91	[3]	1	834686.3	842532.7	27.8	185.38668	11.8	185.7618398	100%	53	0	3	0	0	0	10	0	24.6
																						Overall	24.6

Remarks for SWLs:

[1] SWLs of S02, S05, S13 and S15 are based on site measurement, as refer to Appendix 6.6.

[2] SWLs of S12 and S19 are referred to the S12A Planning Application for Proposed Amendments to the Ping Che and Ta Kwu Ling Outline Zoning Plan from "ARG" and "GB" Zones to "R(A)", "R(A)1" and "G/IC" Zones at Various Lots in D.D. 77 and 84 and Adjoining Government Land in Ping Che, Fanling

[3] SWL of loading and unloading using forklift (91 dB(A)) is referred to the approved EIA report "AEIAR-182/2014 - Proposed Residential Cum Passive Recreation Development within "Recreation" Zone and "Residential (Group C)" Zone at Various Lots in DD 104, Yuen Long, N.T." (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2202014/EIA%20Report/Html/Appendices/App%204-7.pdf)

[4] SWL of movement of lorry (99 dB(A)) is referred to the approved EIA report "AEIAR-182/2014 - Proposed Residential Cum Passive Recreation Development within "Recreation" Zone and "Residential (Group C)" Zone at Various Lots in DD 104, Yuen Long, N.T." (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2202014/EIA%20Report/Html/Appendices/App%204-7.pdf)

[5] SWL of hand-held pneumatic tool (100dB(A)) is referred to the approved EIA report "AEIAR-191/2015 - Chai Wan Government Complex and Vehicle Depot" (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2302015/Web/PDF/EIA%20Report%20-%20Appendices.pdf)

[6] SWL of CNP 048 Crane, mobile/barge mounted (diesel) (112dB(A)) is referred to Technical Memorandum on Noise from Construction Work Other Than Percussive Piling

[7] Correction factor for quantity = 10 log (quantity)

[8] Distance correction for SWL = 20 log (distance) + 8

[9] Correction for percentage on-time over 30 mins = 10 log (on-time %)

[10] Barrier correction: While NSR with no direct line of sight to the source/opening, a 10dB(A) attenuation would be applied. While NSR is partially screened, a 5dB(A) attenuation would be applied.

[11] The following formula was used for calculating the SPLs at NSRs =

SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))

SWL Sound Power Level (dB(A))

QC Correction factor for quantity (dB(A))

DC Distance Attenuation (dB(A))

FC Façade Correction (dB(A))

BC Barrier Correction (dB(A))

OC Percentage on-time Correction (dB(A))

TC Correction for Tonality (dB(A))

IMC Correction for Impulsiveness (dB(A))

INTC Correction for Intermittency (dB(A))

Fixed Plant Noise Impact Assessment Calculation

Project No.: 2127

Project: Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) for Mix Use Development (Residential & Commercial) at Lot 796 & 1008 RP and Adjoining Government land in Ping Che, Ta Kwu Ling, New Territories

NSR ID T2-H-4

Daytime Criterion: 70 dB(A)

Fixed Plant Noise Source								NSR Location			Horizontal Distance	Vertical Distance	Slant Distance	% on time over 30mins	Correction								Resultant Noise Level
															Distance	Quantity	Façade	Tonality	Impulsive	Intermittency	Barrier	% on time	
ID	Name	X-coordinate	Y-coordinate	Height of FPN (mPD)	SWL dB(A)	Remark	Quantity (nos.)	X-coordinate	Y-coordinate	Height of NSR (mPD)	(m)	(m)	(m)	%	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
S01	Tin Wing Vehicle Services	834558.207	842842.2468	16	99	[4]	3	834653.8	842530.4	27.8	326.2	11.8	326.4	100%	58	5	3	0	0	0	10	0	22.9
S02	Ho Cheung Scrap metal recycling	834573.2434	842849.3084	16	100.3	[1]	1	834653.8	842530.4	27.8	328.9	11.8	329.1	100%	58	0	3	0	0	0	10	0	29.0
S03	Chewy Logistics	834696.614	842687.133	16	99	[4]	4	834653.8	842530.4	27.8	162.5	11.8	162.9	100%	52	6	3	0	0	0	10	0	27.8
S04	Open storage	834710.5102	842659.2478	16	99	[4]	1	834653.8	842530.4	27.8	140.8	11.8	141.3	100%	51	0	3	0	0	0	10	0	35.0
S04	Open storage	834710.5102	842659.2478	16	112	[6]	1	834653.8	842530.4	27.8	140.8	11.8	141.3	100%	51	0	3	0	0	0	10	0	48.0
S05	Laundry Workshop	834873.8386	842704.2574	16	98.7	[1]	1	834653.8	842530.4	27.8	280.4	11.8	280.7	100%	57	0	3	0	0	0	10	0	28.7
S09	Fat Lee Company Limited	834773.0303	842407.9832	16	91	[3]	1	834653.8	842530.4	27.8	170.9	11.8	171.3	100%	53	0	3	0	0	0	10	0	25.3
S11	Wo Lee Steel logistic & distribution centre	834850.7133	842332.2819	16	91	[3]	1	834653.8	842530.4	27.8	279.3	11.8	279.6	100%	57	0	3	0	0	0	10	0	21.1
S12	Hong Kong United Recycling Company Limited	834692.2714	842332.7136	16	83.8	[2]	1	834653.8	842530.4	27.8	201.4	11.8	201.7	100%	54	0	3	0	0	0	10	0	16.7
S13	Bosa Technology (Manufacturing & warehouse)	834686.2596	842227.8035	16	88	[1]	1	834653.8	842530.4	27.8	304.3	11.8	304.6	100%	58	0	3	0	0	0	0	0	27.3
S14	Shun Cheong Warehouse	834715.3179	842277.4956	16	91	[3]	1	834653.8	842530.4	27.8	260.3	11.8	260.5	10%	56	0	3	0	0	0	10	10	11.7
S15	Chewy warehouse	834640.7939	842303.5789	16	73	[1]	1	834653.8	842530.4	27.8	227.2	11.8	227.5	100%	55	0	3	0	0	0	10	0	4.9
S17	Vehicle repair shop	834567.9762	842335.0342	16	100	[5]	1	834653.8	842530.4	27.8	213.4	11.8	213.7	16%	55	0	3	0	0	0	10	8	24.4
S18	Castco Warehouse	834480.9689	842425.8793	16	94.1	[2]	1	834653.8	842530.4	27.8	202.0	11.8	202.3	100%	54	0	3	0	0	0	0	0	37.0
S19	Wei Cheng Bus Engineering Company	834415.9141	842407.886	16	100	[5]	2	834653.8	842530.4	27.8	267.6	11.8	267.8	16%	57	3	3	0	0	0	0	8	29.4
S20	Swire Motors repair and maintenance workshop	834566.5368	842643.8691	16	99	[4]	2	834653.8	842530.4	27.8	143.1	11.8	143.6	20%	51	3	3	0	0	0	10	7	24.9
S21	Bang Jie Company (Warehouse / Logistics)	834593.6443	842693.2713	16	91	[3]	1	834653.8	842530.4	27.8	173.6	11.8	174.0	100%	53	0	3	0	0	0	0	0	35.2
																						Overall	**49**

Night-time Criterion: 60 dB(A)

Fixed Plant Noise Source								NSR Location			Horizontal Distance	Vertical Distance	Slant Distance	% on time over 30mins	Correction								Resultant Noise Level
															Distance	Quantity	Façade	Tonality	Impulsive	Intermittency	Barrier	% on time	
ID	Name	X-coordinate	Y-coordinate	Height of Noise Source (mPD)	SWL dB(A)	Remark	Quantity (nos.)	X-coordinate	Y-coordinate	Height of NSR (mPD)	(m)	(m)	(m)	%	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
S15	Chewy warehouse	834640.7939	842303.5789	16	73	[1]	1	834653.8	842530.4	27.8	227.193684	11.8	227.4999122	100%	55	0	3	0	0	0	10	0	4.9
S21	Bang Jie Company (Warehouse / Logistics)	834593.6443	842693.2713	16	91	[3]	1	834653.8	842530.4	27.8	173.6253686	11.8	174.0258849	100%	53	0	3	0	0	0	0	0	35.2
																						Overall	**35.2**

Remarks for SWLs:

[1] SWLs of S02, S05, S13 and S15 are based on site measurement, as refer to Appendix 6.6.

[2] SWLs of S12 and S19 are referred to the S12A Planning Application for Proposed Amendments to the Ping Che and Ta Kwu Ling Outline Zoning Plan from "ARG" and "GB" Zones to "R(A)", "R(A)1" and "G/IC" Zones at Various Lots in D.D. 77 and 84 and Adjoining Government Land in Ping Che, Fanling

[3] SWL of loading and unloading using forklift (91 dB(A)) is referred to the approved EIA report "AEIAR-182/2014 - Proposed Residential Cum Passive Recreation Development within "Recreation" Zone and "Residential (Group C)" Zone at Various Lots in DD 104, Yuen Long, N.T." (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2202014/EIA%20Report/Html/Appendices/App%204-7.pdf)

[4] SWL of movement of lorry (99 dB(A)) is referred to the approved EIA report "AEIAR-182/2014 - Proposed Residential Cum Passive Recreation Development within "Recreation" Zone and "Residential (Group C)" Zone at Various Lots in DD 104, Yuen Long, N.T." (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2202014/EIA%20Report/Html/Appendices/App%204-7.pdf)

[5] SWL of hand-held pneumatic tool (100dB(A)) is referred to the approved EIA report "AEIAR-191/2015 - Chai Wan Government Complex and Vehicle Depot" (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2302015/Web/PDF/EIA%20Report%20-%20Appendices.pdf)

[6] SWL of CNP 048 Crane, mobile/barge mounted (diesel) (112dB(A)) is referred to Technical Memorandum on Noise from Construction Work Other Than Percussive Piling

[7] Correction factor for quantity = 10 log (quantity)

[8] Distance correction for SWL = 20 log (distance) + 8

[9] Correction for percentage on-time over 30 mins = 10 log (on-time %)

[10] Barrier correction: While NSR with no direct line of sight to the source/opening, a 10dB(A) attenuation would be applied. While NSR is partially screened, a 5dB(A) attenuation would be applied.

[11] The following formula was used for calculating the SPLs at NSRs =

SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))

SWL Sound Power Level (dB(A))

QC Correction factor for quantity (dB(A))

DC Distance Attenuation (dB(A))

FC Façade Correction (dB(A))

BC Barrier Correction (dB(A))

OC Percentage on-time Correction (dB(A))

TC Correction for Tonality (dB(A))

IMC Correction for Impulsiveness (dB(A))

INTC Correction for Intermittency (dB(A))

Fixed Plant Noise Impact Assessment Calculation

Project No.: 2127

Project: Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) for Mix Use Development (Residential & Commercial) at Lot 796 & 1008 RP and Adjoining Government land in Ping Che, Ta Kwu Ling, New Territories

NSR ID T3-F-3

Daytime Criterion: 70 dB(A)

Fixed Plant Noise Source								NSR Location			Horizontal Distance	Vertical Distance	Slant Distance	% on time over 30mins	Correction								Resultant Noise Level
															Distance	Quantity	Façade	Tonality	Impulsive	Intermittency	Barrier	% on time	
ID	Name	X-coordinate	Y-coordinate	Height of FPN (mPD)	SWL dB(A)	Remark	Quantity (nos.)	X-coordinate	Y-coordinate	Height of NSR (mPD)	(m)	(m)	(m)	%	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
S01	Tin Wing Vehicle Services	834558.207	842842.2468	16	99	[4]	3	834625.3	842491.7	24.58	356.9	8.58	357.0	100%	59	5	3	0	0	0	10	0	22.1
S02	Ho Cheung Scrap metal recycling	834573.2434	842849.3084	16	100.3	[1]	1	834625.3	842491.7	24.58	361.4	8.58	361.5	100%	59	0	3	0	0	0	10	0	28.1
S03	Chewy Logistics	834696.614	842687.133	16	99	[4]	4	834625.3	842491.7	24.58	208.0	8.58	208.2	100%	54	6	3	0	0	0	10	0	25.6
S04	Open storage	834710.5102	842659.2478	16	99	[4]	1	834625.3	842491.7	24.58	188.0	8.58	188.2	100%	54	0	3	0	0	0	10	0	32.5
S04	Open storage	834710.5102	842659.2478	16	112	[6]	1	834625.3	842491.7	24.58	188.0	8.58	188.2	100%	54	0	3	0	0	0	10	0	45.5
S05	Laundry Workshop	834873.8386	842704.2574	16	98.7	[1]	1	834625.3	842491.7	24.58	327.0	8.58	327.1	100%	58	0	3	0	0	0	10	0	27.4
S09	Fat Lee Company Limited	834773.0303	842407.9832	16	91	[3]	1	834625.3	842491.7	24.58	169.8	8.58	170.0	100%	53	0	3	0	0	0	10	0	25.4
S11	Wo Lee Steel logistic & distribution centre	834850.7133	842332.2819	16	91	[3]	1	834625.3	842491.7	24.58	276.1	8.58	276.2	100%	57	0	3	0	0	0	10	0	21.2
S12	Hong Kong United Recycling Company Limited	834692.2714	842332.7136	16	83.8	[2]	1	834625.3	842491.7	24.58	172.5	8.58	172.7	100%	53	0	3	0	0	0	10	0	18.1
S13	Bosa Technology (Manufacturing & warehouse)	834686.2596	842227.8035	16	88	[1]	1	834625.3	842491.7	24.58	270.8	8.58	271.0	100%	57	0	3	0	0	0	0	0	28.3
S14	Shun Cheong Warehouse	834715.3179	842277.4956	16	91	[3]	1	834625.3	842491.7	24.58	232.4	8.58	232.5	10%	55	0	3	0	0	0	10	10	12.7
S15	Chewy warehouse	834640.7939	842303.5789	16	73	[1]	1	834625.3	842491.7	24.58	188.8	8.58	189.0	100%	54	0	3	0	0	0	10	0	6.5
S17	Vehicle repair shop	834567.9762	842335.0342	16	100	[5]	1	834625.3	842491.7	24.58	166.8	8.58	167.0	16%	53	0	3	0	0	0	10	8	26.5
S18	Castco Warehouse	834480.9689	842425.8793	16	94.1	[2]	1	834625.3	842491.7	24.58	158.6	8.58	158.9	100%	52	0	3	0	0	0	0	0	39.1
S19	Wei Cheng Bus Engineering Company	834415.9141	842407.886	16	100	[5]	2	834625.3	842491.7	24.58	225.5	8.58	225.7	16%	55	3	3	0	0	0	0	8	30.9
S20	Swire Motors repair and maintenance workshop	834566.5368	842643.8691	16	99	[4]	2	834625.3	842491.7	24.58	163.1	8.58	163.3	20%	52	3	3	0	0	0	10	7	23.7
S21	Bang Jie Company (Warehouse / Logistics)	834593.6443	842693.2713	16	91	[3]	1	834625.3	842491.7	24.58	204.0	8.58	204.2	100%	54	0	3	0	0	0	0	0	33.8
																						Overall	**47.2**

Night-time Criterion: 60 dB(A)

Fixed Plant Noise Source								NSR Location			Horizontal Distance	Vertical Distance	Slant Distance	% on time over 30mins	Correction								Resultant Noise Level
															Distance	Quantity	Façade	Tonality	Impulsive	Intermittency	Barrier	% on time	
ID	Name	X-coordinate	Y-coordinate	Height of Noise Source (mPD)	SWL dB(A)	Remark	Quantity (nos.)	X-coordinate	Y-coordinate	Height of NSR (mPD)	(m)	(m)	(m)	%	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
S15	Chewy warehouse	834640.7939	842303.5789	16	73	[1]	1	834625.3	842491.7	24.58	188.7580706	8.58	188.9529719	100%	54	0	3	0	0	0	10	0	6.5
S21	Bang Jie Company (Warehouse / Logistics)	834593.6443	842693.2713	16	91	[3]	1	834625.3	842491.7	24.58	204.0418396	8.58	204.2221553	100%	54	0	3	0	0	0	0	0	33.8
																						Overall	**33.8**

Remarks for SWLs:

[1] SWLs of S02, S05, S13 and S15 are based on site measurement, as refer to Appendix 6.6.

[2] SWLs of S12 and S19 are referred to the S12A Planning Application for Proposed Amendments to the Ping Che and Ta Kwu Ling Outline Zoning Plan from "ARG" and "GB" Zones to "R(A)", "R(A)1" and "G/IC" Zones at Various Lots in D.D. 77 and 84 and Adjoining Government Land in Ping Che, Fanling

[3] SWL of loading and unloading using forklift (91 dB(A)) is referred to the approved EIA report "AEIAR-182/2014 - Proposed Residential Cum Passive Recreation Development within "Recreation" Zone and "Residential (Group C)" Zone at Various Lots in DD 104, Yuen Long, N.T." (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2202014/EIA%20Report/Html/Appendices/App%204-7.pdf)

[4] SWL of movement of lorry (99 dB(A)) is referred to the approved EIA report "AEIAR-182/2014 - Proposed Residential Cum Passive Recreation Development within "Recreation" Zone and "Residential (Group C)" Zone at Various Lots in DD 104, Yuen Long, N.T." (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2202014/EIA%20Report/Html/Appendices/App%204-7.pdf)

[5] SWL of hand-held pneumatic tool (100dB(A)) is referred to the approved EIA report "AEIAR-191/2015 - Chai Wan Government Complex and Vehicle Depot" (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2302015/Web/PDF/EIA%20Report%20-%20Appendices.pdf)

[6] SWL of CNP 048 Crane, mobile/barge mounted (diesel) (112dB(A)) is referred to Technical Memorandum on Noise from Construction Work Other Than Percussive Piling

[7] Correction factor for quantity = 10 log (quantity)

[8] Distance correction for SWL = 20 log (distance) + 8

[9] Correction for percentage on-time over 30 mins = 10 log (on-time %)

[10] Barrier correction: While NSR with no direct line of sight to the source/opening, a 10dB(A) attenuation would be applied. While NSR is partially screened, a 5dB(A) attenuation would be applied.

[11] The following formula was used for calculating the SPLs at NSRs =

SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))

SWL Sound Power Level (dB(A))

QC Correction factor for quantity (dB(A))

DC Distance Attenuation (dB(A))

FC Façade Correction (dB(A))

BC Barrier Correction (dB(A))

OC Percentage on-time Correction (dB(A))

TC Correction for Tonality (dB(A))

IMC Correction for Impulsiveness (dB(A))

INTC Correction for Intermittency (dB(A))

Fixed Plant Noise Impact Assessment Calculation

Project No.: 2127

Project: Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) for Mix Use Development (Residential & Commercial) at Lot 796 & 1008 RP and Adjoining Government land in Ping Che, Ta Kwu Ling, New Territories

NSR ID T4-D-2

Daytime Criterion: 70 dB(A)

Fixed Plant Noise Source								NSR Location			Horizontal Distance	Vertical Distance	Slant Distance	% on time over 30mins	Correction								Resultant Noise Level
															Distance	Quantity	Façade	Tonality	Impulsive	Intermittency	Barrier	% on time	
ID	Name	X-coordinate	Y-coordinate	Height of FPN (mPD)	SWL dB(A)	Remark	Quantity (nos.)	X-coordinate	Y-coordinate	Height of NSR (mPD)	(m)	(m)	(m)	%	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
S01	Tin Wing Vehicle Services	834558.207	842842.2468	16	99	[4]	3	834681	842468.9	24.58	393.0	8.58	393.1	100%	60	5	3	0	0	0	10	0	21.3
S02	Ho Cheung Scrap metal recycling	834573.2434	842849.3084	16	100.3	[1]	1	834681	842468.9	24.58	395.4	8.58	395.5	100%	60	0	3	0	0	0	10	0	27.4
S03	Chewy Logistics	834696.614	842687.133	16	99	[4]	4	834681	842468.9	24.58	218.8	8.58	219.0	100%	55	6	3	0	0	0	10	0	25.2
S04	Open storage	834710.5102	842659.2478	16	99	[4]	1	834681	842468.9	24.58	192.6	8.58	192.8	100%	54	0	3	0	0	0	10	0	32.3
S04	Open storage	834710.5102	842659.2478	16	112	[6]	1	834681	842468.9	24.58	192.6	8.58	192.8	100%	54	0	3	0	0	0	10	0	45.3
S05	Laundry Workshop	834873.8386	842704.2574	16	98.7	[1]	1	834681	842468.9	24.58	304.3	8.58	304.4	100%	58	0	3	0	0	0	10	0	28.0
S09	Fat Lee Company Limited	834773.0303	842407.9832	16	91	[3]	1	834681	842468.9	24.58	110.4	8.58	110.7	100%	49	0	3	0	0	0	0	0	39.1
S11	Wo Lee Steel logistic & distribution centre	834850.7133	842332.2819	16	91	[3]	1	834681	842468.9	24.58	217.9	8.58	218.0	100%	55	0	3	0	0	0	0	0	33.2
S12	Hong Kong United Recycling Company Limited	834692.2714	842332.7136	16	83.8	[2]	1	834681	842468.9	24.58	136.7	8.58	136.9	100%	51	0	3	0	0	0	0	0	30.1
S13	Bosa Technology (Manufacturing & warehouse)	834686.2596	842227.8035	16	88	[1]	1	834681	842468.9	24.58	241.2	8.58	241.3	100%	56	0	3	0	0	0	0	0	29.3
S14	Shun Cheong Warehouse	834715.3179	842277.4956	16	91	[3]	1	834681	842468.9	24.58	194.5	8.58	194.6	10%	54	0	3	0	0	0	10	10	14.2
S15	Chewy warehouse	834640.7939	842303.5789	16	73	[1]	1	834681	842468.9	24.58	170.1	8.58	170.4	100%	53	0	3	0	0	0	10	0	7.4
S17	Vehicle repair shop	834567.9762	842335.0342	16	100	[5]	1	834681	842468.9	24.58	175.2	8.58	175.4	16%	53	0	3	0	0	0	10	8	26.1
S18	Castco Warehouse	834480.9689	842425.8793	16	94.1	[2]	1	834681	842468.9	24.58	204.6	8.58	204.8	100%	54	0	3	0	0	0	10	0	26.9
S19	Wei Cheng Bus Engineering Company	834415.9141	842407.886	16	100	[5]	2	834681	842468.9	24.58	272.0	8.58	272.2	16%	57	3	3	0	0	0	10	8	19.3
S20	Swire Motors repair and maintenance workshop	834566.5368	842643.8691	16	99	[4]	2	834681	842468.9	24.58	209.1	8.58	209.3	20%	54	3	3	0	0	0	10	7	21.6
S21	Bang Jie Company (Warehouse / Logistics)	834593.6443	842693.2713	16	91	[3]	1	834681	842468.9	24.58	240.8	8.58	240.9	100%	56	0	3	0	0	0	10	0	22.4
																						Overall	47

Night-time Criterion: 60 dB(A)

Fixed Plant Noise Source								NSR Location			Horizontal Distance	Vertical Distance	Slant Distance	% on time over 30mins	Correction								Resultant Noise Level
															Distance	Quantity	Façade	Tonality	Impulsive	Intermittency	Barrier	% on time	
ID	Name	X-coordinate	Y-coordinate	Height of Noise Source (mPD)	SWL dB(A)	Remark	Quantity (nos.)	X-coordinate	Y-coordinate	Height of NSR (mPD)	(m)	(m)	(m)	%	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
S15	Chewy warehouse	834640.7939	842303.5789	16	73	[1]	1	834681	842468.9	24.58	170.1399324	8.58	170.3561357	100%	53	0	3	0	0	0	10	0	7.4
S21	Bang Jie Company (Warehouse / Logistics)	834593.6443	842693.2713	16	91	[3]	1	834681	842468.9	24.58	240.7768647	8.58	240.9296889	100%	56	0	3	0	0	0	10	0	22.4
																						Overall	22.5

Remarks for SWLs:

[1] SWLs of S02, S05, S13 and S15 are based on site measurement, as refer to Appendix 6.6.

[2] SWLs of S12 and S19 are referred to the S12A Planning Application for Proposed Amendments to the Ping Che and Ta Kwu Ling Outline Zoning Plan from "ARG" and "GB" Zones to "R(A)", "R(A)1" and "G/IC" Zones at Various Lots in D.D. 77 and 84 and Adjoining Government Land in Ping Che, Fanling

[3] SWL of loading and unloading using forklift (91 dB(A)) is referred to the approved EIA report "AEIAR-182/2014 - Proposed Residential Cum Passive Recreation Development within "Recreation" Zone and "Residential (Group C)" Zone at Various Lots in DD 104, Yuen Long, N.T." (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2202014/EIA%20Report/Html/Appendices/App%204-7.pdf)

[4] SWL of movement of lorry (99 dB(A)) is referred to the approved EIA report "AEIAR-182/2014 - Proposed Residential Cum Passive Recreation Development within "Recreation" Zone and "Residential (Group C)" Zone at Various Lots in DD 104, Yuen Long, N.T." (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2202014/EIA%20Report/Html/Appendices/App%204-7.pdf)

[5] SWL of hand-held pneumatic tool (100dB(A)) is referred to the approved EIA report "AEIAR-191/2015 - Chai Wan Government Complex and Vehicle Depot" (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2302015/Web/PDF/EIA%20Report%20-%20Appendices.pdf)

[6] SWL of CNP 048 Crane, mobile/barge mounted (diesel) (112dB(A)) is referred to Technical Memorandum on Noise from Construction Work Other Than Percussive Piling

[7] Correction factor for quantity = 10 log (quantity)

[8] Distance correction for SWL = 20 log (distance) + 8

[9] Correction for percentage on-time over 30 mins = 10 log (on-time %)

[10] Barrier correction: While NSR with no direct line of sight to the source/opening, a 10dB(A) attenuation would be applied. While NSR is partially screened, a 5dB(A) attenuation would be applied.

[11] The following formula was used for calculating the SPLs at NSRs =

SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))

SWL Sound Power Level (dB(A))

QC Correction factor for quantity (dB(A))

DC Distance Attenuation (dB(A))

FC Façade Correction (dB(A))

BC Barrier Correction (dB(A))

OC Percentage on-time Correction (dB(A))

TC Correction for Tonality (dB(A))

IMC Correction for Impulsiveness (dB(A))

INTC Correction for Intermittency (dB(A))

Fixed Plant Noise Impact Assessment Calculation

Project No.: 2127

Project: Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) for Mix Use Development (Residential & Commercial) at Lot 796 & 1008 RP and Adjoining Government land in Ping Che, Ta Kwu Ling, New Territories

NSR ID T5-E-1

Daytime Criterion: 70 dB(A)

Fixed Plant Noise Source					SWL	Remark	Quantity	NSR Location			Horizontal Distance	Vertical Distance	Slant Distance	% on time over 30mins	Correction								Resultant Noise Level
															Distance	Quantity	Façade	Tonality	Impulsive	Intermittency	Barrier	% on time	
ID	Name	X-coordinate	Y-coordinate	Height of FPN (mPD)	dB(A)		(nos.)	X-coordinate	Y-coordinate	Height of NSR (mPD)	(m)	(m)	(m)	%	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
S01	Tin Wing Vehicle Services	834558.207	842842.2468	16	99	[4]	3	834620.5	842435.5	24.58	411.5	8.6	411.6	100%	60	5	3	0	0	0	10	0	20.9
S02	Ho Cheung Scrap metal recycling	834573.2434	842849.3084	16	100.3	[1]	1	834620.5	842435.5	24.58	416.5	8.6	416.6	100%	60	0	3	0	0	0	10	0	26.9
S03	Chewy Logistics	834696.614	842687.133	16	99	[4]	4	834620.5	842435.5	24.58	262.9	8.6	263.0	100%	56	6	3	0	0	0	10	0	23.6
S04	Open storage	834710.5102	842659.2478	16	99	[4]	1	834620.5	842435.5	24.58	241.2	8.6	241.3	100%	56	0	3	0	0	0	10	0	30.3
S04	Open storage	834710.5102	842659.2478	16	112	[6]	1	834620.5	842435.5	24.58	241.2	8.6	241.3	100%	56	0	3	0	0	0	10	0	43.3
S05	Laundry Workshop	834873.8386	842704.2574	16	98.7	[1]	1	834620.5	842435.5	24.58	369.3	8.6	369.4	100%	59	0	3	0	0	0	10	0	26.3
S09	Fat Lee Company Limited	834773.0303	842407.9832	16	91	[3]	1	834620.5	842435.5	24.58	155.0	8.6	155.2	100%	52	0	3	0	0	0	10	0	26.2
S11	Wo Lee Steel logistic & distribution centre	834850.7133	842332.2819	16	91	[3]	1	834620.5	842435.5	24.58	252.3	8.6	252.4	100%	56	0	3	0	0	0	10	0	22.0
S12	Hong Kong United Recycling Company Limited	834692.2714	842332.7136	16	83.8	[2]	1	834620.5	842435.5	24.58	125.4	8.6	125.7	100%	50	0	3	0	0	0	10	0	20.8
S13	Bosa Technology (Manufacturing & warehouse)	834686.2596	842227.8035	16	88	[1]	1	834620.5	842435.5	24.58	217.9	8.6	218.0	100%	55	0	3	0	0	0	0	0	30.2
S14	Shun Cheong Warehouse	834715.3179	842277.4956	16	91	[3]	1	834620.5	842435.5	24.58	184.3	8.6	184.5	10%	53	0	3	0	0	0	10	10	14.7
S15	Chewy warehouse	834640.7939	842303.5789	16	73	[1]	1	834620.5	842435.5	24.58	133.5	8.6	133.7	100%	51	0	3	0	0	0	10	0	9.5
S17	Vehicle repair shop	834567.9762	842335.0342	16	100	[5]	1	834620.5	842435.5	24.58	113.4	8.6	113.7	16%	49	0	3	0	0	0	10	8	29.9
S18	Castco Warehouse	834480.9689	842425.8793	16	94.1	[2]	1	834620.5	842435.5	24.58	139.9	8.6	140.1	100%	51	0	3	0	0	0	0	0	40.2
S19	Wei Cheng Bus Engineering Company	834415.9141	842407.886	16	100	[5]	2	834620.5	842435.5	24.58	206.4	8.6	206.6	16%	54	3	3	0	0	0	0	8	31.7
S20	Swire Motors repair and maintenance workshop	834566.5368	842643.8691	16	99	[4]	2	834620.5	842435.5	24.58	215.2	8.6	215.4	20%	55	3	3	0	0	0	10	7	21.3
S21	Bang Jie Company (Warehouse / Logistics)	834593.6443	842693.2713	16	91	[3]	1	834620.5	842435.5	24.58	259.2	8.6	259.3	100%	56	0	3	0	0	0	0	0	31.7
																						Overall	46

Night-time Criterion: 60 dB(A)

Fixed Plant Noise Source					SWL	Remark	Quantity	NSR Location			Horizontal Distance	Vertical Distance	Slant Distance	% on time over 30mins	Correction								Resultant Noise Level
															Distance	Quantity	Façade	Tonality	Impulsive	Intermittency	Barrier	% on time	
ID	Name	X-coordinate	Y-coordinate	Height of Noise Source (mPD)	dB(A)		(nos.)	X-coordinate	Y-coordinate	Height of NSR (mPD)	(m)	(m)	(m)	%	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
S15	Chewy warehouse	834640.7939	842303.5789	16	73	[1]	1	834620.5	842435.5	24.58	133.4729149	8.58	133.7484034	100%	51	0	3	0	0	0	10	0	9.5
S21	Bang Jie Company (Warehouse / Logistics)	834593.6443	842693.2713	16	91	[3]	1	834620.5	842435.5	24.58	259.1664942	8.58	259.3084806	100%	56	0	3	0	0	0	0	0	31.7
																						Overall	31.7

Remarks for SWLs:

[1] SWLs of S02, S05, S13 and S15 are based on site measurement, as refer to Appendix 6.6.

[2] SWLs of S12 and S19 are referred to the S12A Planning Application for Proposed Amendments to the Ping Che and Ta Kwu Ling Outline Zoning Plan from "ARG" and "GB" Zones to "R(A)", "R(A)1" and "G/IC" Zones at Various Lots in D.D. 77 and 84 and Adjoining Government Land in Ping Che, Fanling

[3] SWL of loading and unloading using forklift (91 dB(A)) is referred to the approved EIA report "AEIAR-182/2014 - Proposed Residential Cum Passive Recreation Development within "Recreation" Zone and "Residential (Group C)" Zone at Various Lots in DD 104, Yuen Long, N.T." (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2202014/EIA%20Report/Html/Appendices/App%204-7.pdf)

[4] SWL of movement of lorry (99 dB(A)) is referred to the approved EIA report "AEIAR-182/2014 - Proposed Residential Cum Passive Recreation Development within "Recreation" Zone and "Residential (Group C)" Zone at Various Lots in DD 104, Yuen Long, N.T." (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2202014/EIA%20Report/Html/Appendices/App%204-7.pdf)

[5] SWL of hand-held pneumatic tool (100dB(A)) is referred to the approved EIA report "AEIAR-191/2015 - Chai Wan Government Complex and Vehicle Depot" (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2302015/Web/PDF/EIA%20Report%20-%20Appendices.pdf)

[6] SWL of CNP 048 Crane, mobile/barge mounted (diesel) (112dB(A)) is referred to Technical Memorandum on Noise from Construction Work Other Than Percussive Piling

[7] Correction factor for quantity = 10 log (quantity)

[8] Distance correction for SWL = 20 log (distance) + 8

[9] Correction for percentage on-time over 30 mins = 10 log (on-time %)

[10] Barrier correction: While NSR with no direct line of sight to the source/opening, a 10dB(A) attenuation would be applied. While NSR is partially screened, a 5dB(A) attenuation would be applied.

[11] The following formula was used for calculating the SPLs at NSRs =

SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))

SWL Sound Power Level (dB(A))

QC Correction factor for quantity (dB(A))

DC Distance Attenuation (dB(A))

FC Façade Correction (dB(A))

BC Barrier Correction (dB(A))

OC Percentage on-time Correction (dB(A))

TC Correction for Tonality (dB(A))

IMC Correction for Impulsiveness (dB(A))

INTC Correction for Intermittency (dB(A))

Fixed Plant Noise Impact Assessment Calculation

Project No.: 2127

Project: Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) for Mix Use Development (Residential & Commercial) at Lot 796 & 1008 RP and Adjoining Government land in Ping Che, Ta Kwu Ling, New Territories

NSR ID T6-F-5

Daytime Criterion: 70 dB(A)

Fixed Plant Noise Source								NSR Location						% on time over 30mins	Correction								Resultant Noise Level
					SWL	Remark	Quantity				Horizontal Distance	Vertical Distance	Slant Distance		Distance	Quantity	Façade	Tonality	Impulsive	Intermittency	Barrier	% on time	
ID	Name	X-coordinate	Y-coordinate	Height of FPN (mPD)	dB(A)		(nos.)	X-coordinate	Y-coordinate	Height of NSR (mPD)	(m)	(m)	(m)	%	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
S01	Tin Wing Vehicle Services	834558.207	842842.2468	16	99	[4]	3	834682.2	842413.5	24.58	446.3	8.6	446.4	100%	61	5	3	0	0	0	10	0	20.2
S02	Ho Cheung Scrap metal recycling	834573.2434	842849.3084	16	100.3	[1]	1	834682.2	842413.5	24.58	449.2	8.6	449.3	100%	61	0	3	0	0	0	10	0	26.2
S03	Chewy Logistics	834696.614	842687.133	16	99	[4]	4	834682.2	842413.5	24.58	274.0	8.6	274.1	100%	57	6	3	0	0	0	10	0	23.2
S04	Open storage	834710.5102	842659.2478	16	99	[4]	1	834682.2	842413.5	24.58	247.4	8.6	247.5	100%	56	0	3	0	0	0	10	0	30.1
S04	Open storage	834710.5102	842659.2478	16	112	[6]	1	834682.2	842413.5	24.58	247.4	8.6	247.5	100%	56	0	3	0	0	0	10	0	43.1
S05	Laundry Workshop	834873.8386	842704.2574	16	98.7	[1]	1	834682.2	842413.5	24.58	348.2	8.6	348.3	100%	59	0	3	0	0	0	10	0	26.9
S09	Fat Lee Company Limited	834773.0303	842407.9832	16	91	[3]	1	834682.2	842413.5	24.58	91.0	8.6	91.4	100%	47	0	3	0	0	0	0	0	40.8
S11	Wo Lee Steel logistic & distribution centre	834850.7133	842332.2819	16	91	[3]	1	834682.2	842413.5	24.58	187.1	8.6	187.3	100%	53	0	3	0	0	0	0	0	34.6
S12	Hong Kong United Recycling Company Limited	834692.2714	842332.7136	16	83.8	[2]	1	834682.2	842413.5	24.58	81.4	8.6	81.9	100%	46	0	3	0	0	0	0	0	34.5
S13	Bosa Technology (Manufacturing & warehouse)	834686.2596	842227.8035	16	88	[1]	1	834682.2	842413.5	24.58	185.7	8.6	185.9	100%	53	0	3	0	0	0	0	0	31.6
S14	Shun Cheong Warehouse	834715.3179	842277.4956	16	91	[3]	1	834682.2	842413.5	24.58	140.0	8.6	140.2	10%	51	0	3	0	0	0	10	10	17.1
S15	Chewy warehouse	834640.7939	842303.5789	16	73	[1]	1	834682.2	842413.5	24.58	117.5	8.6	117.8	100%	49	0	3	0	0	0	10	0	10.6
S17	Vehicle repair shop	834567.9762	842335.0342	16	100	[5]	1	834682.2	842413.5	24.58	138.6	8.6	138.8	16%	51	0	3	0	0	0	10	8	28.1
S18	Castco Warehouse	834480.9689	842425.8793	16	94.1	[2]	1	834682.2	842413.5	24.58	201.6	8.6	201.8	100%	54	0	3	0	0	0	10	0	27.0
S19	Wei Cheng Bus Engineering Company	834415.9141	842407.886	16	100	[5]	2	834682.2	842413.5	24.58	266.3	8.6	266.5	16%	57	3	3	0	0	0	10	8	19.5
S20	Swire Motors repair and maintenance workshop	834566.5368	842643.8691	16	99	[4]	2	834682.2	842413.5	24.58	257.8	8.6	257.9	20%	56	3	3	0	0	0	10	7	19.8
S21	Bang Jie Company (Warehouse / Logistics)	834593.6443	842693.2713	16	91	[3]	1	834682.2	842413.5	24.58	293.5	8.6	293.6	100%	57	0	3	0	0	0	10	0	20.6
																						Overall	46.4

Night-time Criterion: 60 dB(A)

Fixed Plant Noise Source								NSR Location						% on time over 30mins	Correction								Resultant Noise Level
					SWL	Remark	Quantity				Horizontal Distance	Vertical Distance	Slant Distance		Distance	Quantity	Façade	Tonality	Impulsive	Intermittency	Barrier	% on time	
ID	Name	X-coordinate	Y-coordinate	Height of Noise Source (mPD)	dB(A)		(nos.)	X-coordinate	Y-coordinate	Height of NSR (mPD)	(m)	(m)	(m)	%	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
S15	Chewy warehouse	834640.7939	842303.5789	16	73	[1]	1	834682.2	842413.5	24.58	117.4611142	8.58	117.7740623	100%	49	0	3	0	0	0	10	0	10.6
S21	Bang Jie Company (Warehouse / Logistics)	834593.6443	842693.2713	16	91	[3]	1	834682.2	842413.5	24.58	293.4520273	8.58	293.5774322	100%	57	0	3	0	0	0	10	0	20.6
																						Overall	21

Remarks for SWLs:

[1] SWLs of S02, S05, S13 and S15 are based on site measurement, as refer to Appendix 6.6.

[2] SWLs of S12 and S19 are referred to the S12A Planning Application for Proposed Amendments to the Ping Che and Ta Kwu Ling Outline Zoning Plan from "ARG" and "GB" Zones to "R(A)", "R(A)1" and "G/IC" Zones at Various Lots in D.D. 77 and 84 and Adjoining Government Land in Ping Che, Fanling

[3] SWL of loading and unloading using forklift (91 dB(A)) is referred to the approved EIA report "AEIAR-182/2014 - Proposed Residential Cum Passive Recreation Development within "Recreation" Zone and "Residential (Group C)" Zone at Various Lots in DD 104, Yuen Long, N.T." (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2202014/EIA%20Report/Html/Appendices/App%204-7.pdf)

[4] SWL of movement of lorry (99 dB(A)) is referred to the approved EIA report "AEIAR-182/2014 - Proposed Residential Cum Passive Recreation Development within "Recreation" Zone and "Residential (Group C)" Zone at Various Lots in DD 104, Yuen Long, N.T." (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2202014/EIA%20Report/Html/Appendices/App%204-7.pdf)

[5] SWL of hand-held pneumatic tool (100dB(A)) is referred to the approved EIA report "AEIAR-191/2015 - Chai Wan Government Complex and Vehicle Depot" (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2302015/Web/PDF/EIA%20Report%20-%20Appendices.pdf)

[6] SWL of CNP 048 Crane, mobile/barge mounted (diesel) (112dB(A)) is referred to Technical Memorandum on Noise from Construction Work Other Than Percussive Piling

[7] Correction factor for quantity = 10 log (quantity)

[8] Distance correction for SWL = 20 log (distance) + 8

[9] Correction for percentage on-time over 30 mins = 10 log (on-time %)

[10] Barrier correction: While NSR with no direct line of sight to the source/opening, a 10dB(A) attenuation would be applied. While NSR is partially screened, a 5dB(A) attenuation would be applied.

[11] The following formula was used for calculating the SPLs at NSRs =

SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))

SWL Sound Power Level (dB(A))

QC Correction factor for quantity (dB(A))

DC Distance Attenuation (dB(A))

FC Façade Correction (dB(A))

BC Barrier Correction (dB(A))

OC Percentage on-time Correction (dB(A))

TC Correction for Tonality (dB(A))

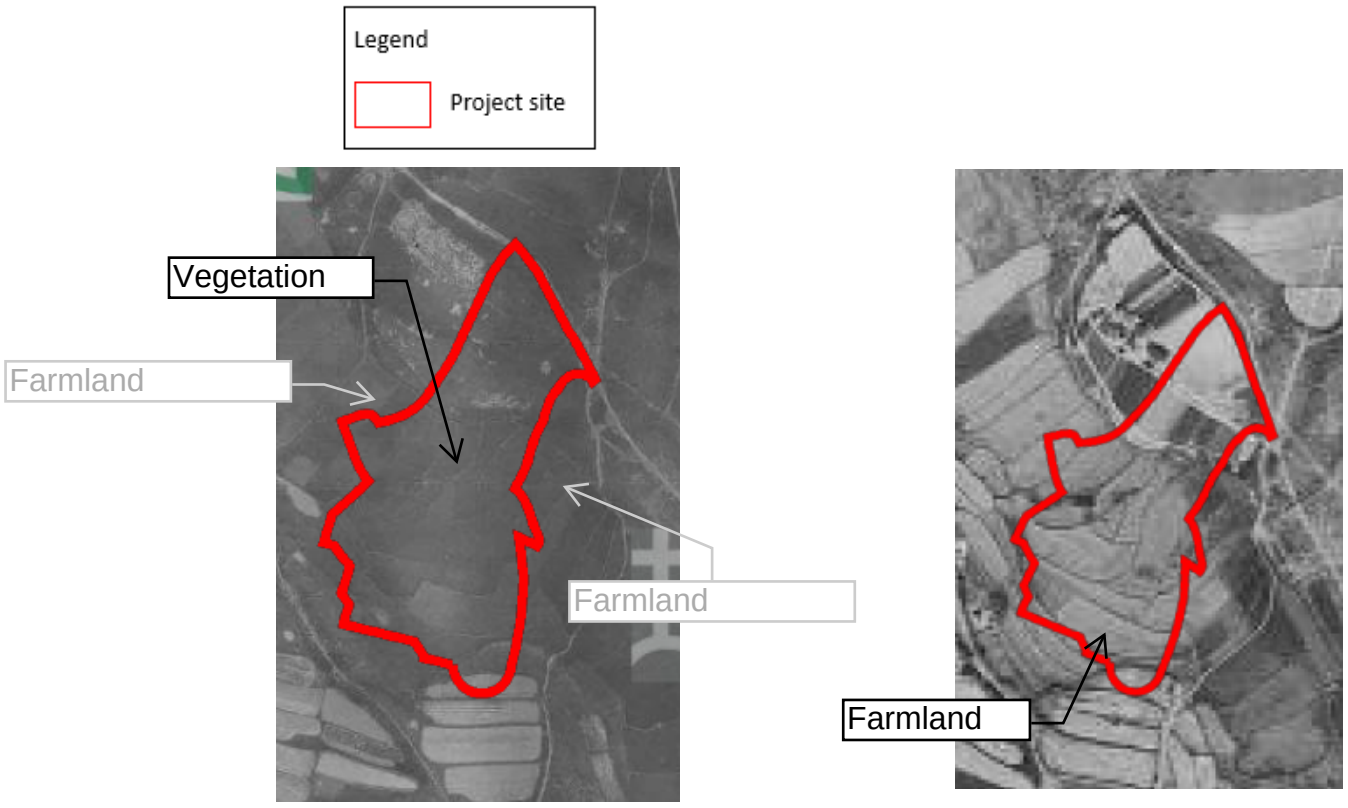
IMC Correction for Impulsiveness (dB(A))

INTC Correction for Intermittency (dB(A))

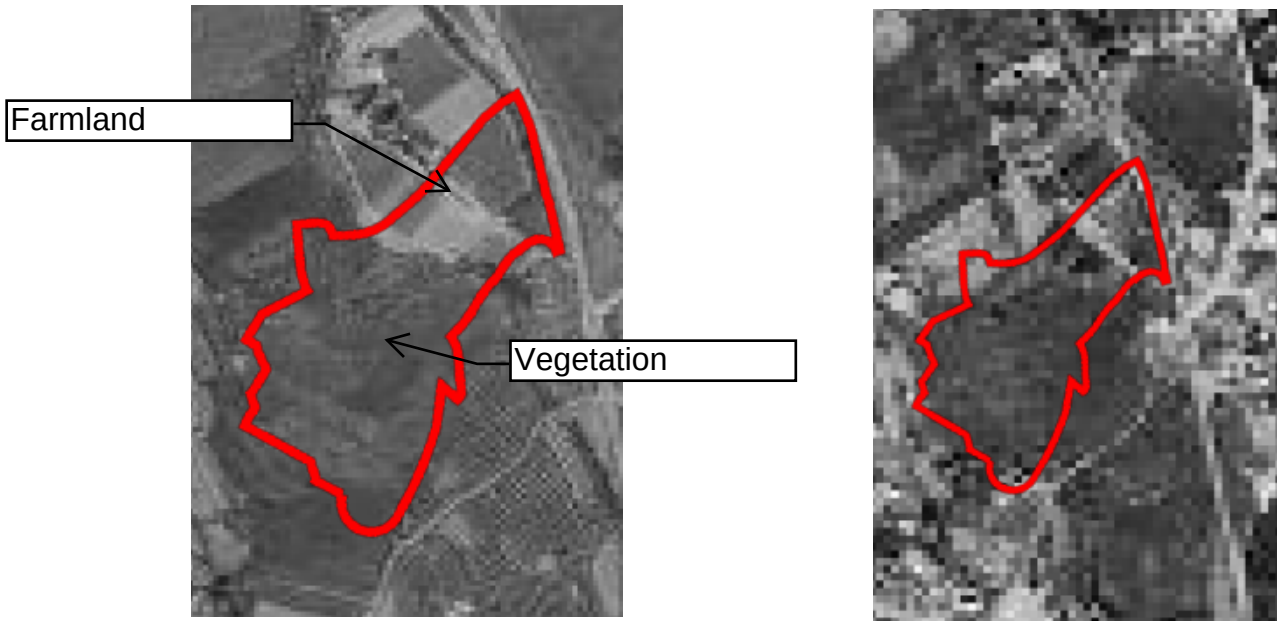
Appendix 8.1

Aerial Photo

Appendix 8.1

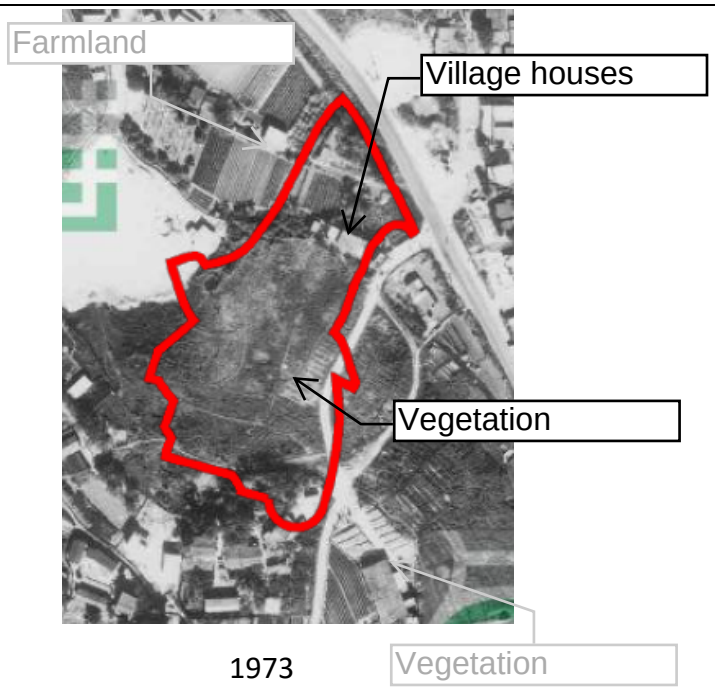


1949 1956

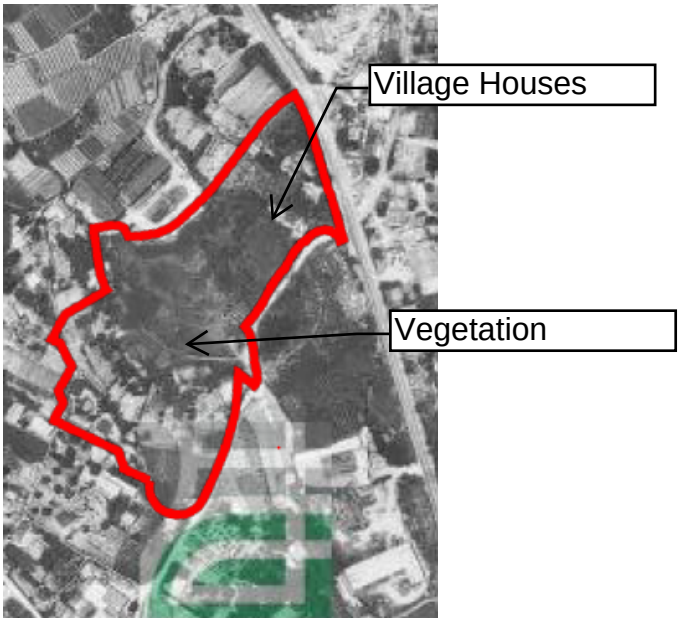


1961 1964

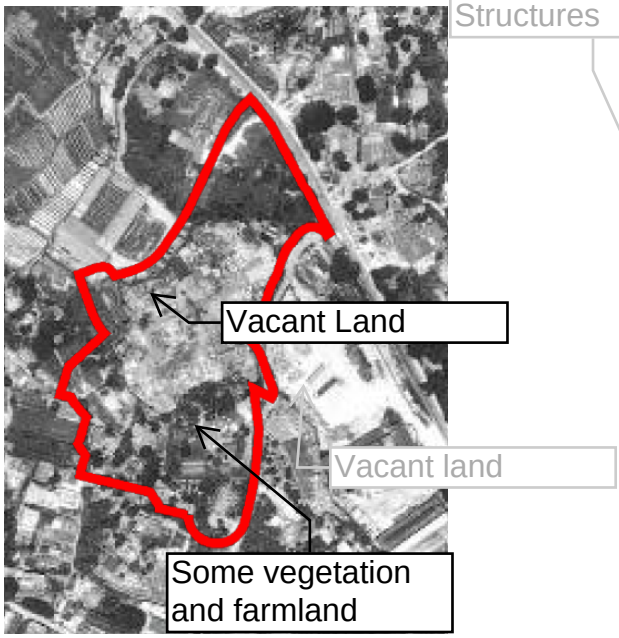
Appendix 8.1



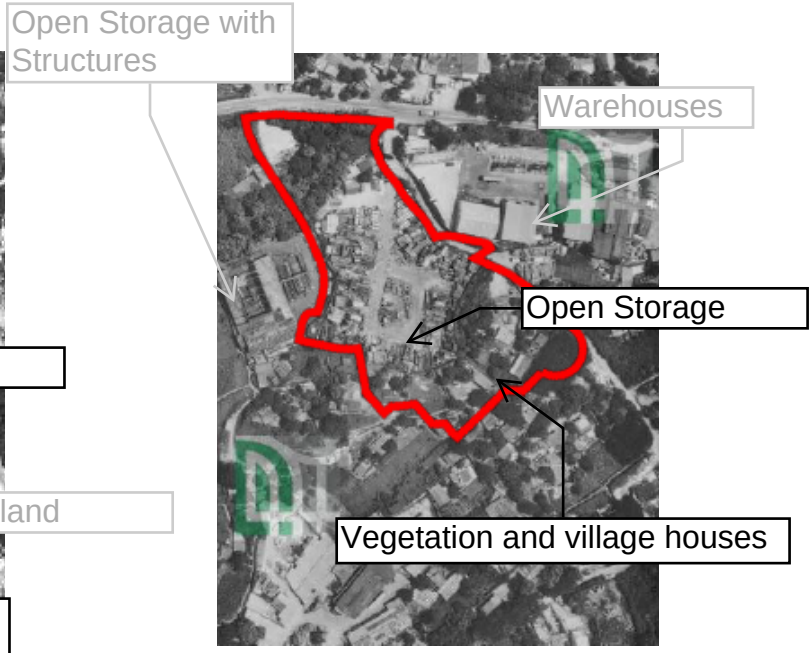
1973



1980



1986



1990

Project No. 2127
Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) for Mix Use Development (Residential & Commercial) at Lot 796 & 1008 RP and Adjoining Government land in Ping Che, Ta Kwu Ling, New Territories

Appendix 8.1



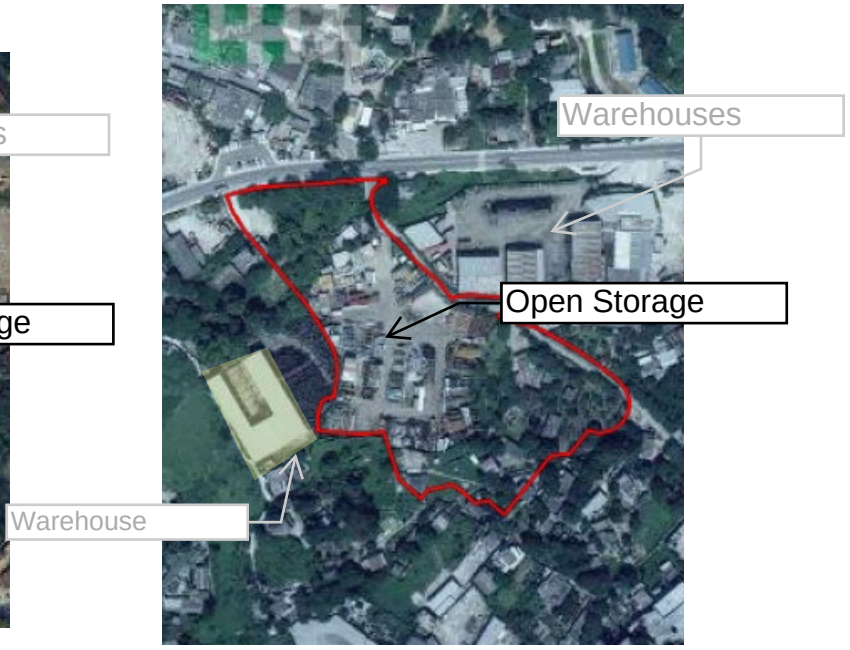
1992



1994



1996



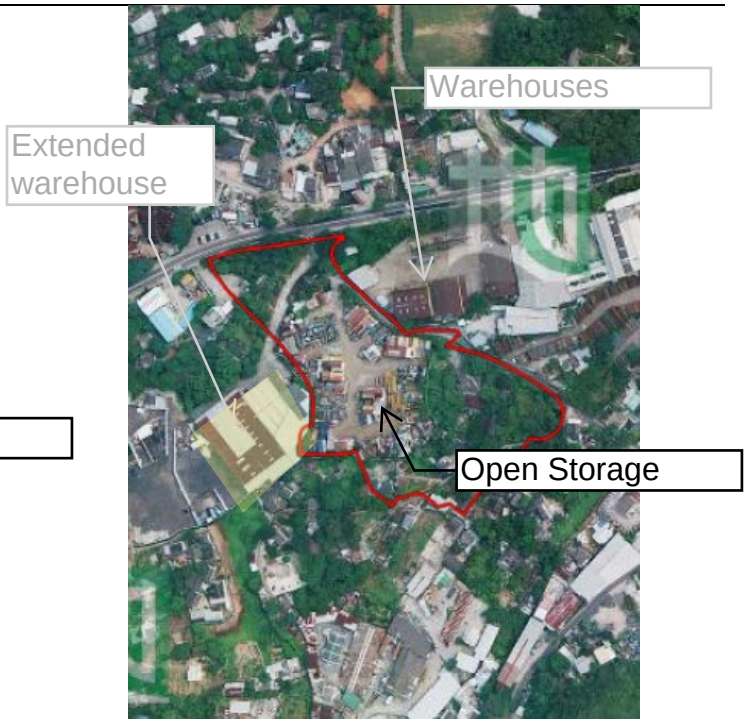
1998

Project No. 2127
Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) for Mix Use Development (Residential & Commercial) at Lot 796 & 1008 RP and Adjoining Government land in Ping Che, Ta Kwu Ling, New Territories

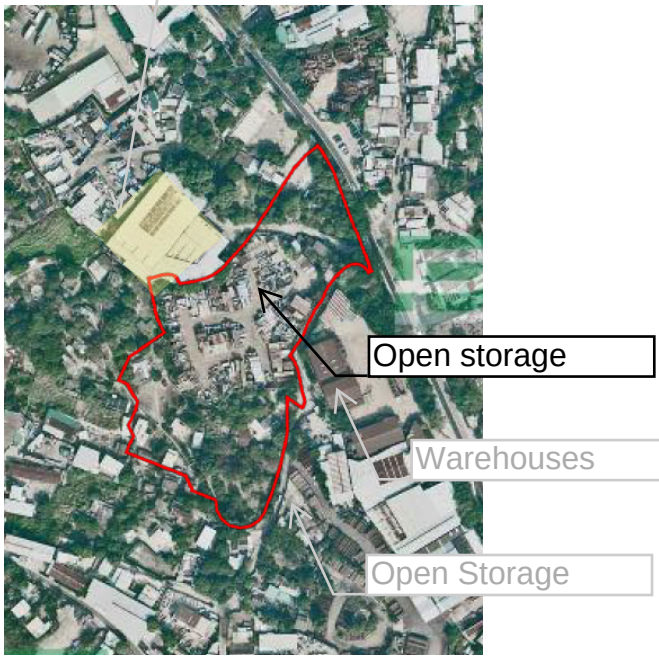
Appendix 8.1



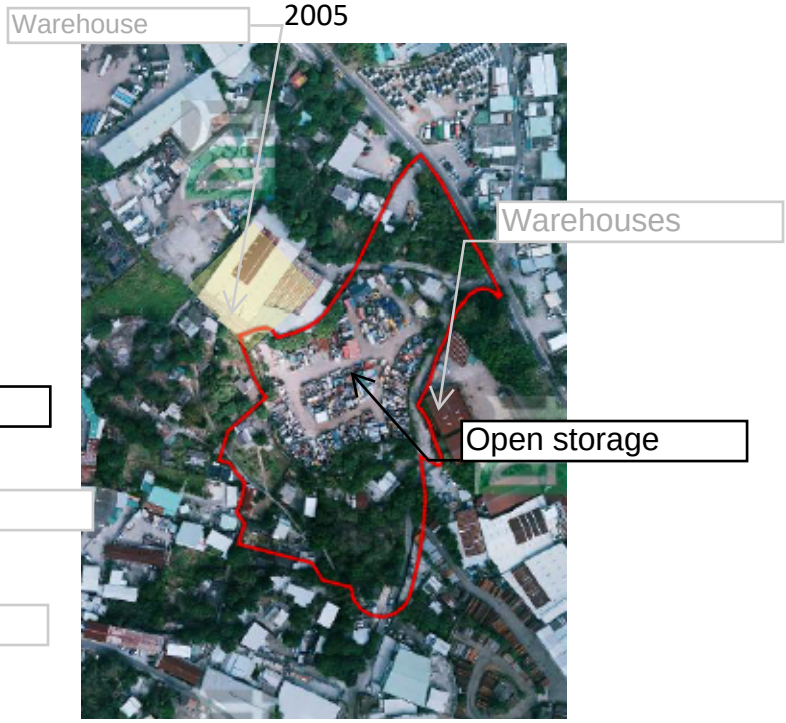
2000



2005



2009



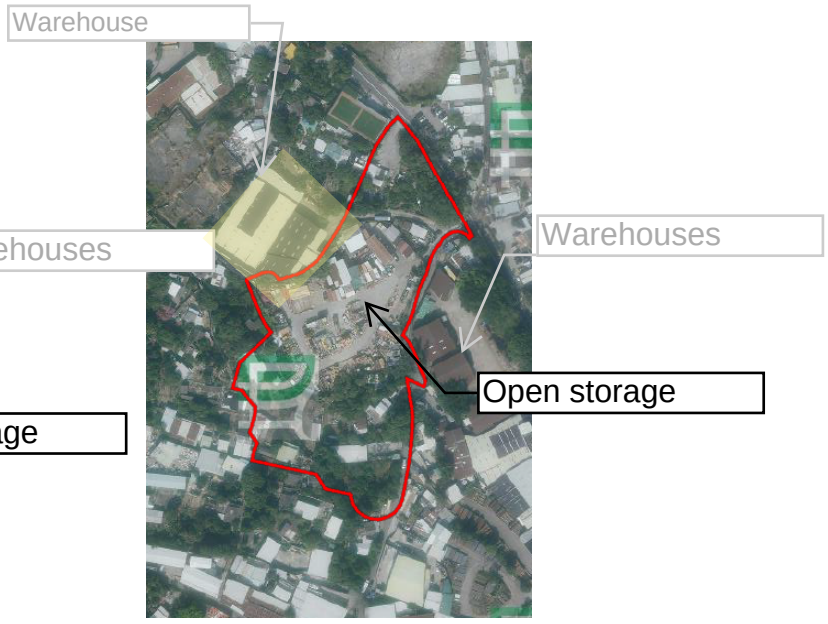
2013

Project No. 2127
Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) for Mix Use Development (Residential & Commercial) at Lot 796 & 1008 RP and Adjoining Government land in Ping Che, Ta Kwu Ling, New Territories

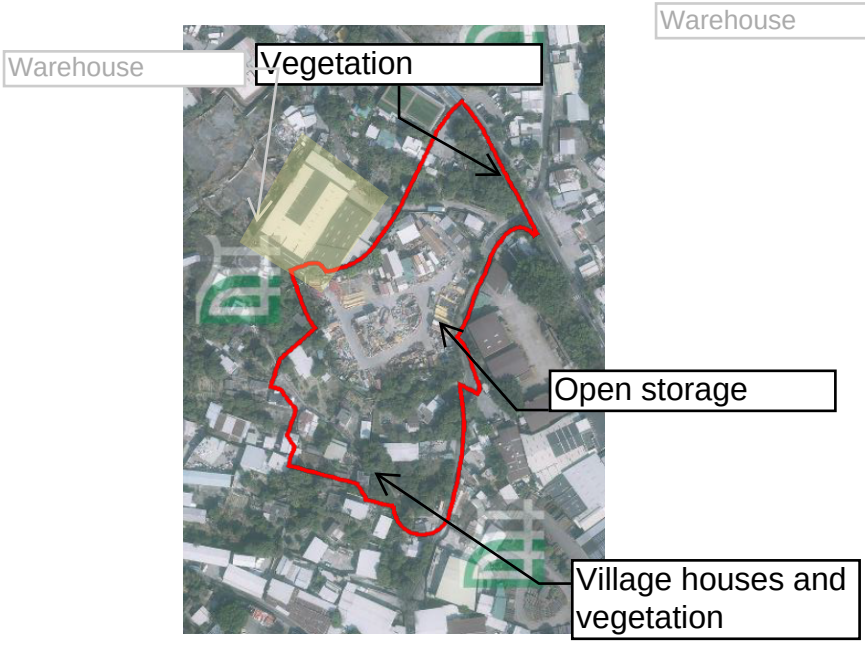
Appendix 8.1



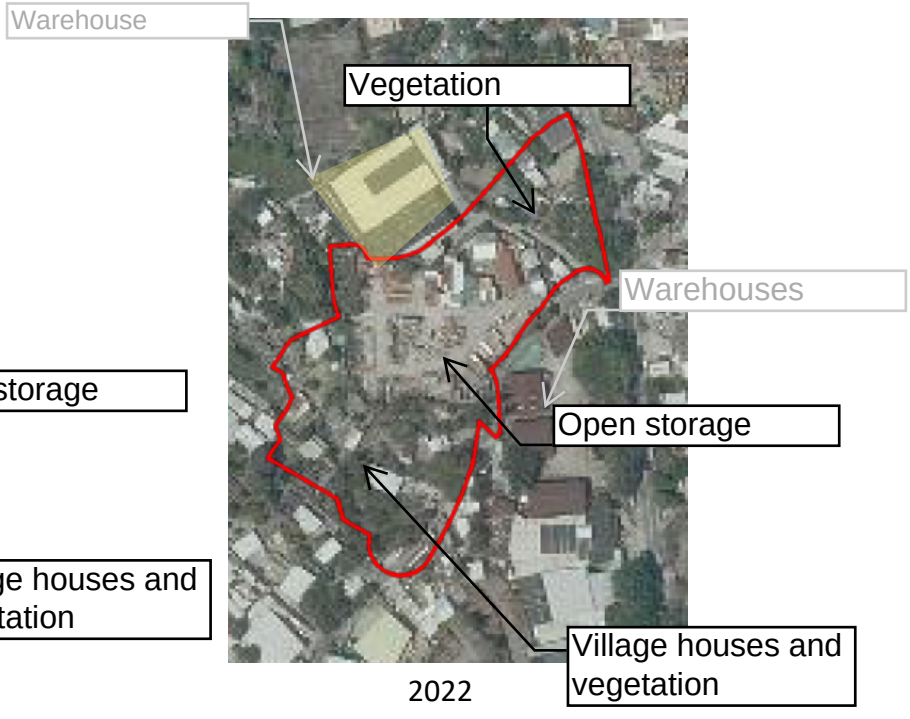
2017



2020



2021



2022

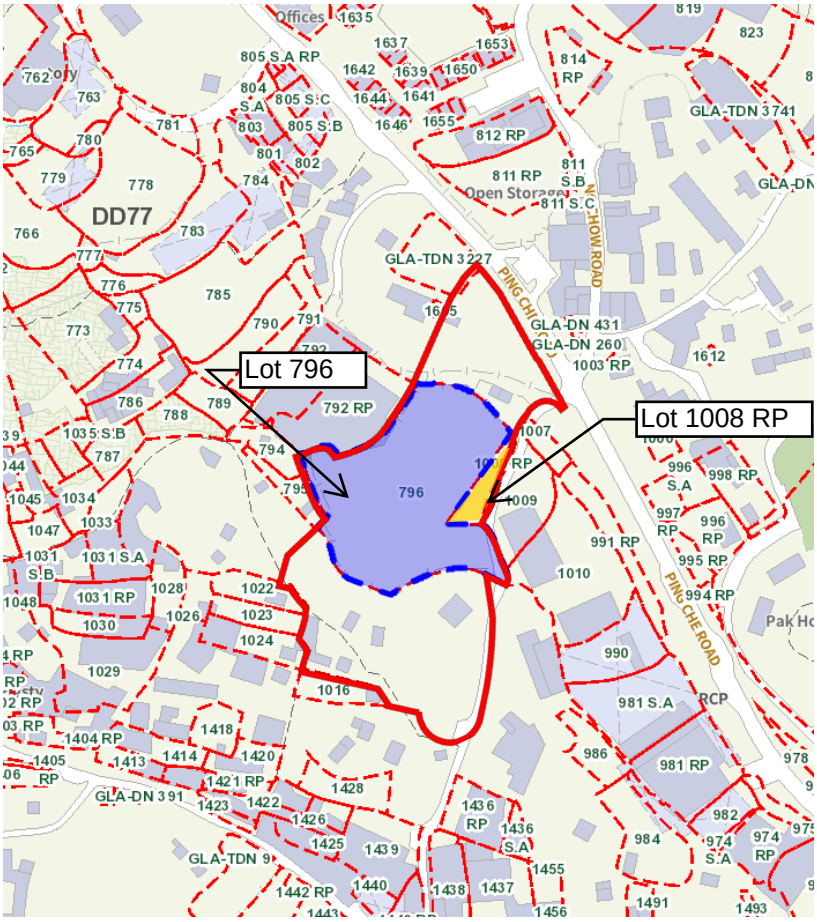
Appendix 8.2

Chemical Waste Register Record

No Invalid Chemical Waste Producer as of 08.02.2024

Valid Chemical Waste Producer as of 08.02.2024

Waste Producer Name	Premises Address	Nature of Business
Hang Kee Development Company Limited	Lot no.796 in D.D.77, Ping Che, North	Construction
Bergeron (Hong Kong) Company Limited	Lot no.796 & 1008 RP, Ping Che, Fanling, N.T.	Warehouse



Appendix 8.3

Copy of Letter Replies from various Government Department

Our Ref. [819.4463/23-0001]

27/F, Overseas Trust Bank Building
160 Gloucester Road
Wan Chai
Hong Kong
T: +852 2815 7028
F: +852 2815 5399
info@aechk.com
www.asecg.com

Environmental Protection Department
Environmental Compliance Division
Regional Office (North)
North
(Attn: Ms. TANG Wing Yin, Alice)

25 May 2023

By Email

Dear Madam,

S16 Application for A/DPA/NE-TKL/31 Ping Che DD77 Lot 796 & 1008RP, Ta Kwu Ling, North District, Hong Kong
Request for Information for Land Contamination Assessment

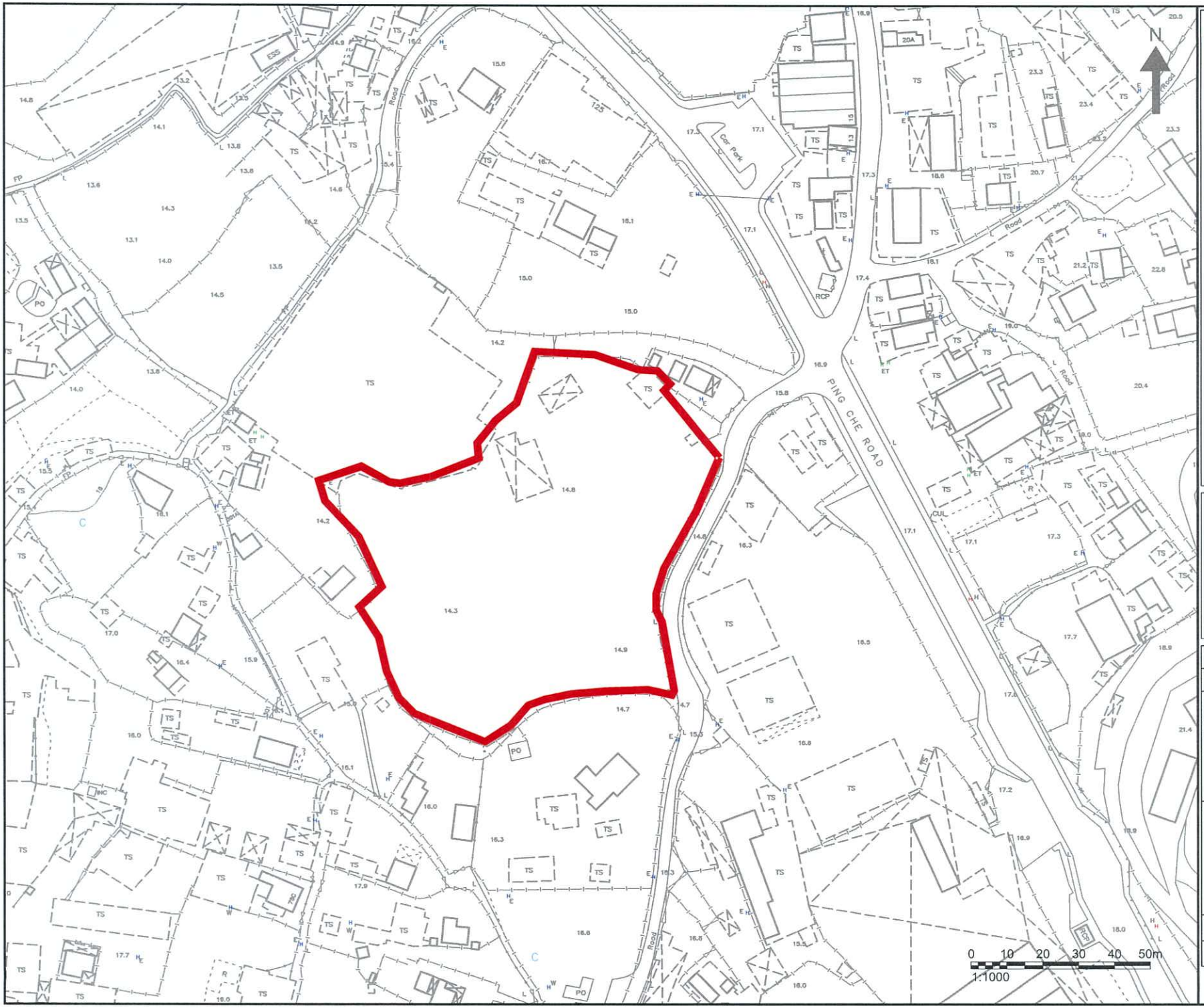
We are conducting an S16 Application for A/DPA/NE-TKL/31 Ping Che DD77 Lot 796 & 1008RP, Ta Kwu Ling, North District, Hong Kong which is shown in the enclosed Site Location Plan. As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Project Site is required as part of the vetting process.

Of particular interest is whether there are any registered chemical waste producers under your record in the Project Site and its immediate surroundings, any waste disposal record, any accidental spillage record, any submission relating to land contamination assessment and any information you could provide which might be useful for our study. We enclosed herewith a site map showing the location of the Project Site for your reference.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email **by 8 June 2023**. Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 (cm@aechk.com) or Ms Bella Cheung (bellacheung@aechk.com) at 3915 7178.

Yours sincerely,

Cathy Man
Associate Director
CM/bc
Encl. Site Location Plan



NOTES :

PROJECT SITE

Consultant

AEC

Allied Environmental Consultants Limited

Project No. :	819.4463
Drawing By :	BC

Project :

S16 APPLICATION FOR A/DPA/NE-TKL/31
PING CHE DD77 LOT 796 & 1008RP,
TA KWU LING, NORTH DISTRICT, HONG KONG

Drawing Title :

PROJECT SITE LOCATION

Drawing No : FIGURE 1	Revision : 0
Scale : AS SHOWN	Date : MAY 2023

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A3 420 x 297

NGAN Chun Sang

From: alicewytang@epd.gov.hk
Sent: Tuesday, 6 June, 2023 11:29 AM
To: Bella Cheung
Cc: Cathy Man; Helen Siu; NGAN Chun Sang
Subject: Re: [819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment
Attachments: 23-0001_EPD Enquiry.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Dear Bella,

I refer to your preceding letter dated 25 May 2023 in regard to the captioned. This Office has no record of any reported chemical spillage / leakage incident at the captioned locations in the past 5 years. You may like to check with other relevant parties / departments for such information as appropriate.

For record of Chemical Waste Producers Registration, a registry is available at our Territory Control Office in Wan Chai. Please contact our Mr. C.K. Tsang at 2835 1017 for details during the office hours.

Regards,

Alice TANG
E(RN)34 / EPD
2158 5842

From: Bella Cheung <bellacheung@aechk.com>
To: "alicewytang@epd.gov.hk" <alicewytang@epd.gov.hk>
Cc: Cathy Man <cm@aechk.com>, Helen Siu <helensiu@aechk.com>, NGAN Chun Sang <nganchunsang@aecasia.io>
Date: 25/05/2023 13:57
Subject: [819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment

---

Dear Alice,

Please kindly see the attached enquiry letter for the land contamination assessment and the site location plan.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by 8 June 2023.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact me.

Regards,

Bella Cheung – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 2815 7028 | **D:** (852) 3915 7178 | **F:** (852) 2815 5399 | **E:** bellacheung@aechk.com

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27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
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(File-Checksum-0332740f)

NOTES :

ADDITIONAL PROJECT SITE

ORIGINAL PROJECT SITE

N

0 10 20 30 40 50m

1:1000

Consultant

Allied Environmental Consultants Limited

Project No. :	819.4463
Drawing By :	BC

Project :

S16 APPLICATION FOR A/DPA/NE-TKL/31
PING CHE DD77 LOT 796 & 1008RP,
TA KWU LING, NORTH DISTRICT, HONG KONG

Drawing Title :

PROJECT SITE LOCATION

Drawing No :	Revision :
FIGURE 1	0
Scale :	Date :
AS SHOWN	JUNE 2023

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A3 420 x 297

P:\2101-2150\2127\05 REPORT\01 AEC REPORT\[2127] FIG1.1.DWG

NGAN Chun Sang

From: alicewytang@epd.gov.hk
Sent: Thursday, 6 July, 2023 2:19 PM
To: Helen Siu
Cc: Bella Cheung; Cathy Man
Subject: RE: [2127/819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment - Updated Site Boundary
Attachments: Fig 1.2_revised site boundary.pdf

Dear Helen,
I refer to your email dated 30 June 2023 in regard to the captioned.

We have no record of any reported chemical spillage / leakage incident at the additional project site in the past 5 years, and no registered chemical waste producers is found in the additional project site. Thanks!

Regards,

Alice TANG
E(RN)34 / EPD
2158 5842

From: Helen Siu <helensiu@aechk.com>
To: "alicewytang@epd.gov.hk" <alicewytang@epd.gov.hk>
Cc: Cathy Man <cm@aechk.com>, Bella Cheung <bellacheung@aechk.com>
Date: 30/06/2023 14:43
Subject: RE: [2127/819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment - Updated Site Boundary

---

Dear Alice,

Thank you for your reply. We further updated the site boundary with the additional project site in red colour as shown in the enclosed location plan.

We would like to request the following records regarding land uses/past activities/incidents/accidents.

Of particular interest is whether there are any registered chemical waste producers under your record in the additional project site, any waste disposal record, any accidental spillage record, any submission relating to land contamination assessment and any information you could provide which might be useful for our study.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email **by 14 July 2023**.

Should you have any queries, please feel free to contact the undersigned or Ms. Cathy Man (cm@aechk.com) at 3915 7148.

Best Regards,

Helen Siu – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 2815 7028 | **D:** (852) 3915 7117 | **F:** (852) 2815 5399 | **E:** helensiu@aechk.com
Allied Environmental Consultants Limited *Member of AEC Group (HKEX Stock Code: 8320.HK)*
27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
Follow us www.asecg.com

P:\2101-2150\2127\02 Correspondence\01 Letters

From: alicewytang@epd.gov.hk <alicewytang@epd.gov.hk>
Sent: Tuesday, June 6, 2023 11:29 AM
To: Bella Cheung <bellacheung@aechk.com>
Cc: Cathy Man <cm@aechk.com>; Helen Siu <helensiu@aechk.com>; NGAN Chun Sang <nganchunsang@aecasia.io>
Subject: Re: [819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment

Dear Bella,

I refer to your preceding letter dated 25 May 2023 in regard to the captioned. This Office has no record of any reported chemical spillage / leakage incident at the captioned locations in the past 5 years. You may like to check with other relevant parties / departments for such information as appropriate.

For record of Chemical Waste Producers Registration, a registry is available at our Territory Control Office in Wan Chai. Please contact our Mr. C.K. Tsang at 2835 1017 for details during the office hours.

Regards,

Alice TANG
E(RN)34 / EPD
2158 5842

From: Bella Cheung <bellacheung@aechk.com>
To: "alicewytang@epd.gov.hk" <alicewytang@epd.gov.hk>
Cc: Cathy Man <cm@aechk.com>, Helen Siu <helensiu@aechk.com>, NGAN Chun Sang <nganchunsang@aecasia.io>
Date: 25/05/2023 13:57
Subject: [819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment

---

Dear Alice,

Please kindly see the attached enquiry letter for the land contamination assessment and the site location plan.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by 8 June 2023.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact me.

Regards,

Bella Cheung – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 2815 7028 | **D:** (852) 3915 7178 | **F:** (852) 2815 5399 | **E:** bellacheung@aechk.com

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(File-Checksum-499ecaa5)

Our Ref. [819.4463/23-0002]

27/F, Overseas Trust Bank Building
160 Gloucester Road
Wan Chai
Hong Kong
T: +852 2815 7028
F: +852 2815 5399
info@aechk.com
www.asecg.com

Fire Services Department / Management Group
9/F, Fire Services Headquarters Building
1 Hong Chong Road
Tsim Sha Tsui East
Kowloon

25 May 2023

By Email

Dear Sir/Madam,

S16 Application for A/DPA/NE-TKL/31 Ping Che DD77 Lot 796 & 1008RP, Ta Kwu Ling, North District, Hong Kong
Request for Information for Land Contamination Assessment

We are conducting an S16 Application for A/DPA/NE-TKL/31 Ping Che DD77 Lot 796 & 1008RP, Ta Kwu Ling, North District, Hong Kong as shown in the enclosed Site Location Plan. As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Project Site is required as part of the vetting process.

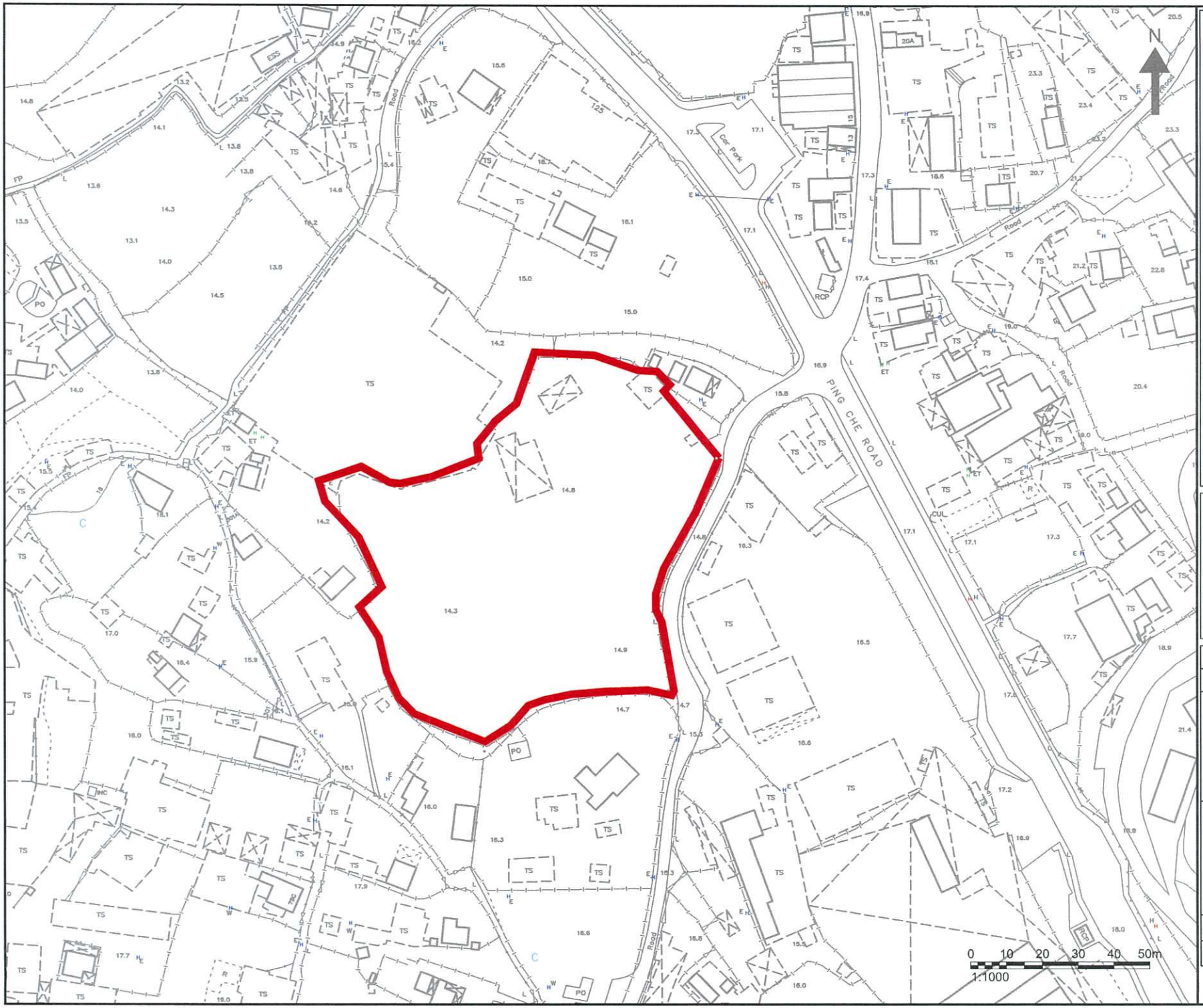
Of particular interest are spill and incident reports (including records of fire at the Project Site and its immediate surroundings) that we believe your Department might have records of. Furthermore, we would also like to know whether anywhere on the Project Site and its immediate surroundings had applied for or possessed a license for dangerous goods storage. We enclosed herewith a site map showing the location of the Project Site for your reference.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email **by 8 June 2023**. Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact the undersigned or Ms Bella Cheung (bellacheung@aechk.com) at 3915 7178.

Yours sincerely,

Cathy Man
Associate Director
CM/bc

Encl. Site Location Plan



NOTES :

PROJECT SITE

Consultant

Allied Environmental Consultants Limited

Project No. : 819.4463	
Drawing By : BC	
Project : S16 APPLICATION FOR A/DPA/NE-TKL/31 PING CHE DD77 LOT 796 & 1008RP, TA KWU LING, NORTH DISTRICT, HONG KONG	
Drawing Title : PROJECT SITE LOCATION	
Drawing No : FIGURE 1	Revision : 0
Scale : AS SHOWN	Date : MAY 2023

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A3 420 x 297

消 防 處
香港九龍尖沙咀東部康莊道 1 號
消防處總部大廈

FIRE SERVICES DEPARTMENT
FIRE SERVICES HEADQUARTERS BUILDING,
No.1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong.

本處檔號 OUR REF. : (190) in FSD GR 6-5/4 R Pt. 46
來函檔號 YOUR REF. : [819.4463/23-0002]
電子郵件 E-mail : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX NO. : 2739 5879
電 話 TEL NO. : 2733 7741

30 May 2023

Allied Environmental Consultants Limited
27/F, Overseas Trust Bank Building,
160 Gloucester Road,
Wan Chai, Hong Kong.
(Attn: Ms. Belle CHEUNG, Assistant Consultant)

By fax (2815 5399) only

Dear Ms. CHEUNG,

S16 Application for A/DPA/NE-TKL/31 Ping Che DD77 Lot 796 & 1008RP, Ta Kwu Ling, North District, Hong Kong
Request for Information of Dangerous Goods & Incident Records

I refer to your letter of 25.5.2023 regarding the captioned subject.

Your case is being handled, and a reply will be furnished to you as soon as possible. Please be advised that due to time lapse, this Department can only provide the following information for your requested information:

(i) Dangerous Goods Licence Record: from the year of 1990 to present moment.

(ii) Incident Record: Past three years of fire and special services incidents.

Please also submit the appointment letter from your client for record.

Should you have further questions, please feel free to contact the undersigned.

Yours sincerely,

(NG Wing-chit)
for Director of Fire Services

Ref. number and date should be quoted in reference to this letter
凡提及本信時請引述編號及日期

NGAN Chun Sang

From: Helen Siu
Sent: Monday, 19 June, 2023 10:18 AM
To: aio_fsd@hkfsd.gov.hk
Cc: Cathy Man; NGAN Chun Sang; Bella Cheung
Subject: [819.4463/23-0005 Ping Che Land Contamination] Request for Information for Land Contamination Assessment - Submission of Appointment Letter
Attachments: Appointment Letter.pdf; 23-0002_FS Enquiry_Reply.pdf

Dear Sir/ Madam,

With reference to your letter(Ref: (190) in FSD GR 6-5/4 R Pt.46) dated 30 May 2023 regarding information request of dangerous goods and incident records, we are please to submit an appointment letter from our client for your record.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by 3 July 2023.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact me.

Regards,

Helen Siu – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 2815 7028 | **D:** (852) 3915 7117 | **F:** (852) 2815 5399 | **E:** helensiu@aechk.com
Allied Environmental Consultants Limited *Member of AEC Group (HKEX Stock Code: 8320.HK)*
27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
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\\192.168.0.176\Old_Project_Server\2101-2150\2127\02 Correspondence\01 Letters

---

From: Bella Cheung
Sent: Thursday, May 25, 2023 1:57 PM
To: aio_fsd@hkfsd.gov.hk
Cc: Helen Siu <helensiu@aechk.com>; NGAN Chun Sang <nganchunsang@aecasia.io>; Cathy Man <cm@aechk.com>
Subject: [819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment

Dear Sir/ Madam,

Please kindly see the attached enquiry letter for the land contamination assessment and the site location plan.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by 8 June 2023.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact me.

Regards,

Bella Cheung – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 2815 7028 | **D:** (852) 3915 7178 | **F:** (852) 2815 5399 | **E:** bellacheung@aechk.com

Allied Environmental Consultants Limited *Member of AEC Group (HKEX Stock Code: 8320.HK)*
27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
Follow us www.asecg.com

消 防 處
香港九龍尖沙咀東部康莊道 1 號
消防處總部大廈

FIRE SERVICES DEPARTMENT
FIRE SERVICES HEADQUARTERS
BUILDING,
No.1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong.

本處檔號 OUR REF. : (153) in FSD GR 6-5/4 R Pt. 47
來函檔號 YOUR REF. :
電子郵件 E-mail : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX NO. : 2739 5879
電 話 TEL NO. : 2733 7743

13 July 2023

Allied Environmental Consultants Limited
27/F, Overseas Trust Bank Building,
160 Gloucester Road,
Wan Chai, Hong Kong.
(Attn: Ms. Helen SIU, Assistant Consultant)

By fax (2815 5399) only

Dear Ms. SIU,

2127/819.4463 Ping Land Contamination
Request for Information of Dangerous Goods & Incident Records

I refer to your email of 30.6.2023 regarding the captioned subject.

Your case is being handled, and a reply will be furnished to you as soon as possible. Please be advised that due to time lapse, this Department can only provide the following information for your requested information:

(i) Dangerous Goods Licence Record: from the year of 1990 to present moment.

(ii) Incident Record: Past three years of fire and special services incidents.

Should you have further questions, please feel free to contact the undersigned.

Yours sincerely,

(CHEUNG Wai-lam)
for Director of Fire Services

NOTES :

ADDITIONAL PROJECT SITE

ORIGINAL PROJECT SITE

N

0 10 20 30 40 50m

1:1000

Consultant

Allied Environmental Consultants Limited

Project No. :	819.4463
Drawing By :	BC

Project :

S16 APPLICATION FOR A/DPA/NE-TKL/31
PING CHE DD77 LOT 796 & 1008RP,
TA KWU LING, NORTH DISTRICT, HONG KONG

Drawing Title :

PROJECT SITE LOCATION

Drawing No :	Revision :
FIGURE 1	0
Scale :	Date :
AS SHOWN	JUNE 2023

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A3 420 x 297

P:\2101-2150\2127\05 REPORT\01 AEC REPORT\[2127] FIG1.1.DWG

消 防 處
香港九龍尖沙咀東部康莊道 1 號
消防處總部大廈

FIRE SERVICES DEPARTMENT
FIRE SERVICES HEADQUARTERS BUILDING,
No.1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong.

本處檔號 **OUR REF.** : (5) in FSD GR 6-5/4 R Pt. 48
來函檔號 **YOUR REF.** :
電子郵件 **E-mail** : hkfsdenq@hkfsd.gov.hk
圖文傳真 **FAX NO.** : 2739 5879
電　　話 **TEL NO.** : 2733 7741

10 August 2023

Allied Environmental Consultants Limited
27/F, Overseas Trust Bank Building,
160 Gloucester Road,
Wan Chai, Hong Kong.
(Attn: Ms. Helen SIU, Assistant Consultant)

Dear Ms. SIU,

2127/819.4463 Ping Land Contamination
Request for Information of Dangerous Goods & Incident Records

I refer to your email of 30.6.2023 regarding the captioned request and reply below in response to your questions:-

1. No Dangerous Goods Licence was issued in respect of the captioned address.

2. A total of **2** incident records were found at the subject location. Please refer to **Appendix A** for details.

If you have further questions, please feel free to contact the undersigned.

Yours sincerely,

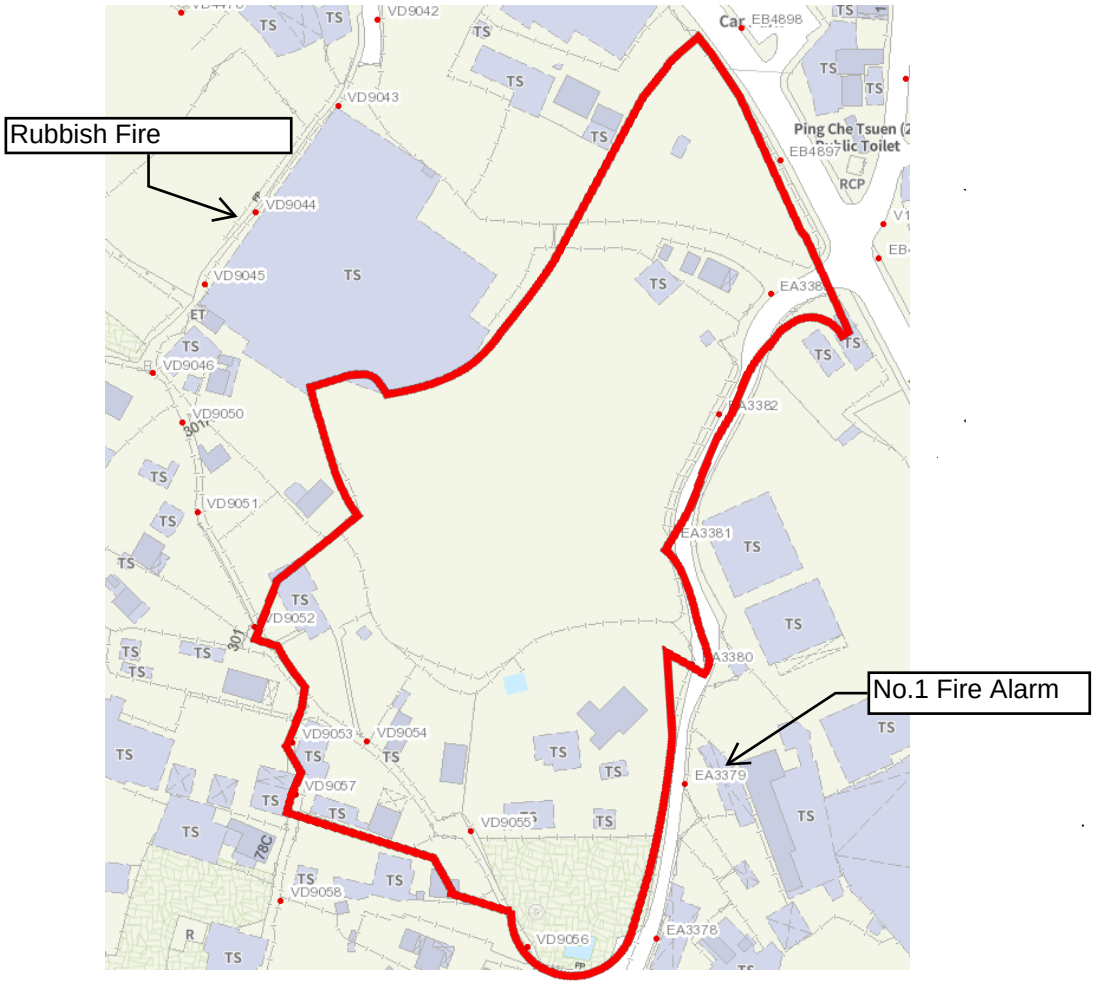
(NG Wing-chit)
for Director of Fire Services

Appendix A

A2127/819.4463 Ping Land Contamination

Request for Information of Dangerous Goods & Incident Records

No.	Date	Address / Lamp Post No.	Type of Incident
1.	21.1.2021	Near Lamppost VD9044 of Ping Che New Village	Rubbish Fire
2.	16.6.2021	Near Lamppost EA3379 of Ha Shan Kai Wat	No.1 Fire Alarm



Our Ref. [819.4463/23-0003]

27/F, Overseas Trust Bank Building
160 Gloucester Road
Wan Chai
Hong Kong
T: +852 2815 7028
F: +852 2815 5399
info@aechk.com
www.asecg.com

Lands Department
District Lands Office,
North
6th floor, North District Government Offices,
3 Pik Fung Road, Fanling,
New Territories.
(Attn: Ms. WONG Hoi Yan, Angie)

25 May 2023

By Email

Dear Madam,

S16 Application for A/DPA/NE-TKL/31 Ping Che DD77 Lot 796 & 1008RP, Ta Kwu Ling, North District, Hong Kong
Request for Information for Land Contamination Assessment

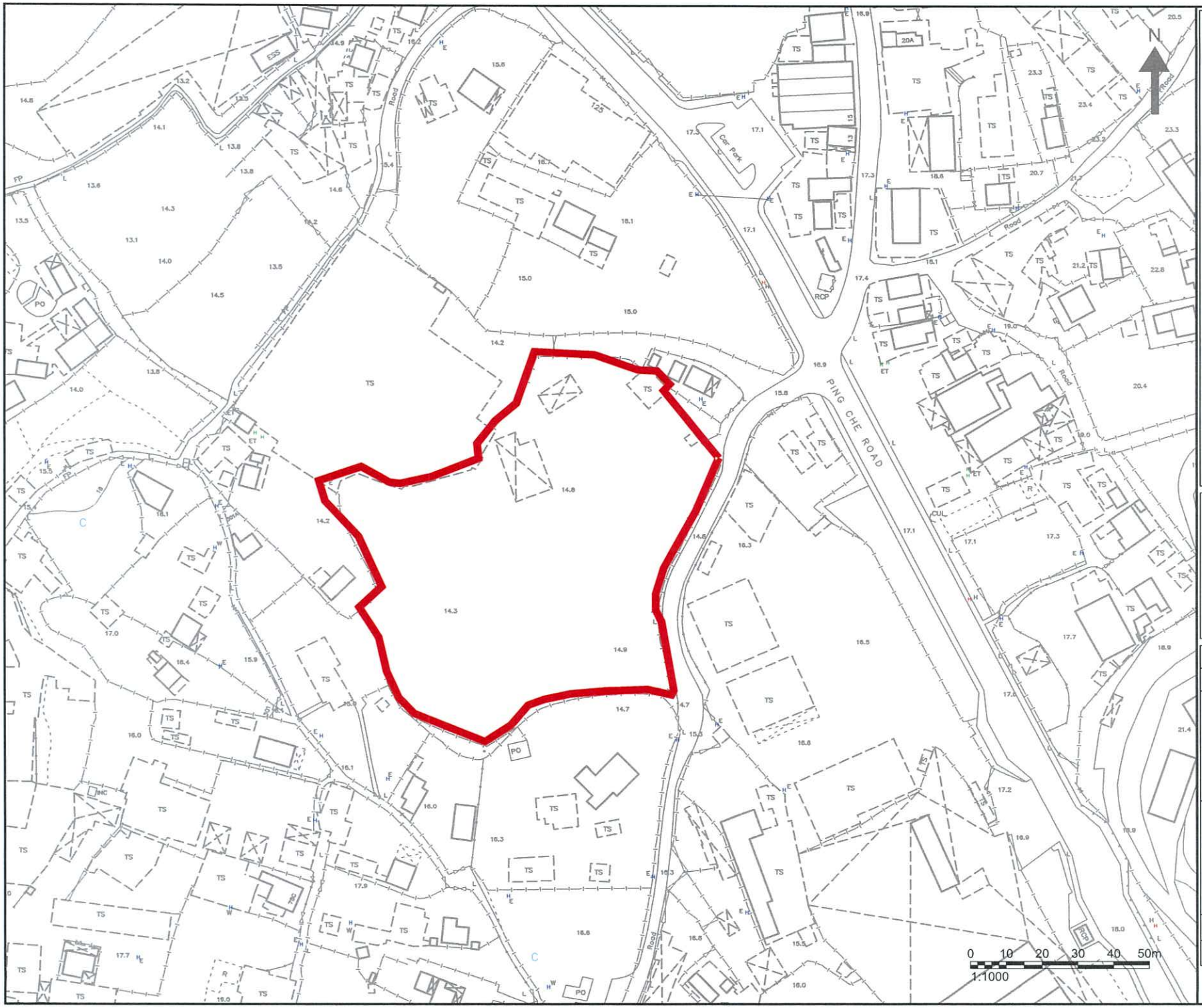
We are conducting an S16 Application for A/DPA/NE-TKL/31 Ping Che DD77 Lot 796 & 1008RP, Ta Kwu Ling, North District, as shown in the enclosed Site Location Plan. As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Project Site is required as part of the vetting process.

Of particular interest is information on spillage accidents, illegal/contaminating land uses or uncontrolled dumping uses, current and historical land use information of the Project Site and its immediate surroundings, and any information you could provide which might be useful for our study.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email **by 8 June 2023.** Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 (cm@aechk.com) or Ms Bella Cheung (bellacheung@aechk.com) at 3915 7178.

Yours sincerely,

Cathy Man
Associate Director
CM/bc
Encl. Site Location Plan



NOTES :

PROJECT SITE

Consultant

Allied Environmental Consultants Limited

Project No. : 819.4463	
Drawing By : BC	
Project : S16 APPLICATION FOR A/DPA/NE-TKL/31 PING CHE DD77 LOT 796 & 1008RP, TA KWU LING, NORTH DISTRICT, HONG KONG	
Drawing Title : PROJECT SITE LOCATION	
Drawing No : FIGURE 1	Revision : 0
Scale : AS SHOWN	Date : MAY 2023

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A3 420 x 297

Bella Cheung

From: lenlm6@landsd.gov.hk
Sent: Thursday, 8 June 2023 11:22 am
To: Bella Cheung
Subject: Fw: [819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment

Dear Ms. CHEUNG,

I refer to your email dated 25.5.2023.

Please be informed that this office has nil record of relevant illegal land contamination case in the area concerned. However, you are also advised to approach Planning Department for enquiry in respect of illegal land use information.

Thank you.

Regards,

(K.Y. LAW)
for District Lands Officer/North
Tel: 2675 1537

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----- Forwarded by Jason Ka Yung LAW/LAO/LANDSD/HKSARG on 08/06/2023 11:16 -----

From: Bella Cheung <bellacheung@aechk.com>
To: "esnn@landsd.gov.hk" <esnn@landsd.gov.hk>
Cc: Helen Siu <helensiu@aechk.com>, NGAN Chun Sang <nganchunsang@aecasia.io>, Cathy Man <cm@aechk.com>
Date: 25/05/2023 13:57
Subject: [819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment

---

Dear Angie,

Please kindly see the attached enquiry letter for the land contamination assessment and the site location plan.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by 8 June 2023.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact me.

Regards,

Bella Cheung – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 2815 7028 | **D:** (852) 3915 7178 | **F:** (852) 2815 5399 | **E:** bellacheung@aechk.com

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[attachment "23-0003_LandsD Enquiry.pdf" deleted by Jason Ka Yung LAW/LAO/LANDSD/HKSARG]

NOTES :

ADDITIONAL PROJECT SITE

ORIGINAL PROJECT SITE

N

0 10 20 30 40 50m

1:1000

Consultant

Allied Environmental Consultants Limited

Project No. :	819.4463
Drawing By :	BC

Project :

S16 APPLICATION FOR A/DPA/NE-TKL/31
PING CHE DD77 LOT 796 & 1008RP,
TA KWU LING, NORTH DISTRICT, HONG KONG

Drawing Title :

PROJECT SITE LOCATION

Drawing No :	Revision :
FIGURE 1	0
Scale :	Date :
AS SHOWN	JUNE 2023

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A3 420 x 297

P:\2101-2150\2127\05 REPORT\01 AEC REPORT\[2127] FIG1.1.DWG

Helen Siu

From: lenlm6@landsd.gov.hk
Sent: Friday, 14 July 2023 5:13 pm
To: Helen Siu
Subject: RE: [2127/819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment - updated site boundary
Attachments: Fig 1.2_revised site boundary.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Ms. SIU,

I refer to your email dated 30.6.2023.

Please be informed that this office has nil record of relevant illegal land contamination case in the area concerned in red as shown in your plan attached. However, you are also advised to approach Planning Department for enquiry in respect of illegal land use information.

Thank you.

Regards,

(K.Y. LAW)
for District Lands Officer/North
Tel: 2675 1537

本信息及任何附件只供收件人使用，而其中可能載有機密及／或屬法律特權的資料。敬請注意，未經許可，不得擅自披露或使用本信息。倘本信息誤傳給你，請立即通知本署，並刪除或銷毀本信息。本署絕不承擔因使用本信息而引致的任何法律責任。
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From: Helen Siu <helensiu@aechk.com>
To: "lenlm6@landsd.gov.hk" <lenlm6@landsd.gov.hk>
Cc: Cathy Man <cm@aechk.com>
Date: 30/06/2023 15:55
Subject: RE: [2127/819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment - updated site boundary

---

Dear Jason,

Thank you for your reply. We further updated the site boundary with the additional project site in red colour as shown in the enclosed location plan.

We would like to request the following records regarding land uses/past activities/incidents/accidents.

Of particular interest is information on spillage accidents, illegal/contaminating land uses or uncontrolled dumping uses, current and historical land use information of the Project Site and its immediate surroundings, and any information you could provide which might be useful for our study.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email **by 14 July 2023**.

Should you have any queries, please feel free to contact the undersigned or Ms. Cathy Man (cm@aechk.com) at 3915 7148.

Regards,

Helen Siu – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 2815 7028 | **D:** (852) 3915 7117 | **F:** (852) 2815 5399 | **E:** helensiu@aechk.com
Allied Environmental Consultants Limited *Member of AEC Group (HKEX Stock Code: 8320.HK)*
27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
Follow us www.asecg.com

From: lenlm6@landsd.gov.hk <lenlm6@landsd.gov.hk>
Sent: Thursday, June 8, 2023 11:22 AM
To: Bella Cheung <bellacheung@aechk.com>
Subject: Fw: [819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment

Dear Ms. CHEUNG,

I refer to your email dated 25.5.2023.

Please be informed that this office has nil record of relevant illegal land contamination case in the area concerned. However, you are also advised to approach Planning Department for enquiry in respect of illegal land use information.

Thank you.

Regards,

(K.Y. LAW)
for District Lands Officer/North
Tel: 2675 1537

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----- Forwarded by Jason Ka Yung LAW/LAO/LANDSD/HKSARG on 08/06/2023 11:16 -----

From: Bella Cheung <bellacheung@aechk.com>
To: "esnn@landsd.gov.hk" <esnn@landsd.gov.hk>
Cc: Helen Siu <helensiu@aechk.com>, NGAN Chun Sang <nganchunsang@aecasia.io>, Cathy Man <cm@aechk.com>
Date: 25/05/2023 13:57
Subject: [819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment

Dear Angie,

Please kindly see the attached enquiry letter for the land contamination assessment and the site location plan.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by 8 June 2023.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact me.

Regards,

Bella Cheung – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 2815 7028 | **D:** (852) 3915 7178 | **F:** (852) 2815 5399 | **E:** bellacheung@aechk.com

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27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
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[attachment "23-0003_LandsD Enquiry.pdf" deleted by Jason Ka Yung LAW/LAO/LANDSD/HKSARG]
----- Message from "lenlm6@landsd.gov.hk" <lenlm6@landsd.gov.hk> on Thu, 8 Jun 2023 03:21:50 +0000 -----
To: Bella Cheung <bellacheung@aechk.com>
Subject: Fw: [819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessme

Dear Ms. CHEUNG,

I refer to your email dated 25.5.2023.

Please be informed that this office has nil record of relevant illegal land contamination case in the area concerned. However, you are also advised to approach Planning Department for enquiry in respect of illegal land use information.

Thank you.

Regards,

(K.Y. LAW)
for District Lands Officer/North
Tel: 2675 1537

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From: Bella Cheung <bellacheung@aechk.com>
To: "esnn@landsd.gov.hk" <esnn@landsd.gov.hk>
Cc: Helen Siu <helensiu@aechk.com>, NGAN Chun Sang <nganchunsang@aecasia.io>, Cathy Man <cm@aechk.com>
Date: 25/05/2023 13:57
Subject: [819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment

Dear Angie,

Please kindly see the attached enquiry letter for the land contamination assessment and the site location plan.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by 8 June 2023.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact me.

Regards,

Bella Cheung – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 2815 7028 | **D:** (852) 3915 7178 | **F:** (852) 2815 5399 | **E:** bellacheung@aechk.com

Allied Environmental Consultants Limited *Member of AEC Group (HKEX Stock Code: 8320.HK)*

Our Ref. [819.4463/23-0004]

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F: +852 2815 5399
info@aechk.com
www.asecg.com

Planning Department
District Planning Branch
New Territories District Planning Division
Sha Tin, Tai Po and North District Planning Office
13/F, Sha Tin Government Offices,
1 Sheung Wo Che Road, Sha Tin, N.T.
(Attn: Ms. LEE Si Wai, Sheren)

25 May 2023

By Email

Dear Madam,

S16 Application for A/DPA/NE-TKL/31 Ping Che DD77 Lot 796 & 1008RP, Ta Kwu Ling, North District, Hong Kong
Request for Information for Land Contamination Assessment

We are conducting an S16 Application for A/DPA/NE-TKL/31 Ping Che DD77 Lot 796 & 1008RP, Ta Kwu Ling, North District, Hong Kong , as shown in the enclosed Site Location Plan. As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Project Site is required as part of the vetting process.

Of particular interest are current and historical site information, any change on the land use and any information you could provide that might be useful for our study.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email **by 8 June 2023**. Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 (cm@aechk.com) or Ms Bella Cheung (bellacheung@aechk.com) at 3915 7178.

Yours sincerely,

Cathy Man
Associate Director
CM/bc
Encl. Site Location Plan

From:	Sheren Si Wai LEE/PLAND
To:	NGAN Chun Sang
Cc:	Gordon Foo; Leanna Lei; Cathy Man; WL LEUNG/PLAND; Johnny Chung Yin LAM/PLAND
Subject:	Re: [2127/819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment - updated site boundary
Date:	Friday, April 12, 2024 12:22:48 PM
Attachments:	image001.png image009.png image010.png image011.png image012.png image013.png image014.png image015.png image016.png image017.png image018.png

Dear Mr. Ngan,

I refer to the captioned matter on requesting information for land contamination for conducting land contamination assessment under the rezoning application No. Y/NE-TKL/5.

The Site falls within an area zoned "Open Storage" and "Agriculture" and area shown as 'Road' on the approved Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14. According to our record, part of the Site is the subject of a previous application No. DPA/NE-TKL/31 for proposed warehouse for the storage of tunnel boring machine and scaffolding materials approved by the Rural and New Town Planning Committee on 14.8.1992. We do not have other information on the past activities/incidents/accidents of the Site please.

Regards,
Sheren Lee
TP/N3, PlanD
2158 6391

From: Cathy Man <cm@aechk.com>
Sent: Wednesday, April 10, 2024 12:18 PM
To: Sheren Si Wai LEE/PLAND <sswlee@pland.gov.hk>
Cc: Gordon Foo <Gordon.Foo@arup.com>; NGAN Chun Sang <nganchunsang@aecasia.io>; Leanna Lei <leannalei@aechk.com>
Subject: FW: [2127/819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment - updated site boundary

Dear Ms. Sheren LEE,

We are conducting a S12A Planning Application (Application no. Y/NE-TKL/5) for Ping Che DD77 Lot 796 & 1008RP, Ta Kwu Ling, North District, Hong Kong, as shown in the enclosed Site Location Plan. As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Project Site AND its immediate surrounding is required as part of the vetting process.

Of particular interest are current and historical site information, any change on the land use and any information you could provide that might be useful for our study.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email **by 15 April 2024**. Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 (cm@aechk.com) or Mr NGAN Chun Sang (nganchunsang@aecasia.io) at 5290 3688.

Thanks and Regards,

Cathy Man – Associate Director
Environmental Consultancy | Green & Healthy Building
T: (852) 2815 7028 | **D:** (852) 3915 7148 | **F:** (852) 2815 5399 | **E:** cm@aechk.com

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27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
Follow us www.asecg.com

From: Gordon Foo <Gordon.Foo@arup.com>
Sent: Tuesday, April 9, 2024 12:10 PM
To: NGAN Chun Sang <nganchunsang@aecasia.io>
Cc: Cathy Man <cm@aechk.com>; Sabrina Law <sabrina.law@arup.com>
Subject: FW: [2127/819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment - updated site boundary

Dear Mr. Ngan,

We refer to s.12A Planning Application No. Y/NE-TKL/5.

We have received a call from Planning Department (PlanD) officer on our case regarding information request made by AEC in Feb 2024 regarding land uses/past activities/incidents/accidents in our Application Site.

As requested by PlanD officer, grateful if you could further follow-up by making a new request to PlanD with the correct application No. Y/NE-TKL/5 and the latest application site boundary for their further handling. The contact information of PlanD officer is as below for your information:

Contact Information of PlanD Officer
Name: Ms. Sheren LEE
Post Title: Town Planner/North 3
Office Tel: 2158 6391
Email: sswlee@pland.gov.hk

Please feel free to discuss should you have any questions. Thank you.

Best Regards,
Gordon Foo
Assistant Town Planner | Planning

Arup
Level 5, Festival Walk, 80 Tat Chee Avenue
Kowloon Tong, Kowloon, Hong Kong
d +852 2268 3709 f +852 2779 8428
t +852 2528 3031
arup.com

Follow Arup on LinkedIn Twitter Instagram YouTube Facebook WeChat Weibo

---

From: Sheren Si Wai LEE/PLAND <sswlee@pland.gov.hk>
Sent: Tuesday, April 9, 2024 11:50 AM
To: Gordon Foo <Gordon.Foo@arup.com>
Subject: Fw: [2127/819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment - updated site boundary

Dear Gordon,

FYI please.

Regards,
Sheren Lee
TP/N3, PlanD
2158 6391

From: Sheren Si Wai LEE/PLAND
Sent: Tuesday, February 20, 2024 12:16 PM
To: 'NGAN Chun Sang' <nganchunsang@aecasia.io>
Cc:; Leanna Lei <leannalei@aechk.com>; Shirley Chow <shirleychow@aechk.com>; Johnny Chung Yin LAM/PLAND <jcylam@pland.gov.hk>
Subject: Re: [2127/819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment - updated site boundary

Dear Mr. Ngan,

I refer to the plan provided by you indicating the project site of planning application No. A/DPA/NE-TKL/31 and additional project site.

It appears that the 'original project site' deviates from the site boundary of planning application No. A/DPA/NE-TKL/31 for Warehouse for the storage of the machine parts of the tunnel boring machine and scaffolding materials. I should be grateful if you would check and confirm the site area/location. Please also advise the meaning of 'additional project site' as it does not seem to have any planning approval covering the additional area. Besides, please clarify the meaning of checked area and stripped area. You may wish to note that if the amendments to the approved development proposal fall within Class B amendment specified under the Town Planning Board Guidelines No. TPB PG-No. 36C, approval of the Town Planning Board under section 16A(2) of the

Town Planning Ordinance is required. A material change to the original approved development proposal requires a fresh planning application.

FYI, the site falls within an area zoned “Open Storage” on the Ping Che and Ta Kwu Ling Outline Zoning Plan No. S/NE-TKL/14. The site falls within the site area of a rezoning application No. Y/NE-TKL/5 which is under processing by the Planning Department. We do not have any information on the past activities/incidents/accidents of the Site.

Regards,
Sheren Lee
TP/N3, PlanD
2158 6391

From:
Sent: Friday, February 16, 2024 11:10 AM
To: Sheren Si Wai LEE/PLAND <sswlee@pland.gov.hk>
Cc: Cathy Man <cm@aechk.com>; Leanna Lei <leannalei@aechk.com>; Shirley Chow <shirleychow@aechk.com>
Subject: FW: [2127/819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment - updated site boundary

Dear Sheren,

Grateful is you can follow up on the email below.
We further updated the site boundary with the additional project site in red colour as shown in the enclosed location plan.

We would like to request the following records regarding land uses/past activities/incidents/accidents. Of particular interest are current and historical site information, any changes on the land use and any information you could provide that might be useful for our study.
Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by **23 Feb 2024.**

Should you have any queries, please feel free to contact the undersigned or Ms. Cathy Man (cm@aechk.com) at 3915 7148.
Thank you.

Regards,

NGAN Chun Sang – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 5290 3688 | **E:** nganchunsang@aecasia.io

Allied Environmental Consultants Limited *Member of AEC Group (HKEX Stock Code: 8320.HK)*
27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
Follow us www.asecg.com

From: Helen Siu <helensiu@aechk.com>
Sent: Friday, June 30, 2023 3:54 PM
To: mltchan@pland.gov.hk
Cc: Cathy Man <cm@aechk.com>
Subject: RE: [2127/819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment - updated site boundary

Dear Sheren,

Grateful if you can follow up on the email below.

We further updated the site boundary with the additional project site in red colour as shown in the enclosed location plan.

We would like to request the following records regarding land uses/past activities/incidents/accidents.

Of particular interest are current and historical site information, any change on the land use and any information you could provide that might be useful for our study.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email **by 14 July 2023**.

Should you have any queries, please feel free to contact the undersigned or Ms. Cathy Man (cm@aechk.com) at 3915 7148.

Regards,

Helen Siu – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 2815 7028 | **D:** (852) 3915 7117 | **F:** (852) 2815 5399 | **E:** helensiu@aechk.com
Allied Environmental Consultants Limited *Member of AEC Group (HKEX Stock Code: 8320.HK)*
27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
Follow us www.asecg.com

From: Bella Cheung
Sent: Thursday, May 25, 2023 1:57 PM
To: mltchan@pland.gov.hk
Cc: Helen Siu <helensiu@aechk.com>; NGAN Chun Sang <nganchunsang@aecasia.io>; Cathy Man <cm@aechk.com>
Subject: [819.4463 Ping Che Land Contamination] Request for Information for Land Contamination Assessment

Dear Sheren,

Please kindly see the attached enquiry letter for the land contamination assessment and the site location plan.

Due to the tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by 8 June 2023.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact me.

Regards,

Bella Cheung – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 2815 7028 | **D:** (852) 3915 7178 | **F:** (852) 2815 5399 | **E:** bellacheung@aechk.com

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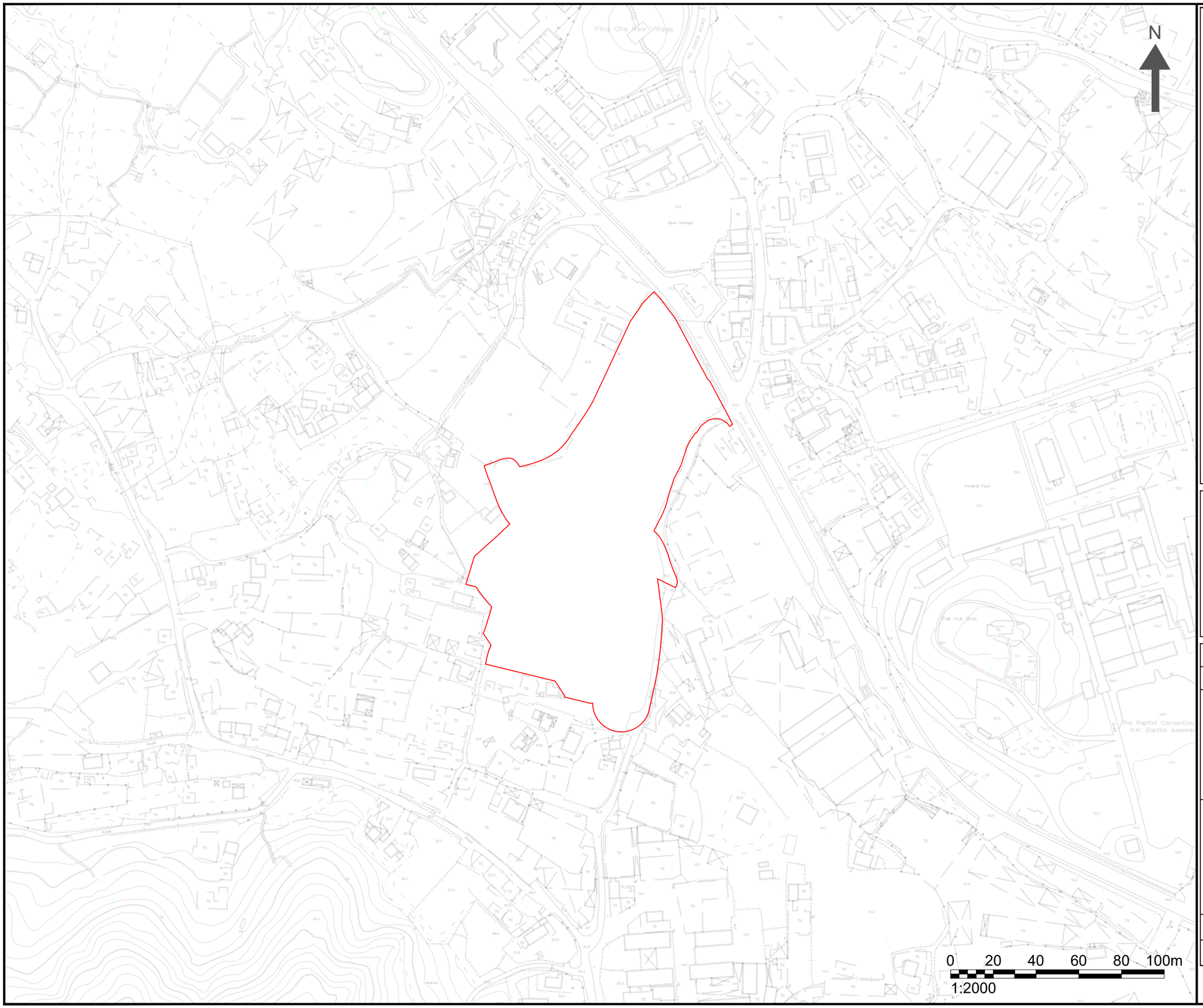
Electronic mail messages entering and leaving Arup business systems are scanned for viruses and acceptability of content.



NOTES :

APPLICATION SITE

Consultant

Allied Environmental Consultants Limited

Project No. :	2127
Drawing By :	CS

Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

SITE LOCATION PLAN

Drawing No : FIGURE 1	Revision : 0
Scale : AS SHOWN	Date : APR 2024

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A3 420 x 297

C:\USERS\NGANCHUNSANG\SYNOLOGYDRIVE\2127 PING CHE DD77\02 CORRESPONDENCE\01 LETTERS\PLAND ENQUIRY\[2127] PING CHE SITE LOCATION PLAN.DWG

Appendix 8.4

Site Walkover Checklist

Annex C1

Site Walkover Checklist (20th June 2023)

GENERAL SITE DETAILS

SITE OWNER/CLIENT	保嘉/ 杰記
PROPERTY ADDRESS	Ping Che DD77 Lot 796 & 1008RP, Ta Kwu Ling, North District, Hong Kong

PERSON CONDUCTING THE QUESTIONNAIRE

NAME	Bella Cheung
POSITION	Assistant Consultant (Allied Environmental Consultants Limited)

AUTHORIZED OWNER/CLIENT REPRESENTATIVE (IF APPLICABLE)

NAME	Jeff Chan
POSITION	Site representative
TELEPHONE	98666519

SITE ACTIVITIES

Briefly describe activities carried out on site, including types of products/chemicals/materials handled.

Obtain a flow schematic if possible.

Number of employees:	Full-time:	8
	Part-time:	0
	Temporary/Seasonal:	0
Maximum no. of people on site at any time:		10
Typical hours of operation:		08:00-18:00
Number of shifts:		1
Days per week:		6
Weeks per year:		52
Scheduled plant shut-down:		N/A

Detail the main sources of energy at the site:

Gas	Yes/~~No~~ (Acetylene cylinders)
Electricity	Yes/~~No~~
Coal	Yes/~~No~~ (Acetylene cylinders)
Oil	Yes/~~No~~
Other	~~Yes~~/No

SITE DESCRIPTION

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area: 17,822m^2

What area of the site is covered by buildings (%): 7%

Please list all current and previous owners/occupiers if possible. 保嘉/ 杰記(current)

Is a site plan available? If yes, please attach. Yes/~~No~~

Are there any other parties on site as tenants or sub-tenants? ~~Yes~~/No

If yes, identify those parties:

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North: Residential- One village house

South: Residential- Village houses (Around 3);
Storage

East: Residential- One village house;
Storage (warehouse)

West: Storage(warehouse)

Annex C1 – Site Walkover Checklist (Page 43)

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc.).

Flat land

State the size and location of the nearest residential communities.

One village house in the north with approximately 30m, one tin house in the east with approximately 18m and around three tin houses in the south with approximately 17m.

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

No

Questionnaire with Existing/Previous Site Owner or Occupier

Ref.		Yes/No	Notes
1.	What are the main activities/operations at the above address?	Yes	Open storage area for construction material (e.g. noise barriers, water barriers, construction brick) and machinery, temporary storage for containers.
2.	How long have you been occupying the site?	Since April 2023 - present	Before the entrance, the land was vacant and mostly paved with concrete. (Air drone photo provided by the existing site occupier)
3.	Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy?)	No	The land has been occupied since 1982. It used as open storage from 1990 onwards.
4.	Prior to your occupancy, who occupied the site?	Yes	Unknown
5.	What were the main activities/operations during their occupancy?	Yes	The open storage area for construction materials and some machinery.
6.	Have there been any major changes in operations carried out at the site in the last 10 years?	No	-
7.	Have any polluting activities been carried out in the vicinity of the site in the past?	No	-
8.	To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	No	-
9.	Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	No	-

10	Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	No	No record
11.	Are any chemicals used in your daily operations? (If yes, please provide details.)	Yes	- One temporary oil drum to transport the oil on-site - A small amount of battery acid cylinders - Acetylene cylinders
	• Where do you store these chemicals?	Yes	Open area in the northern part (maintenance area)
12.	Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	No	-
13.	Has the facility produced a separate hazardous substance inventory?	No	-
14.	Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	No	-
15.	How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	Yes	The sand and soil are received by truck and stored on-site with a small stockpiling area, and the waste oil are stored in tanks/oil drum.
16.	Do you have any underground storage tanks? (If yes, please provide details.)	No	-
	▪ How many underground storage tanks do you have on site?	-	-
	▪ What are the tanks constructed of?	-	-
	▪ What are the contents of these tanks?	-	-
	▪ Are the pipelines above or below ground?	-	-
	▪ If the pipelines are below ground, has any leak and integrity testing been performed?	-	-
	▪ Have there been any spills associated with these tanks?	-	-
17.	Are there any disused underground storage tanks?	No	-
18.	Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	No	-
19.	How are the wastes disposed of?	Yes	- General refuse stored in designated area prior for collection and disposal.

			- Waste oil drum/tanks stored at designated area and collected and handle by the licensed collector.
20.	Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	No	-
21.	Have any spills occurred on site? (If yes, please provide details.)	No	-
	• When did the spill occur?	-	-
	• What were the substances spilled?	-	-
	• What was the quantity of material spilled?	-	-
	• Did you notify the relevant departments of the spill?	-	-
	• What were the actions taken to clean up the spill?	-	-
	• What were the areas affected?	-	-
22.	Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	No	-
23.	Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	No	-
24.	Are there any known contaminations on site? (If yes, please provide details.)	No	-
25.	Has the site ever been remediated? (If yes, please provide details.)	No	Unknown

Observations

1.	Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	No	The chemical is placed on the ground of the machinery maintenance area. Some of the acetylene cylinders are placed on the tray with a lock.
2.	What are the conditions of the bund walls and floors?	-	-
3.	Are any surface water drains located near to drum storage and unloading areas?	No	-
4.	Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	Yes	Waste oil for machinery generated in machinery maintenance area.
5.	Is there a storage site for the wastes?	No	-
6.	Is there an on-site landfill?	No	Only stockpiling area is

			found for the inert materials.
7.	Were any stressed vegetation noted on-site during the site reconnaissance? (If yes, please indicate location and approximate size.)	No	No sign of stressed vegetation on site.
8.	Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	Yes	Stained surfaces are mainly found towards the site boundary in the machinery maintenance area. Several stains were found within the open storage area as shown in Appendix 8.5a
9.	Are there any potential off-site sources of contamination?	No	-
10.	Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	No	-
11.	Are there any sumps, effluent pits, interceptors or lagoons on site?	No	-
12.	Any noticeable odours during site walkover?	No	-
13.	Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	Yes	Machinery Maintenance Area: - One temporary oil drum to transport the oil on-site - A small amount of battery acid cylinders - Acetylene cylinders - Waste lubricating oil stored in containers

Appendix 8.5

Site Visit Photo Records



NOTES :

- APPLICATION SITE
- MACHINERY STORAGE AREA
- MACHINERY MAINTENANCE AREA
- BUILDING MATERIAL STORAGE AREA
- PHOTOLOG TAKEN DIRECTION
- PHOTOLOG TAKEN DIRECTION (WITH CONTAMINATION POTENTIAL)
- STAINED SURFACE

Consultant

Allied Environmental Consultants Limited

Project No. : 2127	
Drawing By : LL	
Project : APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES	
Drawing Title : PHOTOLOG MAP INDICATION	
Drawing No : FIGURE 8.5a	Revision : 1
Scale : AS SHOWN	Date : FEB 2024

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A3 420 x 297

G:\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\01 EA (AIR+NOISE+LANDCON)\ISSUE 5\LANDCON_FIG&APP\AIRDRONE.DWG



Photo1



Photo2



Photo3



Photo4

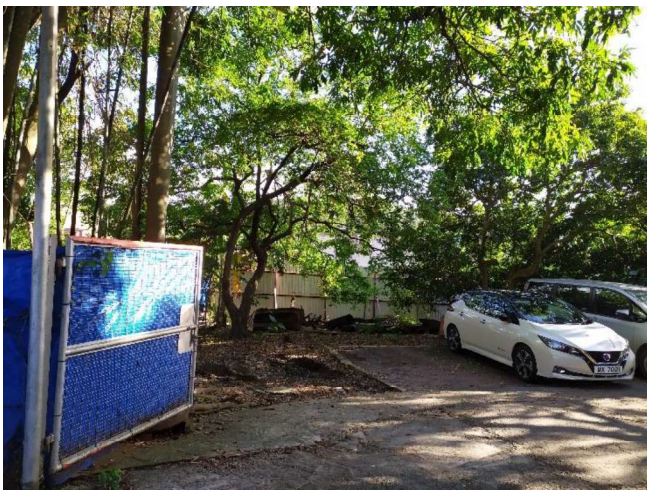

Photo5



Photo6



Photo7



Photo8



Photo9



Photo10



Photo11



Photo12



Photo13



Photo14



Photo15



Photo16



Photo17



Photo18



Photo19



Photo20

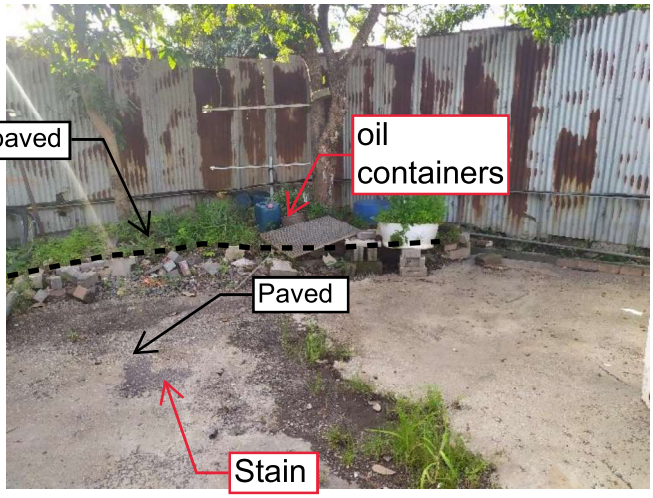

Photo21



Photo22



Photo23



Photo24



Photo25



Photo26



Photo27



Photo28



Photo29



Photo30



Photo31



Photo32



Photo33



Photo34



Photo35



Photo36



Photo37



Photo38



Photo39



Photo40



Photo41



Photo42



Photo43



Photo44



Photo45



Photo46



Photo47



Photo48



Photo49



Photo50



Photo51



Photo52



Photo53



Photo54



Photo55



Photo56



Photo57



Photo58

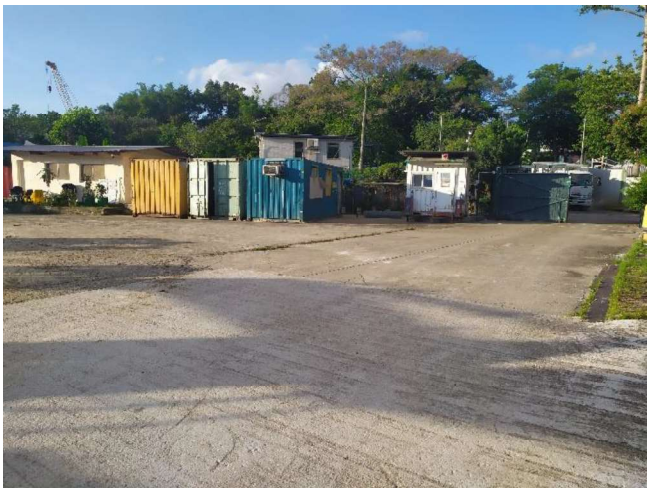

Photo59



Photo60

OLC-3



Photo61



Photo62



Photo63



Photo64

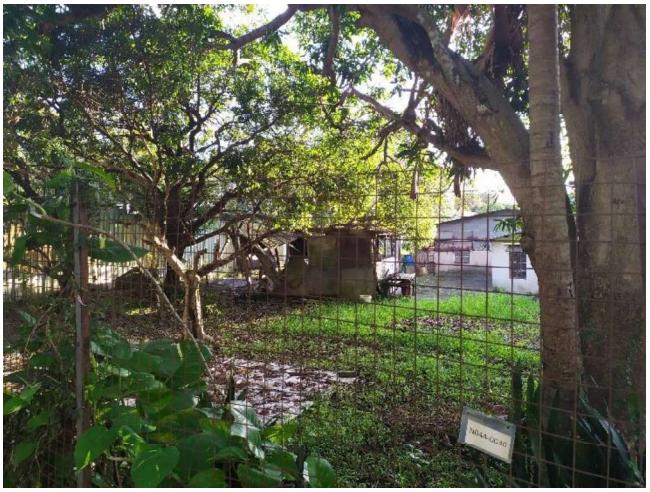

Photo65



Photo66



Photo 67



Photo68

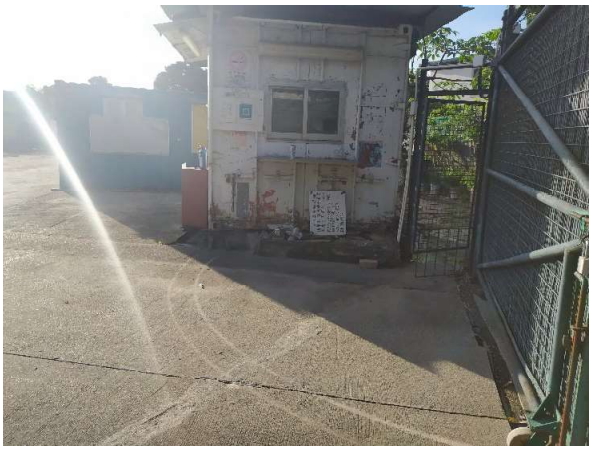

Photo69



Photo70



Photo 71



Photo 72



Photo 73

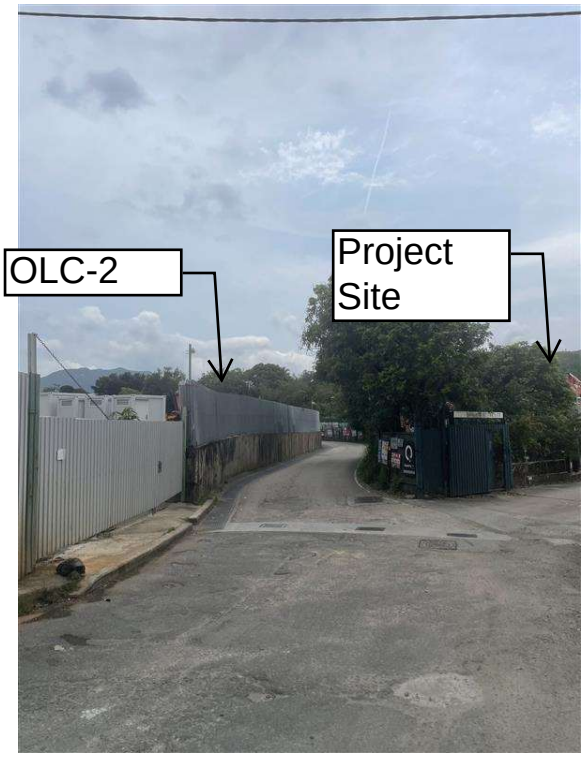

Photo 74

Appendix 9.1

Extract of Reference for Waste Index

- Practice Guide for Investigation and Remediation of Contaminated Land

5.2 Potential Impacts

Construction Phase

5.2.1 The key potential waste sources during the construction phase are:

- Inert Construction and Demolition ("C&D") materials (e.g. waste concrete, surplus soil, waste asphalt etc.)
- Non-inert C&D Waste (e.g. wood and plastics)
- Chemical wastes such as waste battery and waste lubricating oil from vehicles/plant maintenance
- General refuse generated by site workers

Inert C&D Materials

5.2.2 Inert C&D materials are those which do not decompose, such as debris, rubble, earth and concrete, and which are suitable for land reclamation and site formation.

5.2.3 The major source of inert C&D materials during construction includes excavation for removal of paving. The Site area is approx. 9,705m^2 and approx. 20% of the Site area with concrete paving will be removed, i.e., 1,941m^2. Assuming the paving density is 2 tonnes/m^3 and the thickness of paving is 100mm, approx. 194 tonnes waste paving will be generated from the removal of paving.

5.2.4 As advised by the Applicant, excavation will be minimal and the amount of C&D material due to excavation is therefore assumed to be negligible.

5.2.5 Construction waste will also be generated during construction of the Proposed Development. This will comprise inert C&D materials, such as concrete waste, waste from blockwork and brickwork; and non-inert C&D materials (or C&D waste) from timber formwork, packaging waste and other non-inert wastes.

5.2.6 In accordance with Section 3.2 of *A Guide for Managing and Minimizing Building and Demolition Waste* published by the Hong Kong Polytechnic University in May 2001 ("the Guide"), it provides a "waste index" for building waste generation in Hong Kong based on the Gross Floor Area ("GFA") of three different building types as follows:

- Private Housing Projects 0.250m^3/m^2 GFA
- Government Housing Projects 0.174m^3/m^2 GFA
- Commercial Office Projects 0.200m^3/m^2 GFA

5.2.7 In order to properly estimate building waste from the Proposed Development, the "waste index" also include C&D wastes such as timber formwork, packaging waste and other wastes. On the other hand, the Guide does not identify what proportion of building waste is inert C&D materials and what proportion is C&D wastes.

5.2.8 With reference to Plate 2.12 of EPD's *Monitoring of Solid Waste in Hong Kong – Waste Statistics for 2021*, in 2021 94% of construction wastes was either reused on-site or sent to

the public fill reception facilities, implying that such construction wastes should be inert C&D materials. The proportion of inert C&D materials in the "waste index" can therefore be estimated by applying the Hong Kong-wide proportion of inert C&D materials in construction waste, i.e. 94%, to the "waste index" as follows:

$$\text{Waste Index}_{\text{Inert C\&D materials (Commercial Office Projects)}} = 0.94 \times 0.200 m^3/m^2 \text{ GFA}$$

$$= 0.188 m^3/m^2 \text{ GFA}$$

5.2.9 The inert C&D materials component of building waste from the Proposed Development with a total floor area of approx. 2,025m^2 has therefore been estimated below:

$$\text{Building Waste} = \text{Waste Index}_{\text{Inert C\&D materials (Commercial Office Projects)}} \times \text{GFA}$$

$$= 0.188 \times 2,025$$

$$= 381 m^3$$

5.2.10 Assuming the density of inert C&D materials is 1.8 tonnes/m^3, approx. 686 tonnes of building waste would be generated by the Proposed Development.

Table 5-1 Total Estimated Inert C&D Materials Generated During Construction

INERT C&D MATERIAL TYPE	ESTIMATED NON-INERT C&D MATERIAL GENERATION (TONNES)
STAGE: SITE CLEARANCE AND FORMATION	
Paving	194
Excavated Material	Negligible
STAGE: INFRASTRUCTURE CONSTRUCTION	
Building Waste	686
Total	**880**

5.2.11 In total, approx. 880 tonnes of inert C&D materials may be generated throughout the construction period. Assuming the construction period to be nine months with six working days a week and four weeks a month, the daily inert C&D material generation rate will be approx. 4 tonnes/day (i.e. 880 tonnes/(6 x 4) x 9 months)).

5.2.12 Inert C&D materials should be reused on-site as far as practicable. Good site practice and mitigation measures recommended in **Section 5.3** should be provided and implemented. Surplus inert C&D materials, if any, should be reused or recycled off-site as far as practicable. If there will still be any remaining materials, they should be delivered to public fill reception facilities such as Fill Bank at Tuen Mun Area 38.

5.2.13 With the provision and implementation of the recommended mitigation measures, no adverse waste impact from the handling, transportation or disposal of inert C&D materials during construction of the Proposed Development is anticipated.

Non-Inert C&D Materials (or C&D Waste)

5.2.14 Non-inert C&D materials (or C&D waste), are those which can decompose such as bamboo, timber, vegetation, packaging waste and other organic material, and which are therefore unsuitable for land reclamation.

5.2.15 The major source of non-inert C&D materials during construction will be building waste including non-inert C&D materials such as timber formwork, packaging waste.

5.2.16 The building waste are included in the "waste index" provided in the Guide, discussed above, however, this also includes inert C&D materials.

5.2.17 As shown in Plate 2.12 of Waste Statistics for 2021, in 2021 6% of C&D waste was disposed of at landfills. The proportion of non-inert C&D materials (or C&D waste) in the "waste index" can therefore be estimated by applying the Hong Kong-wide proportion of non-inert C&D materials (or C&D waste) in construction waste, i.e. 6%, to the "waste index" as follows:

$$\text{Waste Index}_{\text{Non-Inert C\&D materials (Commercial Office Projects)}} = 0.06 \times 0.200 m^3/m^2 \text{ GFA}$$

$$= 0.012 m^3/m^2 \text{ GFA}$$

5.2.18 Hence, the non-inert C&D materials (or C&D waste) components in building waste can therefore be estimated as follows:

$$\text{Building Waste} = \text{Waste Index}_{\text{Non-Inert C\&D materials (Commercial Office Projects)}} \times \text{GFA}$$

$$= 0.012 \times 2{,}025$$

$$= 24.3 m^3$$

5.2.19 Assuming the density of non-inert C&D materials is 1.0 tonnes/m^3, approx. 24.3 tonnes of C&D waste will be arising from the Proposed Development. Assuming the construction period to be nine months with six working days a week and four weeks a month, the daily C&D waste generation rate will be approx. 0.11 tonnes/day (i.e. 24.3 tonnes/(6 x 4) x 9 months)).

5.2.20 The non-insert C&D waste is summarised in **Table 5-2**.

Table 5-2 Total Estimated Non-Inert C&D Materials Generated During Construction

NON-INERT C&D MATERIAL TYPE	ESTIMATED NON-INERT C&D MATERIAL GENERATION (TONNES)
STAGE: INFRASTRUCTURE CONSTRUCTION	
Building Waste	24.3
Total	**24.3 or 24**

5.2.21 On-site sorting should be carried out for non-inert C&D materials generated from the works. Recyclable materials, such as metal, paper product, timber and plastics, should be collected by local recyclers for recycling. All non-inert C&D materials should be recycled as far as possible and landfill disposal should be adopted as the last resort.

5.2.22 The quantity of the generated non-inert building waste could be recycled/reused is expected to be no more than 10% of the generated amount in view of the scale of the Proposed Development. Therefore, no more than 2 tonnes C&D waste may be reused or recycled on-site.

5.2.23 If 10% C&D waste can be reused/recycled on-site, the surplus C&D waste mainly comprising building waste will be approx. 22 tonnes in total. Assuming the construction

Appendix G Drainage Impact Assessment

Issue No. : 5
Issue Date : Jun 2024
Project No. : 2127

DRAINAGE IMPACT ASSESSMENT

FOR

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOTS 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Prepared by

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Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
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1. INTRODUCTION

1.1. Background

1.1.1. Allied Environmental Consultants Limited ("AEC") has been appointed to conduct a Drainage Impact Assessment ("DIA") to support of a Section 12A application for the mixed use development at Lot 796 & 1008 RP at D.D. 77 and adjoining government land in Ping Che, Ta Kwu Ling, New territories (hereinafter referred to as "Application Site").

1.1.2. According to the approved Ping Che and Ta Kwu Ling Outline Zoning Plan (OZP No.: S/NE-TKL/14) gazette on 12/03/2010, the Application Site is currently zoned as "Open Storage" ("OS") Zone, the southern part of the Application Site is zoned as "Agriculture" ("AGR") and a minor portion of the Application Site is shown as "Road".

1.2. Objectives

1.2.1. The objectives of this DIA are to review the proposed drainage facilities in the vicinity of the Proposed Development at the Application Site, evaluate potential impacts based on the catchment, recommend appropriate options for stormwater discharge, if necessary.

1.3. Report Structure

1.3.1. The remaining chapters of this report are shown below:

Chapter 2 – Site Context
Chapter 3 – Relevant Guidelines & Standards
Chapter 4 – Drainage Impact Assessment
Chapter 5 – Conclusion

2. SITE CONTEXT

2.1. Site Location and Its Environs

2.1.1. The proposed development is located at Ping Che Road from the north to northeast, the unnamed village road to the east, village, agricultural land and open storage area to the south and west.

2.1.2. ***Figure 2.1*** shows the Site location and its environs.

2.2. Proposed Development Scheme

2.2.1. The proposed site area of the application site is 17,822m^2, with a plot ratio of 5.9 for domestic use and 1.1 for non-domestic use. The total GFA for domestic use is 105,145 m^2, and the 19,603 m^2 for non-domestic use. The proposed development will consist of 5 blocks of residential tower ranging from 47 to 48-storey (excluding basement) in height, provided 2,205 residential unit, and 1 block of commercial tower with 35-storey (excluding basement) in height. The non-domestic use consisted of retail, office, hotel or service apartment, clubhouse, day care centre for the elderly and child care centre, and a proposed on-site Sewerage Treatment Plant (STP) within the Application Site.

2.2.2. The Master Layout Plan (MLP) and Sectional Drawing of the proposed development are shown in ***Appendix A.*** Based on the tentative implementation programme, the planned population intake would be in year 2032.

2.3. Existing Drainage Condition

2.3.1. Drainage information was obtained from the GeoInfo Map services of the Lands Department to gather the background information on drainage infrastructure in the vicinity of the Application Site. Concerned drainage network was identified for estimation of the potential impact to the downstream drainage associated with the proposed development. Stormwater runoff from Proposed Development is collected at the terminal manhole and discharged to existing public stormwater network along the Ping Che Road at the northeast side of the site, flowing to northwest direction and into the Ping Yuen River. The size of the existing stormwater pipe along Ping Che Road is relatively small ranging from 375mm to 600mm.

2.4. Planned Drainage Facilities in the vicinity

2.4.1. With reference to Project Profile prepared for "Remaining Phase Development of the New Territories North (NTN) – NTN New Town and Man Kam To" (NTN Development) in May 2021, (ESB-341/2021), the application site fall within the NTN development. The NTN includes the following individual works items.

- Item F.1, Part I, Schedule 2 - Sewage treatment works with an installed capacity of more than 15,000 m3 per day

- Item F.2, Part I, Schedule 2 - Sewage treatment works- (a) with an installed capacity of more than 5,000 m3 per day

- Item F.3, Part I, Schedule 2 - A sewage pumping station- with an installed capacity of more than 300,000 m3 per day

- Item I.2, Part I, Schedule 2 - A flood storage pond more than 10 ha in size

- Item I.1(b), Part I, Schedule 2 - Drainage channel or river training and diversion works which discharges or discharge into an area which is less than 300 m from the nearest boundary of an existing or planned (i) site of special scientific interest; (ii) site of cultural heritage; (iii) marine park or marine reserve; (iv) fish culture zone; (v) wild animal protection area; (vi) coastal protection area; or (vii) conservation area

2.4.2. In December 2017, Planning Department (PlanD) and Civil Engineering and Development Department (CEDD) completed Preliminary Feasibility Study on Developing the New Territories North (NTN) (the Preliminary NTN Study). It is noted that a proposed drainage works and a Drainage Master Layout Plan have been formulated.

2.4.3. During the course of study, relevant details and construction programme cannot be obtained from North Development Office (NDO) of CEDD, the Project Proponent of the NTN Development.

3. RELEVANT GUIDELINES & STANDARDS

3.1. Legislation, Standards and Guidelines

3.1.1. Water quality in Hong Kong is legislated by the provisions of the Water Pollution Control Ordinance (Cap 358), 1980 (WPCO). Territorial Water has been subdivided into ten Water Control Zones (WCZ) and four supplementary water control zones. A Technical Memorandum on Standards for Effluents discharged into Drainage and Sewerage Systems, Inland and Coastal Water (TMES) has been issued, which requires licensing of all discharges into all public sewers and drains. The water quality standards will have to be met during the operation stage.

3.1.2. Besides as stipulated in the Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations 41(1), 40(2), 41(1), 90 and recap in ProPECC PN 1/23, domestic sewage should be discharged to a foul water sewer and surface water should be discharged via rainwater pipes to stormwater drains during operation phase.

3.2. Assessment Methodology

3.2.1. Under the existing condition before proposed development, the ground level of Application Site is 14.3 mPD. According the Drainage Record Plan, the cover level of nearby existing manhole is around 17 mPD and thus it is assumed that storm water from the Application Site is not discharging to the existing drainage system along Ping Che Road. According to existing flow regime, surface runoff from the Application Site and its vicinity flows towards northwest direction and finally discharged into Ping Yuen River following the topography of Ping Che Area***. Figure 3.1*** illustrates the existing stormwater surface run-off flow path from upstream catchments to the Application Site, and finally collected by Ping Yuen River to the Northwest of the Site.

3.2.2. With the proposed development, the ground level of Application site elevated to 16.0 mPD. ***Figure 3.2*** illustrates an overview of corresponding catchment areas and existing drainage network for this study. As shown in ***Figure 3.2***, the ground level of the Application Site is elevated and lower than that of Catchment A. storm water from Catchment A will be collected by the proposed U- Channel along the site boundary at the east of the Application Site. The surface runoff within the Application Site and the treated effluent from on-site STP together with storm water from Catchment A will be collected and discharge through two terminal manholes (P1: STMH-01 and P2: STMH-02) at the Application Site respectively. They will be connected to the existing 450mm sewer public storm water manholes (D1:

SMH1003241 and D3: SMH1003243).

3.2.3. The drainage calculations are in accordance with the Stormwater Drainage Manual (Fifth Edition, January 2018 and Corrigendum No. 1/2022) published by Drainage Services Department (DSD). Rational Method shall be applied to estimate the peak surface runoff values. The idea behind the Rational Method is that for a spatially and temporally uniform intensity *i*, which continues indefinitely, the runoff at the outlet of a catchment will increase until the time concentration t_c, when the whole catchment is contributing flow to the outlet. The peak runoff is calculated as follows.

$$Q_P = 0.278\ C\ i\ A \quad \ldots\ldots (1)$$

Where

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

3.2.4. Runoff coefficient C depends on the permeability, slope and pond character of the surface; rainfall intensity i, is the average rainfall intensity selected on the basis of the design rainfall duration and return period.

4. DRAINAGE IMPACT ASSESSMENT

4.1. Site Condition

4.1.1. The existing Application Site is used as an open storage, it is partially covered with vegetation (~35% vegetation; ~65% paved). The flow path of the existing stormwater surface runoff is illustrated in ***Figure 3.1***, which indicates that the runoff from immediate upstream will flow through the Application Site, and the runoff will flow further downstream based on the topography. The existing surface runoff is expected to free flow along the surface towards northwest direction, and finally discharge to Ping Yuen River.

4.1.2. The Application Site contains an approximate area of 17,822 m^2. The surface runoff within the Application Site after development and the treated effluent from on-site STP will be collected and discharge through the terminal manhole (P1: STMH-01) at the Application Site and connected to the existing 450mm public storm water manhole (D3: SMH1003243. The at grade greenery area will be maintained at minimum of 20% and the proposed permeable material paving for the Application Site will be at least 15%, subject to detail design at later stage.

4.1.3. Due to the geographical characteristics, the existing surface runoff from the project site are flowing towards northwest direction, and existing project site is receiving runoff from the direct upstream Catchment A. The Proposed Development elevated the level of Application Site from 14.3 mPD to 16.0 mPD, it is expected that the runoff from immediate upstream of the site will be disrupted and intercepted. Therefore, U-channel is proposed along the site boundary at the east of the Application Site to cater the runoff from the Catchment A, collected by the terminal manhole (P2: STMH-02) and discharged to the existing 375mm public stormwater manhole (SMH1003241).

4.1.4. The public stormwater manhole also serving the area Catchment B and Catchment C at the vicinity of the Application site. Catchment B will be discharged to public manhole SMH1003241 while Catchment C will be discharged to SMH1003243.

4.1.5. The flow from the preliminary drainage plan is shown in ***Figure 3.2***, the detailed drainage plan will be submitted at later detailed design stage.

4.2. Peak Flow Estimation

4.2.1. The peak flow from the Proposed development and the surrounding Catchments is calculated

from equation (1) as mentioned in ***Section 3.2.3***. Detailed calculation is tabulated in ***Appendix B*** and summarized in ***Table 4-1*** below.

Table 4-1 Estimated Peak Flow for the Application Site

Catchment	Area (m^2)	Paved Area (%)	Unpaved Area (%)	Runoff under 1 in 50 years scenario (m^3/s)	Receiving Terminal Stormwater Manhole	Receiving Public Stormwater Manhole
Proposed Development						
Application Site	17,822	20	80	1.052	STMH-01	SMH1003243
Catchment A	6,123	30	70	0.270	STMH-02	SMH1003241
Catchment B	6,303	30	70	0.279	-	SMH1003241
Catchment C	6,553	30	70	0.271	-	SMH1003243
STP	-	-	-	0.072	STMH-01	SMH1003243
Total:		**-**	**-**	**1.943**		
Existing Scenario						
Application Site	17,822	35	65	0.718	N/A	N/A
Total:		**35**	**65**	**0.718**		

4.3. Potential Impact on Public Stormwater System due to Surface Runoff

4.3.1. The Application site is currently slightly hilly land and partially covered by greenery, while the proposed development is basically built on the paved surface.

4.3.2. Based on the assessment, the overall greenery area of the existing Application Site is approximately 35%. The anticipated surface runoff form the existing site is 0.718m^3/s, the calculation is shown in ***Table 4-1*** and ***Appendix B***.

4.3.3. The Colebrook-White and Manning frictional resistance equations with reference to the Stormwater Drainage Manual (Fifth Edition) are used to calculate the hydraulic capacities of the stormwater drainage pipes. As defined in Section 6.6.2 in Stormwater Drainage Manual, 50 years of the return periods for an Urban Drainage Branch System is adopted for the assessment.

Existing Condition

4.3.4. The hydraulic calculation of runoff from existing Application Site and surrounding catchments is calculated to assess the adequacy of the existing stormwater pipe. The surface run off from Catchment A and Catchment B are expected to discharge into public manhole SMH1003241,

while the Catchment C and existing Application Site are discharged into public manhole SMH1003243. The calculation is shown in ***Appendix C*** and summarized in ***Table 4-2***.

Table 4-2 Summary of Peak Flow and Drainage Capacity before Proposed Development

Manhole		Catchment	Total Flow from Catchment (m^3/s)	Percentage of Capacity
From	To			
SMH1003241	SMH1003242	Catchment A + B	0.548	**505%**
SMH1003242	SMH1003243	Catchment A + B	0.548	**446%**
SMH1003243	SMH1003246	Existing Site + Catchment A + B + C	1.538	**501%**
SMH1003246	SMH1003247	Existing Site + Catchment A + B + C	1.538	**554%**
SMH1003247	SMH1003249	Existing Site + Catchment A + B + C	1.538	**553%**
SMH1003249	SMH1003248	Existing Site + Catchment A + B + C	1.538	**564%**
SMH1003248	SMH1003250	Existing Site + Catchment A + B + C	1.538	**678%**
SMH1003250	SMH1003252	Existing Site + Catchment A + B + C	1.538	**536%**
SMH1003252	SMH1003253	Existing Site + Catchment A + B + C	1.538	**520%**
SMH1003253	SMH1003254	Existing Site + Catchment A + B + C	1.538	**529%**
SMH1003254	SMH1003255	Existing Site + Catchment A + B + C	1.538	**370%**
SMH1003255	Outlet to Ping Yuen River	Existing Site + Catchment A + B + C	1.538	**271%**

*Note: The segments exceeding the capacity are **bolded***

4.3.5. Based on the hydraulic calculation shown in ***Appendix C*** and ***Table 4-2***, the stormwater flow from existing condition will exceed the capacity of the public drainage, ranged from 271% to 678%.

After Proposed Development

4.3.6. The site formation work is expected to increase the level from 14.3mPD to 16.0mPD. As discussed in ***Section 4.1.3***, U-channel drainage is proposed along the site boundary at the east of the Application Site to cater the upstream runoff, collected by the proposed STMH-02 and discharged to the existing 375mm public stormwater manhole (SMH1003241).

4.3.7. There is also expected to be a decrease in overall greenery area within the Application Site after proposed development, the greenery is reduced from ~35% to ~20%. According to the

DIA hydraulic calculations presented in ***Table 4-1*** and ***Appendix B***, it is anticipated that surface runoff will increase, going from 0.718m³/s to 1.052m³/s. The runoff from Application Site and treated effluent from on-site STP together with storm water from Catchment A will be collected and discharge through the STMH-01 and STMH-02 and connected to the existing 450mm public storm water manhole. At the same time, the stormwater runoff from catchment B and Catchment C will be collected and discharge through the SMH1003240 and SMH1003243 respectively and connected to the existing 375mm to 450mm public stormwater manhole. In this connection, the proposed development will lead to increase of 0.406 m^3/s in peak flow at existing drainage system along Ping Che Road, taking stormwater from Catchment A into consideration.

4.3.8. According to the calculation as tabulated in ***Appendix B***, the total flows from the Application Site under 1 in 50 years storm event are found to be 1.124 m^3/s after the Proposed Development, as summarized in ***Table 4-1***.

4.3.9. The hydraulic calculation of runoff from Application site and surrounding catchments is also included in the calculation to assess the adequacy of the proposed stormwater pipe, the calculation is shown in ***Appendix C*** and summarized in ***Table 4-3.***

Table 4-3 Estimation of Peak Flow and Drainage Capacity Check

Manhole		Catchment	Total Flow from Catchment (m^3/s)	Percentage of Capacity
From	To			
STMH-02	SMH1003241	Catchment A	0.270	85%
SMH1003241	SMH1003242	Catchment A + B	0.548	**505%**
SMH1003242	SMH1003243	Catchment A + B	0.548	**446%**
STMH-01	SMH1003243	Application Site + STP	1.124	56%
SMH1003243	SMH1003246	Application Site + STP + Catchment A + B + C	1.943	**633%**
SMH1003246	SMH1003247	Application Site + STP + Catchment A + B + C	1.943	**700%**
SMH1003247	SMH1003249	Application Site + STP + Catchment A + B + C	1.943	**699%**
SMH1003249	SMH1003248	Application Site + STP + Catchment A + B + C	1.943	**712%**
SMH1003248	SMH1003250	Application Site + STP + Catchment A + B + C	1.943	**857%**
SMH1003250	SMH1003252	Application Site + STP + Catchment A + B + C	1.943	**677%**
SMH1003252	SMH1003253	Application Site + STP + Catchment A + B + C	1.943	**657%**
SMH1003253	SMH1003254	Application Site + STP + Catchment A + B + C	1.943	**669%**

SMH1003254	SMH1003255	Application Site + STP + Catchment A + B + C	1.943	**468%**
SMH1003255	Outlet to Ping Yuen River	Application Site + STP + Catchment A + B + C	1.943	**342%**

*Note: The segments exceeding the capacity are **bolded***

4.3.10. Based on the hydraulic calculation shown in ***Appendix C*** and ***Table 4-3***, the stormwater flow for existing public drainage will exceed the capacity after development, ranged from 342% to 857%. The drainage impact is anticipated.

4.3.11. Based on the EIA Project Profile and Study brief for Development of New territories North (NTN) New Town and Man Kam To Development (NTN Development) (ESB-341/2021), Designated Projects including Sewerage Treatment Works (Item F.1 and/or Item F.2), Sewerage Pumping Station(s) (Item F.3), Drainage channel or river training and diversion works (Item I.1(b)) and a flood storage pond more than 10 ha in size (Item I.2, Part I) are included in the NTN Development.

4.3.12. The implementation details of NTN Development are yet to be confirmed, no programme and details can be obtained during the course of study, the changes and upgrading of sewerage and drainage system cannot be identified at this stage. It is expected to have upgrade works of drainage system, however the assessment is evaluate based on the existing scenario without NTN development in place for completeness is expected and the hydraulic calculation is provided in ***Appendix C***.

4.3.13. A hydraulic assessment was conducted, which the upgrading on existing drainage network is taken into account and provided in ***Appendix D***. A minimum pipe diameter, yet feasible to cater the surface runoff discharged from the application site after development is proposed. The results showed that the pipes are required to be updated to 750mm, 1050mm and 1200mm respectively. The summary of the hydraulic calculation is summarized in

4.3.14. ***Table*** 4-4.

Table 4-4 Estimation of Peak Flow and Drainage Capacity After Upgrading works is Considered

Pipe Segment	Upgraded Diameter (mm)	Maximum Capacity of Sewer (m^3/s)	Catchment	Total Flow from Catchment (m^3/s)	Percentage of Used Capacity
P2 – D1	375	0.318	Catchment A	0.270	85%
D1 – D2	750	0.673	Catchment A + B	0.548	81%

D2 – D3	750	0.763	Catchment A + B	0.548	72%
P1 – D3	600	2.009	Application Site + STP	1.124	56%
D3 – D4	1050	2.838	Application Site + STP + Catchment A + B + C	1.943	68%
D4 – D5	1050	2.566	Application Site + STP + Catchment A + B + C	1.943	76%
D5 – D6	1050	2.572	Application Site + STP + Catchment A + B + C	1.943	76%
D6 – D7	1050	2.525	Application Site + STP + Catchment A + B + C	1.943	77%
D7 – D8	1050	2.100	Application Site + STP + Catchment A + B + C	1.943	93%
D8 – D9	1050	2.655	Application Site + STP + Catchment A + B + C	1.943	73%
D9 – D10	1200	2.588	Application Site + STP + Catchment A + B + C	1.943	75%
D10 – D11	1200	2.544	Application Site + STP + Catchment A + B + C	1.943	76%
D11 – D12	1200	2.560	Application Site + STP + Catchment A + B + C	1.943	76%
D12 – D13	1200	3.494	Application Site + STP + Catchment A + B + C	1.943	56%

*Note: The segments exceeding the capacity are **bolded***

4.3.15. Further assessment will be conducted to determine if upgrading works by the Project is required. If there is exceedance or the drainage upgrading works by CEDD for NTN Development is not yet available before the intake of population of the proposed development, mitigation measures and/or upgrading works will be proposed and implemented by the Project.

4.3.16. The size and detailed arrangement of the proposed internal drainage system for the proposed development will be further reviewed in the detailed design stage. Submission will be made to Building Department for approval in due course.

4.4. Mitigation Measures

4.4.1. Based on the assessment, the stormwater peak flow will exceed the capacity of the existing public drainage system along the Ping Che Road. At the moment of limited information available, the scenario of upgrading the public drainage system from SMH1003241 to SMH1003252, upgrade from 375mm, 450mm, 525mm and 600mm to 750mm, 1050mm and 1200mm respectively, are presented as one of the feasible options for proposed mitigation measures.

U-Channel

4.4.2. Due to the alteration of the surface level of Application Site by the proposed development, a series of U-channel drainage is proposed to install along the eastern site boundary of the Application Site. The U-channel is used to accommodate the surface runoff flowing from upstream Cathcment A. The preliminary drainage layout is shown in Figure 3.2, the detailed drainage plan is subjected to detailed design stage later.

4.4.3. For collecting surface runoff within the Proposed Development and upstream catchment, the design of site drainage and disposal of various site effluents generated within the Application Site should follow the relevant guidelines and practices as given in ProPECC PN1/23. Proper drainage facilities will also be provided to discharge the surface runoff to the public drain.

Greenery and Pervious Material

4.4.4. The existing greenery to pavement ratio at the Application Site stands at 0.35 greenery: 0.65 pavement area. In order to mitigate the potential adverse impacts resulting from the proposed development, at-grade greenery and green roof within the proposed development will be maximized as far as practicable. Additionally, the proposed development will incorporate pervious paving material at hard landscape area (except EVA) when feasible. In summary, it is targeted to provide the total greenery and pervious paving area constituting of around 40% of site area, which is equivalent to existing greenery area on site.

Blue-Green Infrastructure

4.4.5. The proposed development will explore and study for incorporation of appropriate blue-green infrastructure following TC(W) No. 9/2020 Blue-Green Drainage Infrastructure" issued by DEVB in July 2020 and the recently issued DSD guidelines for blue-green infrastructure. The rainwater harvesting and detention pond will be considered. In the case of proposed development, the Stormwater Harvesting System (SHS) is installed to collect and treat the stormwater entering the storage tank during rainstorm events, and potentially reuse it toward fulfilling the needs in residences, service trades, hotel and service apartments such as toilet flushing, water features, car washing, street cleansing etc. The layout plan and design of SHS and retention pond are subjected to detailed design stage later.

4.4.6. Application of floodable area and drainage facility co-use in drainage management will also

be considered during detailed design stage when practicable. The client will implement the required mitigation measures before occupation of the project.

4.4.7. Further assessment will be conducted to determine if upgrading works by the Project is required. If there is exceedance or the drainage upgrading works by CEDD for NTN Development is not yet available before the intake of population of the proposed development, mitigation measures and/or upgrading works will be proposed and implemented by the Project. The updated DIA report will be submitted to DSD for approval.

4.4.8. The size and detailed arrangement of the proposed internal drainage system for the proposed development will be further reviewed in the detailed design stage. Submission will be made to Building Department for approval in due course.

Others

4.4.9. The applicant will be responsible for the construction of all necessary drainage system, including the proposed pipe connected to the public stormwater drain as well as other internal drainage infrastructure within the application site.

4.4.10. No fertilisers or pesticides will be routinely used for vegetation management in landscape area in accordance with the General Specification for Building (2012 edition) by Architectural Services Department (ASD). During heavy rainfall, trace of pollutants may be wash-off and is often bound or adsorbed onto particles (i.e. loose soil or litter). The stormwater drainage system on site will be equipped with silt trap to remove the particles and associated pollutants. The stormwater discharge will satisfy the effluent standards and requirements stipulated in the WPCO-TM, notably, with respect to prohibited substances as stated in clauses 8.4 and 9.1, as the case may be.

4.4.11. Layout of major drainage channels within the Proposed Development will be submitted to the relevant authorities. All drainage facilities shall be designed and constructed to conform to the requirements laid down in:

- The Stormwater Drainage Manual, DSD
- The General Specification for Civil Engineering Works, Hong Kong Government
- The DSD Standard Drawings

5. CONCLUSION

5.1.1. A Drainage Impact Assessment (DIA) has been conducted to evaluate the possible impacts on the public drainage network due to the proposed development. The proposed project will involve alteration of the surface level of Application Site. Series of U-channel drainage is proposed to install along the eastern site boundary of the Application Site to collect storm water from the catchment immediately upstream (Catchment A). The stormwater runoff from Application Site, Catchment A, Catchment B, Catchment C and the treated effluent generated from STP will be collected at proposed terminal manholes (STMH-01 and STMH-02) and public stormwater manhole (SMH1003241 and SMH1003243), then discharged into the public drainage along Ping Che Road.

5.1.2. There is a New Territories North (NTN) New Town and Man Kam To Development plan nearby the Application Site, the planned drainage facilities are expected according to the Project Profile for the NTN Development, where design details and construction programme cannot be obtained during the course of study.

5.1.3. Based on the assessment, the peak flow is exceeding the capacity of the existing drainage system. A scenario with upgrading works from SMH1003241 to SMH1003255 until the outlet to Ping Yuen River is proposed as one of the feasible mitigation measures, with limited information available. Further study will be conducted at detailed design stage taken the planned drainage facilities into consideration when relevant information available.

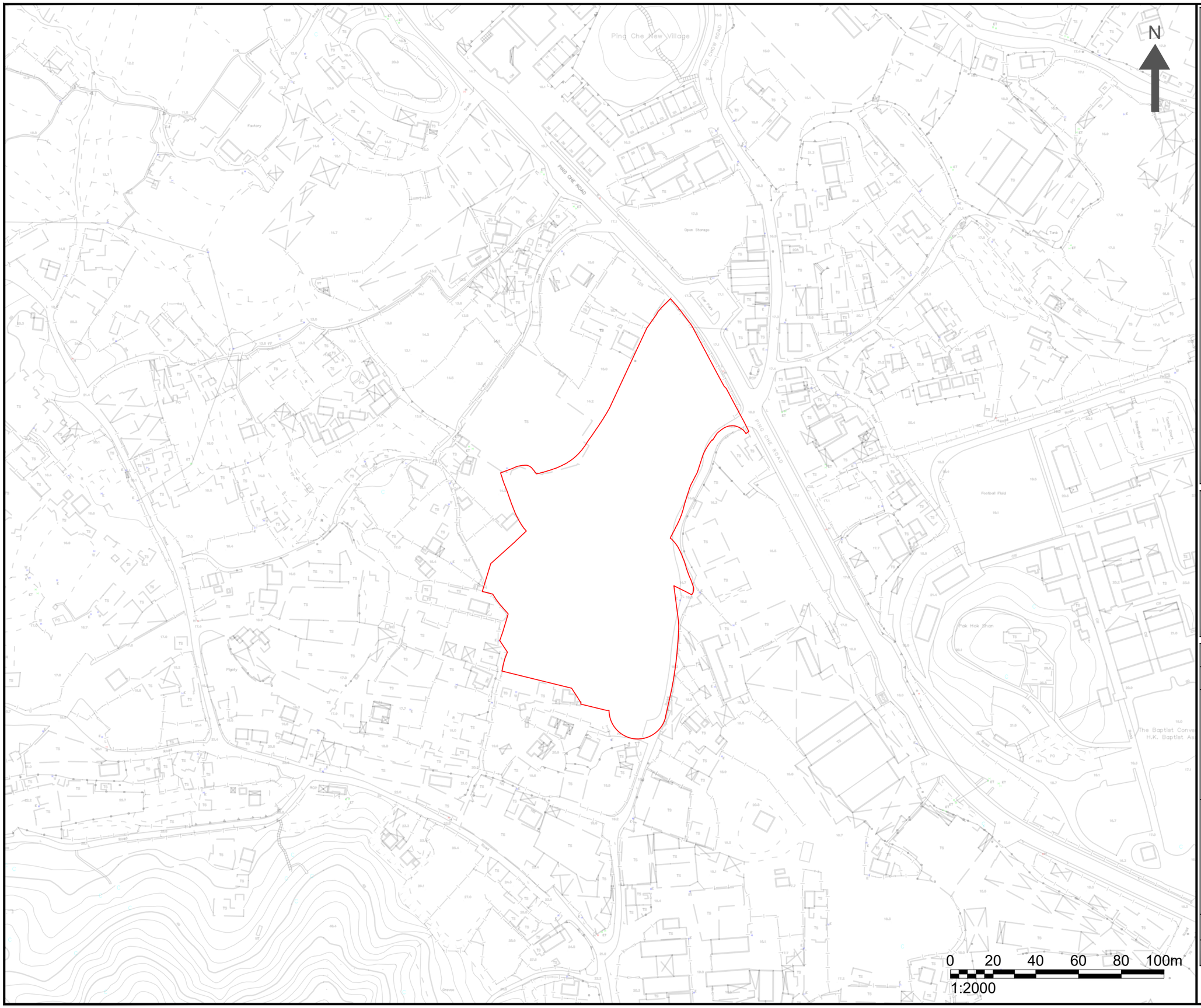
5.1.4. Various mitigation measures will be explored and studied for incorporation in the design for implementation to minimize the discharge of storm water from the Application Site, including

- Greenery (at grade greenery/ green roof)
- Pervious material
- Rainwater harvesting system and retention pond
- Application of Floodable Area and Drainage Facility Co-Use

5.1.5. Based on the above, it is concluded that the drainage impact arising from the proposed development should be acceptable.

Figure 2.1

Application Site Location and Its Environs



NOTES :

APPLICATION SITE

Consultant

Allied Environmental Consultants Limited

Project No. :	2127
Drawing By :	CS

Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOTS 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

APPLICATION SITE LOCATION & ITS ENVIRONS

Drawing No : FIGURE 2.1	Revision : 1
Scale : AS SHOWN	Date : OCT 2023

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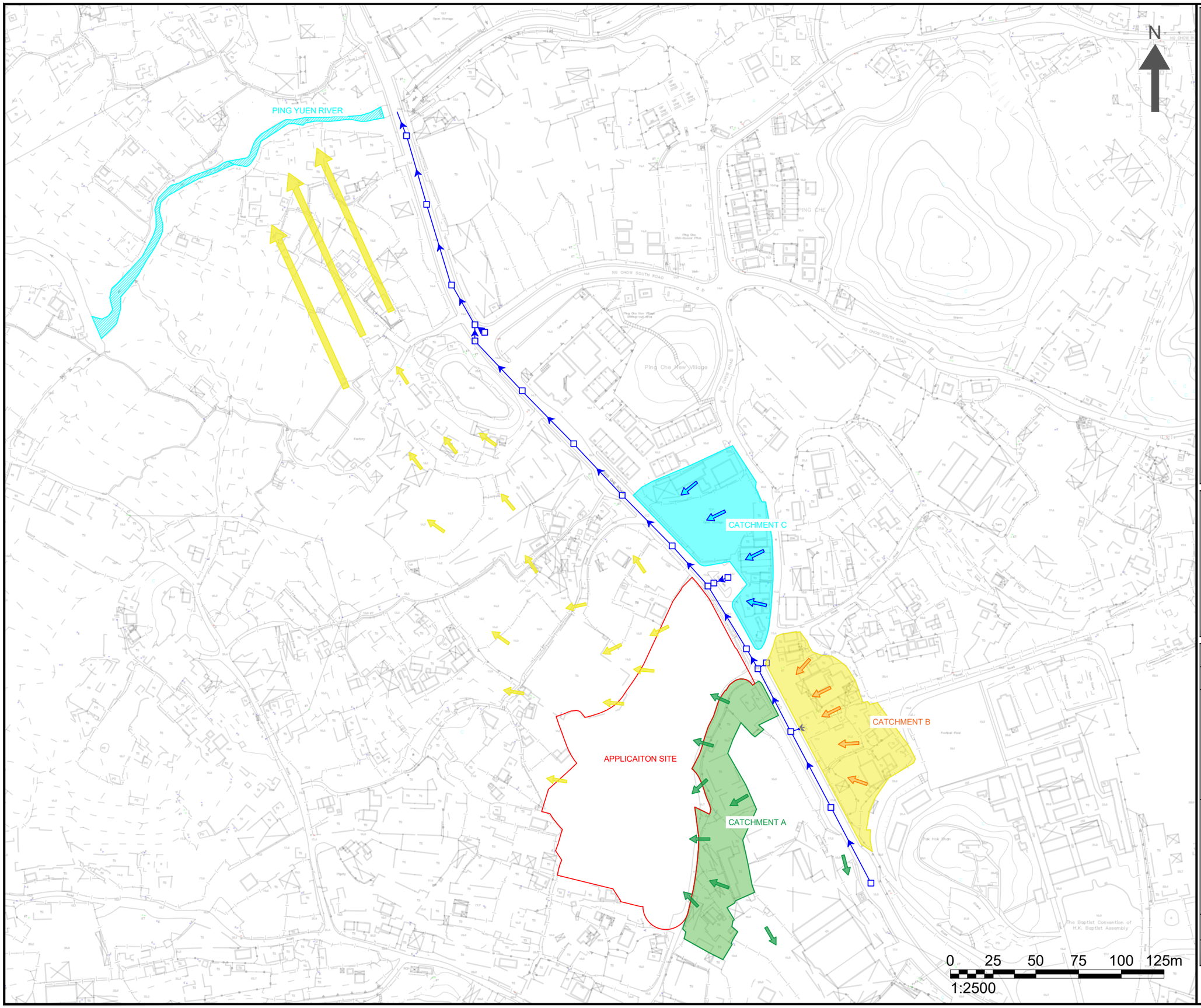
A3 420 x 297

C:\USERS\NGANCHUNSANG\SYNOLOGYDRIVE\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\03 DIA\ISSUE 4\FIG\[2127] DIA FIG 2.1_SITE LOCATION_ISSUE 4.DWG

Figure 3.1

Overview of Existing Surface Runoff Flow Path at the Vicinity of the Application Site



NOTES :

APPLICATION SITE

CATCHMENT AREA

EXISTING DRAINAGE & MANHOLE

EXISTING SURFACE RUNOFF FLOW PATH FROM CATCHMENT A

EXISTING SURFACE RUNOFF FLOW PATH FROM CATCHMENT B

EXISTING SURFACE RUNOFF FLOW PATH FROM CATCHMENT C

EXISTING SURFACE RUNOFF FLOW PATH TO DOWNSTREAM

PING YUEN RIVER

Consultant

Allied Environmental Consultants Limited

Project No. :	2127
Drawing By :	CS

Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOTS 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

OVERVIEW OF EXISTING SURFACE RUNOFF FLOW PATH AT THE VICINITY OF APPLICAITON SITE

Drawing No :	Revision :
FIGURE 3.1	4
Scale :	Date :
AS SHOWN	JUN 2024

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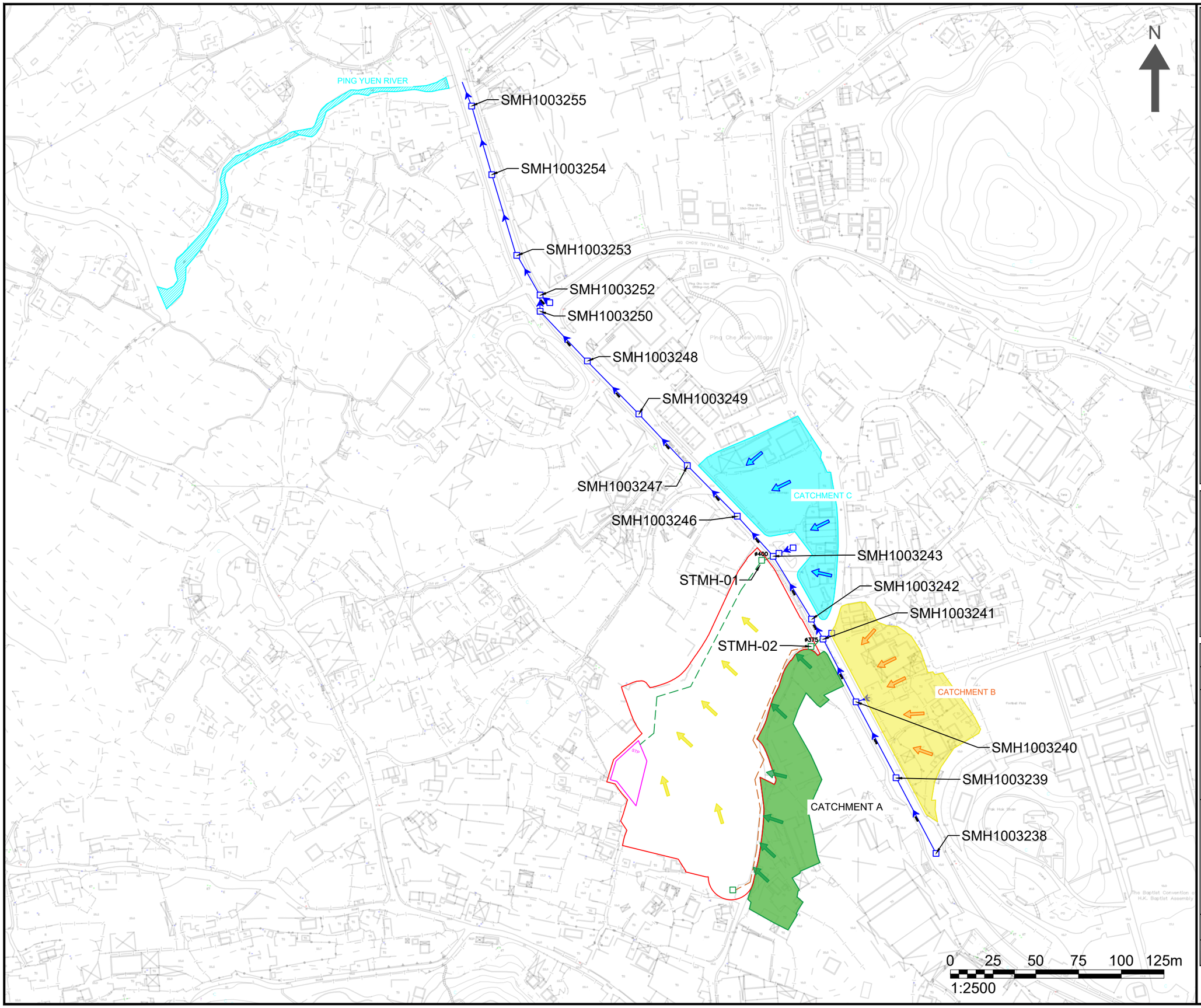
A3 420 x 297

C:\USERS\NGANCHUNSANG\SYNOLOGYDRIVE\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\03 DIA\ISSUE 5\FINALIZE\FIG\[2127] DIA FIG 3.1_EXISTING FLOW PATH_ISSUE 5_20240613.DWG

Figure 3.2

Overview of Existing Drainage, Proposed Drainage & Catchment Area



NOTES :

- APPLICATION SITE
- CATCHMENT AREA
- PROPOSED ON-SITE SEWAGE TREATMENT PLANT
- EXISTING DRAINAGE & MANHOLE
- PROPOSED DRAINAGE & MANHOLE
- PROPOSED U-CHANNEL DRAINAGE
- SURFACE RUNOFF FLOW PATH FROM PROJECT SITE / CATCHMENT AFTER DEVELOPMENT
- Ping Yuen River

Consultant

Allied Environmental Consultants Limited

Project No. : 2127

Drawing By : CS

Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOTS 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

OVERVIEW OF EXISTING DRAINAGE, PROPOSED DRAINAGE & CATCHMENT AREA

Drawing No :	Revision :
FIGURE 3.2	4
Scale :	Date :
AS SHOWN	JUN 2024

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A3 420 x 297

C:\USERS\NGANCHUNSANG\SYNOLOGYDRIVE\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\03 DIA\ISSUE 5\FINALIZE\FIG\[2127] DIA FIG 3.2_DRAINAGE OVERVIEW_ISSUE 5_20240613.DWG

Appendix A

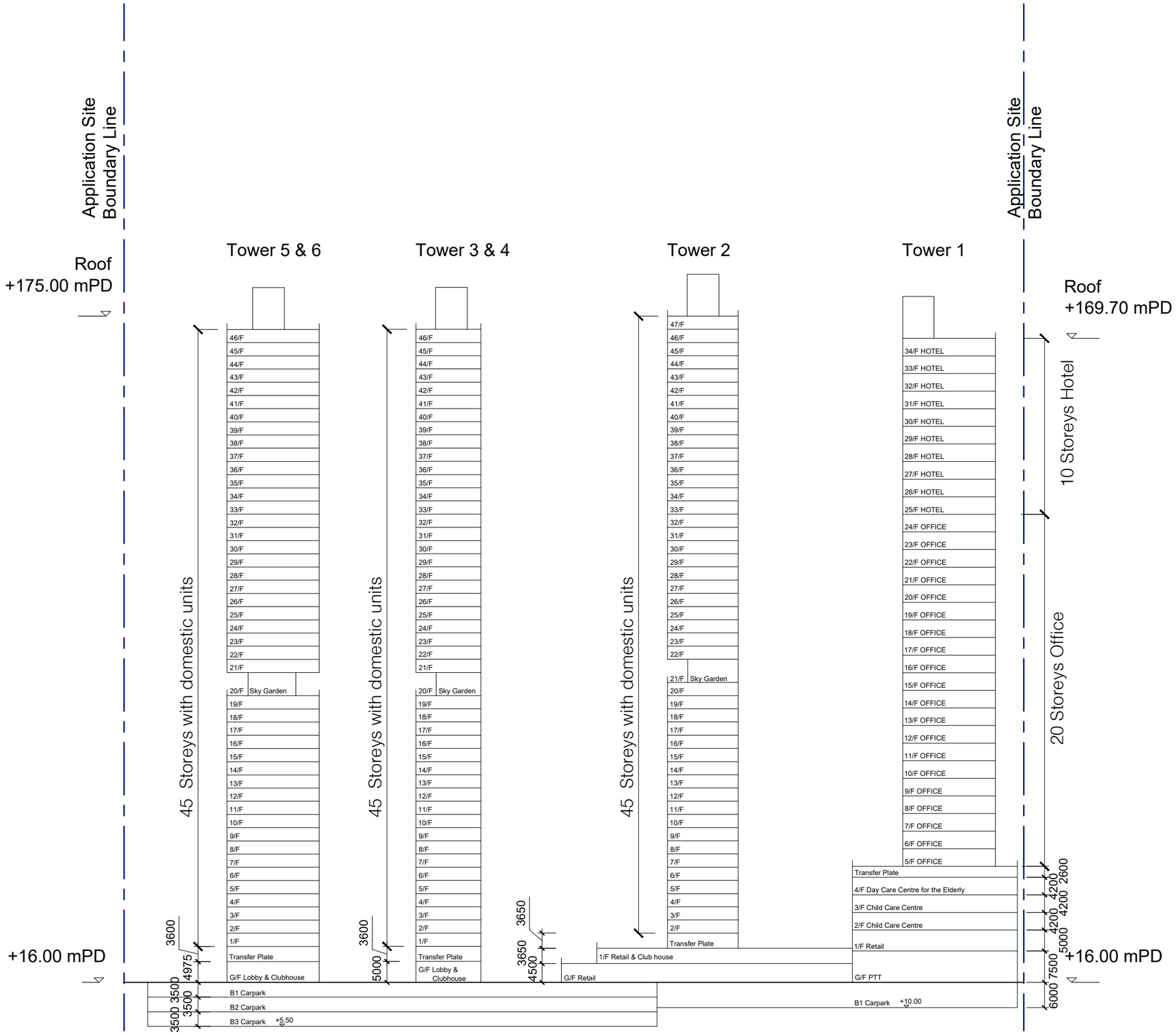
Master Layout Plan and Sectional Drawings



BLOCK PLAN SK-1
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

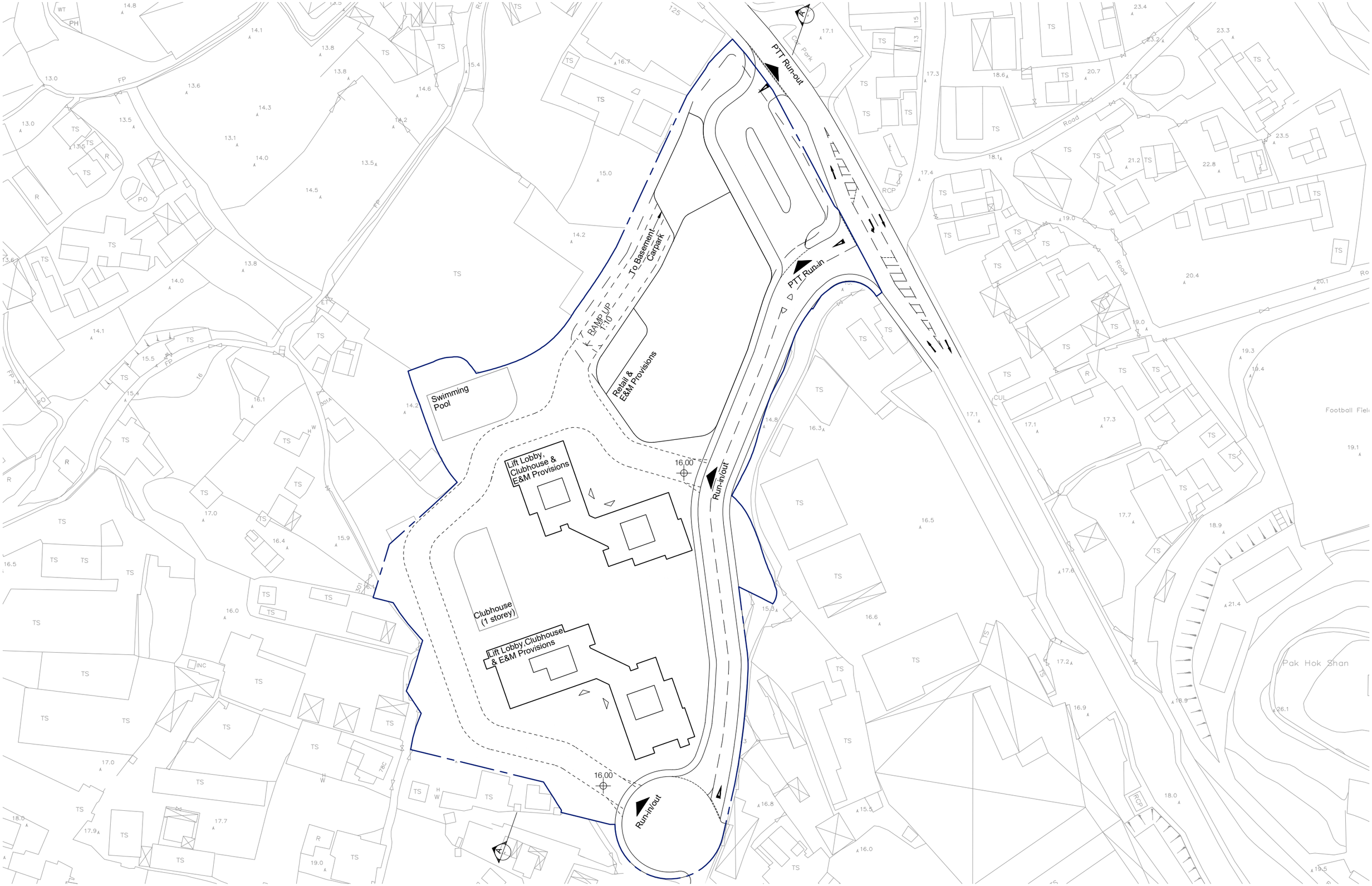
SINGULAR STUDIO LTD
11 DECEMBER 2023



SCHEMATIC SECTION AA' SK-2
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

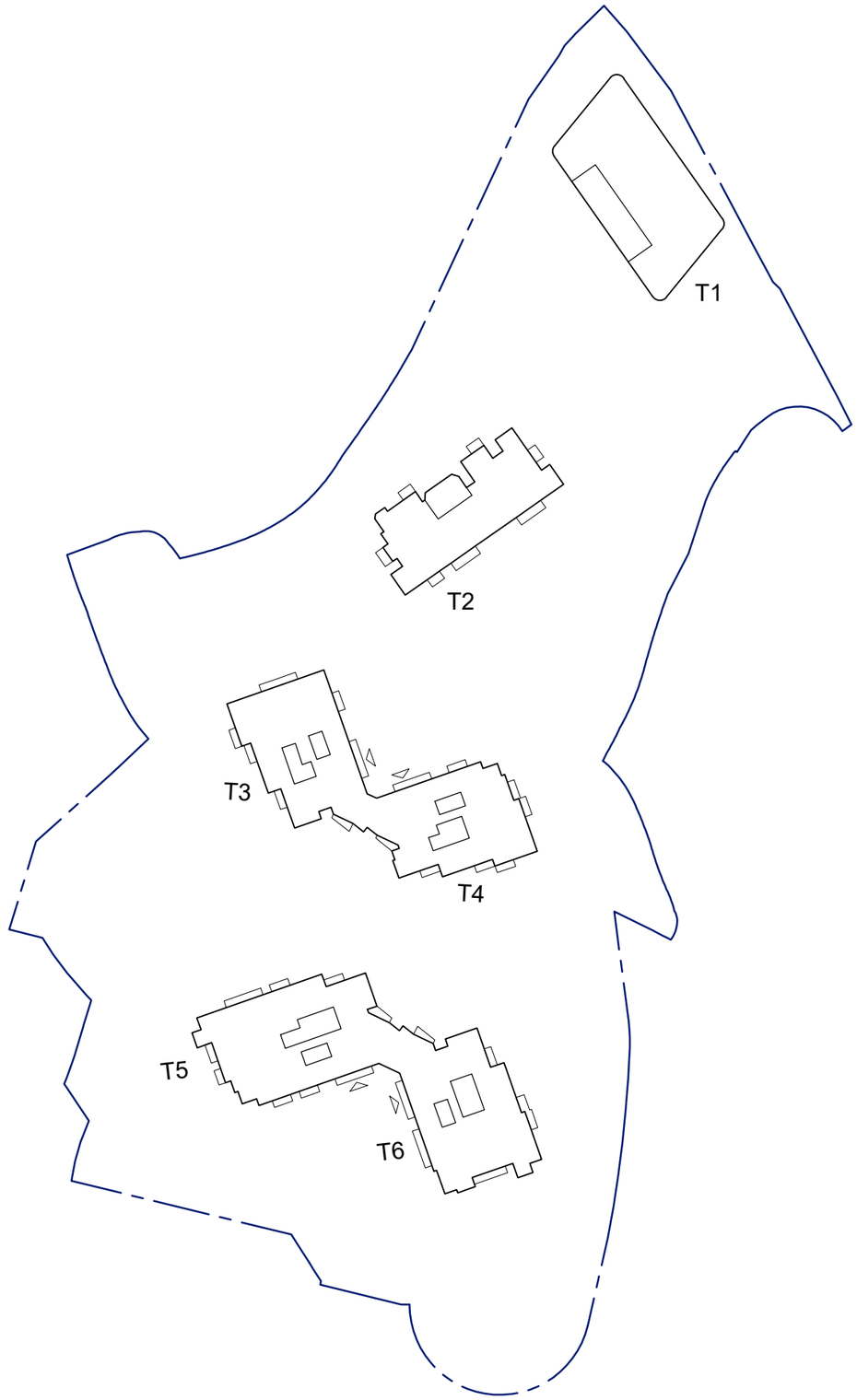
SINGULAR STUDIO LTD
6 OCTOBER 2023



GROUND FLOOR PLAN SK-3
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
11 DECEMBER 2023



TYPICAL FLOOR PLAN SK-9
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
12 OCTOBER 2023

Appendix B

Peak Runoff Estimation of Sub-catchments and Subject Site after the completion of Proposed Development

Appendix A Peak Runoff Estiamtion

Peak Runoff Estimation of Subcatchments and Subject Site **after** the completion of Proposed Development

Catchment	Total Area of the Catchment (m^2)	Land Use		Topography		Average Slope, H (m per 100m)	Flow Distance, L (m)	Inlet Time, t_o (min) [1]	Flow Time, t_f (min) [2]	Duration, t_c (min) [3]	50 - year return period				Runoff Coefficient, C [6]	Rainfall Increase due to Climate Change, % [7]	50 - year return period	
		Surface Characteristics	Area (m^2)	Inlet invert level (mPD)	Outlet invert level (mPD)						Storm Constant, a [4]	Storm Constant, b [4]	Storm Constant, c [4]	Extreme Mean Intensity, i (mm/hr) [5]			Peak Runoff, Qp (m3/s) [8]	Total Peak Runoff, Qp (m3/s) [8]
Application Site	17822	Concrete	14258	16.0	16.0	0.00	232	5.00	0	5.00	474.6	2.9	0.371	220.45	0.95	16.0	0.963	1.052
		Grass	3564												0.35		0.089	
Catchment A	6123	Concrete	4286	17.2	14.7	1.27	196	11.32	0	11.32	474.6	2.9	0.371	177.27	0.95	16.0	0.233	0.270
		Grass	1837												0.35		0.037	
Catchment B	6303	Concrete	4412	17.5	17.1	0.28	143	11.13	0	11.13	474.6	2.9	0.371	178.16	0.95	16.0	0.241	0.279
		Grass	1891												0.35		0.038	
Catchment C	6553	Concrete	4587	17.4	17.1	0.18	164	13.85	0	13.85	474.6	2.9	0.371	166.81	0.95	16.0	0.234	0.271
		Grass	1966												0.35		0.037	
STP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.072
Existing Condition																		
Application Site	17822	Concrete	11584	16.1	14.3	0.77	232	13.29	0	13.29	474.6	2.9	0.371	168.91	0.95	16.0	0.599	0.718
		Grass	6238												0.35		0.119	

Note:

[1] Brandsby William's equation is referenced from Section 7.5.2 in DSD Stormwater Drainage Manual (Fifth Edition).

$$t_o = \frac{0.1446L}{H^{0.2} A^{0.1}}$$

where t_o = time of concentration of a natural catchment (min.)

A = catchment area (m^2)

H = average slope (m per 100 m), measured along the line of natural flow, from the summit of the catchment to the point under consideration

L = distance (on plan) measured on the line of natural flow between the summit and the point under consideration (m)

Time of concentraction for subject site is assumed as 5 min.

[2] t_f is assumed to be 0 for conservative estimation.

[3] $t_c = t_o + t_f$

[4] Storm constants are referenced to Table 3d in DSD Stormwater Drainage Manual (Fifth Edition) and its Corrigendum No. 1/2024 based on corresponding return periods.

[5] Intensity-Duration-Frequency calculation is referenced from Section 4.3.3 in DSD Stormwater Drainage Manual (Fifth Edition) and its Corrigendum 1/2024.

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

where i = extreme mean intensity in mm/hr,
t_d = duration in minutes ($t_d \leq 240$), and
a, b, c = storm constants given in Tables 3a, 3b, 3c and 3d.

[6] Runoff coefficient is referenced from Section 7.5.2 in DSD Stormwater Drainage Manual (Fifth Edition). For conservative estimation, coefficient of 0.35 is assumed for unpaved area while that of 0.95 for paved area.

[7] Rainfall increase precentage due to climate change is referenced from Table 28 in DSD Stormwater Drainage Manual (Fifth Edition) and Corrigendum No. 1/2022. 16.0% for End of 21st Century is adopted as worst case scenario.

[8] Rational method for peak runoff estimation is referenced from Section 4.3.3 in DSD Stormwater Drainage Manual (Fifth Edition).

$$Q_p = 0.278\, C\, i\, A$$

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

Appendix C

Estimation of Drainage Flow from Proposed Development and Detailed Hydraulic Calculation

Peak Runoff Estimation of Subcatchments and Subject Site **before** the completion of Proposed Development

ID	From	ID	To	Diameter, D (m) [1]	Cross-section Area, A (m^2) [2]	Wetted Perimeter, P (m) [2]	Hydraulic Radius, R (m) [3]	Length of Pipe, L (m) [1]	Inlet Invert Level (mPD) [1]	Outlet Invert Level (mPD) [1]	Slope, s [4]	Pipe Roughess, k (m) [5]	Velocity, V (m/s) [6]	Full Capacity, Q (m^3/s) [7]	Contributing Catchment Area [8]	Return Periods (Year) [9]	Additional Peak Flow, Q (m^3/s)	Total Flow from All Catch-ment Area (m^3/s)	Occupancy (%)
D1	SMH1003241	D2	SMH1003242	0.375	0.099	1.178	0.084	14.2	15.58	15.52	0.004	0.0006	1.09	0.108	Catchment A + B	50	0.548	0.548	505%
D2	SMH1003242	D3	SMH1003243	0.375	0.099	1.178	0.084	50.0	15.52	15.25	0.005	0.0006	1.24	0.123	Catchment A + B	50	0.000	0.548	446%
D3	SMH1003243	D4	SMH1003246	0.450	0.143	1.414	0.101	35.3	14.75	14.30	0.013	0.0006	2.14	0.307	Existing Site + Catchment A + B + C	50	0.990	1.538	501%
D4	SMH1003246	D5	SMH1003247	0.450	0.143	1.414	0.101	47.9	14.30	13.80	0.010	0.0006	1.94	0.277	Existing Site + Catchment A + B + C	50	0.000	1.538	554%
D5	SMH1003247	D6	SMH1003249	0.450	0.143	1.414	0.101	47.7	13.80	13.30	0.010	0.0006	1.94	0.278	Existing Site + Catchment A + B + C	50	0.000	1.538	553%
D6	SMH1003249	D7	SMH1003248	0.450	0.143	1.414	0.101	49.5	13.30	12.80	0.010	0.0006	1.91	0.273	Existing Site + Catchment A + B + C	50	0.000	1.538	564%
D7	SMH1003248	D8	SMH1003250	0.450	0.143	1.414	0.101	45.7	12.10	11.78	0.007	0.0006	1.59	0.227	Existing Site + Catchment A + B + C	50	0.000	1.538	678%
D8	SMH1003250	D9	SMH1003252	0.450	0.143	1.414	0.101	9.0	11.60	11.50	0.011	0.0006	2.01	0.287	Existing Site + Catchment A + B + C	50	0.000	1.538	536%
D9	SMH1003252	D10	SMH1003253	0.525	0.195	1.649	0.118	30.2	11.50	11.34	0.005	0.0006	1.52	0.296	Existing Site + Catchment A + B + C	50	0.000	1.538	520%
D10	SMH1003253	D11	SMH1003254	0.525	0.195	1.649	0.118	56.7	11.34	11.05	0.005	0.0006	1.49	0.291	Existing Site + Catchment A + B + C	50	0.000	1.538	529%
D11	SMH1003254	D12	SMH1003255	0.600	0.254	1.885	0.135	48.3	11.05	10.80	0.005	0.0006	1.63	0.415	Existing Site + Catchment A + B + C	50	0.000	1.538	370%
D12	SMH1003255	D13	Outlet to Ping Yuen River	0.600	0.254	1.885	0.135	16.6	10.80	10.64	0.010	0.0006	2.23	0.568	Existing Site + Catchment A + B + C	50	0.000	1.538	271%

[1] With reference to the Drainage Plan and Geoinfo Map.
[2] According to Section 9.3 in DSD Stormwater Drainage Manual (Fifth Edition), 5% / 10% reduction in flow area based on channel gradient is taken into account for the effects to flow capacity due to materials deposited on the bed.
[3] Hydraulic Radius = Cross-section Area / Wetted Perimeter
[4] Slope = (Inlet Invert Level - Outlet Invert Level) / Length of Pipe
[5] Surface roughness is assumed to be 6.0mm for slimed concrete pipe with poor condition as worst case scenario, with reference to Table 14 in DSD Stormwater Drainage Manual (Fifth Edition).
Treated effluent discharged from reprovided sewage treatment plant
[6] Velocity is calculated based on Colebrook-White equations.

$$\bar{V} = -\sqrt{32gRS_f}\,\log\left[\frac{k_s}{14.8R} + \frac{1.255\nu}{R\sqrt{32gRS_f}}\right]$$ n Section 7.5.2 in DSD Stormwater Drainage Manual (Fifth Edition).

Where
$\bar{V}$ = cross-sectional mean velocity (m/s)
R = hydraulic radius (m)
S_f = friction gradient (dimensionless)
C = Chézy coefficient ($m^{1/2}/s$)
n = Manning coefficient ($s/m^{1/3}$)
f = Darcy-Weisbach friction factor (dimensionless)
k_s = surface roughness (m)
ν = kinematic viscosity (m^2/s)
g = acceleration due to gravity (m/s^2)
C_{HW} = Hazen-William coefficient (dimensionless)

With Reference to Table 14 in DSD Stromwater Drainage Manual (Fifth Edition),
Kinematic viscosity is 0.000001306 m/s.
Gravitational acceleration is 9.8m/s^2.
[7] Capacity = Length of Pipe × Velocity
[8] Bold and underlined subcatchment ID stands for stormwater in those subcatchments flowing into the corresponding pipe.
[9] With reference to Table 3 of Section 6.6.2 in DSD Stormwater Drainage Manual (Fifth Edition), 50 years of return period has been adopted.

Peak Runoff Estimation of Subcatchments and Subject Site **after** the completion of Proposed Development

ID	From	ID	To	Diameter, D (m) [1]	Cross-section Area, A (m^2) [2]	Wetted Perimeter, P (m) [2]	Hydraulic Radius, R (m) [3]	Length of Pipe, L (m) [1]	Inlet Invert Level (mPD) [1]	Outlet Invert Level (mPD) [1]	Slope, s [4]	Pipe Roughess, k (m) [5]	Velocity, V (m/s) [6]	Full Capacity, Q (m^3/s) [7]	Contributing Catchment Area [8]	Return Periods (Year) [9]	Additional Peak Flow, Q (m^3/s)	Total Flow from All Catch-ment Area (m^3/s)	Occupancy (%)
P2	STMH-02	D1	SMH1003241	0.375	0.099	1.178	0.084	6.7	15.82	15.58	0.036	0.0006	3.20	0.318	Catchment A	50	0.270	0.270	85%
D1	SMH1003241	D2	SMH1003242	0.375	0.099	1.178	0.084	14.2	15.58	15.52	0.004	0.0006	1.09	0.108	Catchment A + B	50	0.279	0.548	505%
D2	SMH1003242	D3	SMH1003243	0.375	0.099	1.178	0.084	50.0	15.52	15.25	0.005	0.0006	1.24	0.123	Catchment A + B	50	0.000	0.548	446%
P1	STMH-01	D3	SMH1003243	0.600	0.269	1.885	0.143	4.5	15.20	14.75	0.100	0.0006	7.48	2.009	Application Site + STP	50	1.124	1.124	56%
D3	SMH1003243	D4	SMH1003246	0.450	0.143	1.414	0.101	35.3	14.75	14.30	0.013	0.0006	2.14	0.307	Application Site + STP + Catchment A + B + C	50	0.271	1.943	633%
D4	SMH1003246	D5	SMH1003247	0.450	0.143	1.414	0.101	47.9	14.30	13.80	0.010	0.0006	1.94	0.277	Application Site + STP + Catchment A + B + C	50	0.000	1.943	700%
D5	SMH1003247	D6	SMH1003249	0.450	0.143	1.414	0.101	47.7	13.80	13.30	0.010	0.0006	1.94	0.278	Application Site + STP + Catchment A + B + C	50	0.000	1.943	699%
D6	SMH1003249	D7	SMH1003248	0.450	0.143	1.414	0.101	49.5	13.30	12.80	0.010	0.0006	1.91	0.273	Application Site + STP + Catchment A + B + C	50	0.000	1.943	712%
D7	SMH1003248	D8	SMH1003250	0.450	0.143	1.414	0.101	45.7	12.10	11.78	0.007	0.0006	1.59	0.227	Application Site + STP + Catchment A + B + C	50	0.000	1.943	857%
D8	SMH1003250	D9	SMH1003252	0.450	0.143	1.414	0.101	9.0	11.60	11.50	0.011	0.0006	2.01	0.287	Application Site + STP + Catchment A + B + C	50	0.000	1.943	677%
D9	SMH1003252	D10	SMH1003253	0.525	0.195	1.649	0.118	30.2	11.50	11.34	0.005	0.0006	1.52	0.296	Application Site + STP + Catchment A + B + C	50	0.000	1.943	657%
D10	SMH1003253	D11	SMH1003254	0.525	0.195	1.649	0.118	56.7	11.34	11.05	0.005	0.0006	1.49	0.291	Application Site + STP + Catchment A + B + C	50	0.000	1.943	669%
D11	SMH1003254	D12	SMH1003255	0.600	0.254	1.885	0.135	48.3	11.05	10.80	0.005	0.0006	1.63	0.415	Application Site + STP + Catchment A + B + C	50	0.000	1.943	468%
D12	SMH1003255	D13	Outlet to Ping Yuen River	0.600	0.254	1.885	0.135	16.6	10.80	10.64	0.010	0.0006	2.23	0.568	Application Site + STP + Catchment A + B + C	50	0.000	1.943	342%

[1] With reference to the Drainage Plan and Geoinfo Map.
[2] According to Section 9.3 in DSD Stormwater Drainage Manual (Fifth Edition), 5% / 10% reduction in flow area based on channel gradient is taken into account for the effects to flow capacity due to materials deposited on the bed.
[3] Hydraulic Radius = Cross-section Area / Wetted Perimeter
[4] Slope = (Inlet Invert Level - Outlet Invert Level) / Length of Pipe
[5] Surface roughness is assumed to be 6.0mm for slimed concrete pipe with poor condition as worst case scenario, with reference to Table 14 in DSD Stormwater Drainage Manual (Fifth Edition).
Treated effluent discharged from reprovided sewage treatment plant
[6] Velocity is calculated based on Colebrook-White equations.

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

n Section 7.5.2 in DSD Stormwater Drainage Manual (Fifth Edition).

$\bar{V}$ = cross-sectional mean velocity (m/s)
R = hydraulic radius (m)
S_f = friction gradient (dimensionless)
C = Chézy coefficient ($m^{½}/s$)
n = Manning coefficient ($s/m^{1/3}$)
f = Darcy-Weisbach friction factor (dimensionless)
k_s = surface roughness (m)
ν = kinematic viscosity (m^2/s)
g = acceleration due to gravity (m/s^2)
C_{HW} = Hazen-William coefficient (dimensionless)

With Reference to Table 14 in DSD Stromwater Drainage Manual (Fifth Edition),
Kinematic viscosity is 0.000001306 m/s.
Gravitational acceleration is $9.8 m/s^2$.
[7] Capacity = Length of Pipe × Velocity
[8] Bold and underlined subcatchment ID stands for stormwater in those subcatchments flowing into the corresponding pipe.
[9] With reference to Table 3 of Section 6.6.2 in DSD Stormwater Drainage Manual (Fifth Edition), 50 years of return period has been adopted.

Appendix D

Estimation of Drainage Flow from Proposed Development and Detailed Hydraulic Calculation (After Considering Upgrading Works)

Peak Runoff Estimation of Subcatchments and Subject Site **after** the completion of Proposed Development

ID	From	ID	To	Diameter, D (m) [1]	Cross-section Area, A (m^2) [2]	Wetted Perimeter, P (m) [2]	Hydraulic Radius, R (m) [3]	Length of Pipe, L (m) [1]	Inlet Invert Level (mPD) [1]	Outlet Invert Level (mPD) [1]	Slope, s [4]	Pipe Roughess, k (m) [5]	Velocity, V (m/s) [6]	Full Capacity, Q (m^3/s) [7]	Contributing Catchment Area [8]	Return Periods (Year) [9]	Additional Peak Flow, Q (m^3/s)	Total Flow from All Catch-ment Area (m^3/s)	Occupancy (%)
P2	STMH-02	D1	SMH1003241	0.375	0.099	1.178	0.084	6.7	15.82	15.58	0.036	0.0006	3.20	0.318	Catchment A	50	0.270	0.270	85%
D1	SMH1003241	D2	SMH1003242	0.750	0.398	2.356	0.169	14.2	15.58	15.52	0.004	0.0006	1.69	0.673	Catchment A + B	50	0.279	0.548	81%
D2	SMH1003242	D3	SMH1003243	0.750	0.398	2.356	0.169	50.0	15.52	15.25	0.005	0.0006	1.92	0.763	Catchment A + B	50	0.000	0.548	72%
P1	STMH-01	D3	SMH1003243	0.600	0.269	1.885	0.143	4.5	15.20	14.75	0.100	0.0006	7.48	2.009	Application Site + STP	50	1.124	1.124	56%
D3	SMH1003243	D4	SMH1003246	1.050	0.779	3.299	0.236	35.3	14.75	14.30	0.013	0.0006	3.64	2.838	Application Site + STP + Catchment A + B + C	50	0.271	1.943	68%
D4	SMH1003246	D5	SMH1003247	1.050	0.779	3.299	0.236	47.9	14.30	13.80	0.010	0.0006	3.29	2.566	Application Site + STP + Catchment A + B + C	50	0.000	1.943	76%
D5	SMH1003247	D6	SMH1003249	1.050	0.779	3.299	0.236	47.7	13.80	13.30	0.010	0.0006	3.30	2.572	Application Site + STP + Catchment A + B + C	50	0.000	1.943	76%
D6	SMH1003249	D7	SMH1003248	1.050	0.779	3.299	0.236	49.5	13.30	12.80	0.010	0.0006	3.24	2.525	Application Site + STP + Catchment A + B + C	50	0.000	1.943	77%
D7	SMH1003248	D8	SMH1003250	1.050	0.779	3.299	0.236	45.7	12.10	11.78	0.007	0.0006	2.70	2.100	Application Site + STP + Catchment A + B + C	50	0.000	1.943	93%
D8	SMH1003250	D9	SMH1003252	1.050	0.779	3.299	0.236	9.0	11.60	11.50	0.011	0.0006	3.41	2.655	Application Site + STP + Catchment A + B + C	50	0.000	1.943	73%
D9	SMH1003252	D10	SMH1003253	1.200	1.018	3.770	0.270	30.2	11.50	11.34	0.005	0.0006	2.54	2.588	Application Site + STP + Catchment A + B + C	50	0.000	1.943	75%
D10	SMH1003253	D11	SMH1003254	1.200	1.018	3.770	0.270	56.7	11.34	11.05	0.005	0.0006	2.50	2.544	Application Site + STP + Catchment A + B + C	50	0.000	1.943	76%
D11	SMH1003254	D12	SMH1003255	1.200	1.018	3.770	0.270	48.3	11.05	10.80	0.005	0.0006	2.51	2.560	Application Site + STP + Catchment A + B + C	50	0.000	1.943	76%
D12	SMH1003255	D13	Outlet to Ping Yuen River	1.200	1.018	3.770	0.270	16.6	10.80	10.64	0.010	0.0006	3.43	3.494	Application Site + STP + Catchment A + B + C	50	0.000	1.943	56%

[1] With reference to the Drainage Plan and Geoinfo Map.
[2] According to Section 9.3 in DSD Stormwater Drainage Manual (Fifth Edition), 5% / 10% reduction in flow area based on channel gradient is taken into account for the effects to flow capacity due to materials deposited on the bed.
[3] Hydraulic Radius = Cross-section Area / Wetted Perimeter
[4] Slope = (Inlet Invert Level - Outlet Invert Level) / Length of Pipe
[5] Surface roughness is assumed to be 6.0mm for slimed concrete pipe with poor condition as worst case scenario, with reference to Table 14 in DSD Stormwater Drainage Manual (Fifth Edition).

Treated ef Surface roughness is assumed to be 6.0mm for slimed concrete pipe with poor condition as worst case scenario, with reference to Table 14 in DSD Stormwater Drainage Manual (Fifth Edition).

[6] Velocity is calculated based on Colebrook-White equations.

$$\bar{V} = -\sqrt{32gRS_f}\,\log\left[\frac{k_s}{14.8R} + \frac{1.255\nu}{R\sqrt{32gRS_f}}\right]$$) Section 7.5.2 in DSD Stormwater Drainage Manual (Fifth Edition).

Where
$\bar{V}$ = cross-sectional mean velocity (m/s)
R = hydraulic radius (m)
S_f = friction gradient (dimensionless)
C = Chézy coefficient ($m^{1/2}/s$)
n = Manning coefficient ($s/m^{1/3}$)
f = Darcy-Weisbach friction factor (dimensionless)
k_s = surface roughness (m)
v = kinematic viscosity (m^2/s)
g = acceleration due to gravity (m/s^2)
C_{HW} = Hazen-William coefficient (dimensionless)

With Reference to Table 14 in DSD Stormwater Drainage Manual (Fifth Edition),
Kinematic viscosity is 0.000001306 m/s.
Gravitational acceleration is 9.8m/s^2.
[7] Capacity = Length of Pipe × Velocity
[8] Bold and underlined subcatchment ID stands for stormwater in those subcatchments flowing into the corresponding pipe.
[9] With reference to Table 3 of Section 6.6.2 in DSD Stormwater Drainage Manual (Fifth Edition), 50 years of return period has been adopted.

Appendix H Sewerage Impact Assessment

Issue No. : 5

Issue Date : Jun 2024

Project No. : 2127

SEWERAGE IMPACT ASSESSMENT

FOR

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOTS 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

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1. INTRODUCTION

1.1. Background

1.1.1. Allied Environmental Consultants Limited ("AEC") has been appointed to conduct a Sewerage Impact Assessment ("SIA") to support of a Section 12A application for the mixed use development at Lot 796 & 1008RP at D.D. 77 and adjoining government land in Ping Che, Ta Kwu Ling, New territories (hereinafter referred to as "Application Site").

1.1.2. According to the approved Ping Che and Ta Kwu Ling Outline Zoning Plan (OZP No.: S/NE-TKL/14) gazette on 12/03/2010, the Application Site is currently zoned as "Open Storage" ("OS") Zone, the southern part of the Application Site is zoned as "Agriculture" ("AGR") and a minor portion of the Application Site is shown as "Road".

1.2. Objectives

1.2.1. The objectives of this SIA are to assess whether the capacity of the existing sewerage networking to the Application Site is sufficient to cope with the sewage flow from proposed development.

1.3. Report Structure

1.3.1. The remaining chapters of this report are shown below:

Chapter 2 – Site Context
Chapter 3 – Relevant Guidelines & Standards
Chapter 4 – Sewerage Impact Assessment
Chapter 5 – Conclusion

2. SITE CONTEXT

2.1. Site Location

2.1.1. The proposed development is located at Ping Che Road from the north to northeast, the unnamed village road to the east, village, agricultural land and open storage area to the south and west.

2.2. Proposed Development Scheme and Existing Environment

2.2.1. The proposed site area of the subject site is 17,822m^2, with a plot ratio of 5.9 for domestic use and 1.1 for non-domestic use. The total GFA for domestic use is 105,145 m^2, and the 19,603 m^2 for non-domestic use. The proposed development will consist of 5 blocks of residential tower ranging from 47 to 48-storey (excluding basement) in height, provided 2,205 residential unit, and 1 block of commercial tower with 35-storey (excluding basement) in height. The non-domestic use consisted of retail, office, hotel or service apartment, clubhouse, day care centre for the elderly and child care centre.

2.2.2. Drainage information was obtained from the GeoInfo Map services of the Lands Department in Aug 2023 to gather the background information on sewerage infrastructure in the vicinity of the Application Site. A series of rising main public sewers with diameters of 200 mm were found along Ping Che Road, towards Southeast direction and further downstream. Furthermore, there are 2 pumping stations around the Application Site, which are Ng Chow South Road Sewage Pumping Station and Hung Leng Sewage Pumping Station are located 250 m and 1 km away from Application Site respectively.

2.2.3. However, there is no public foul sewer identified along Ping Che Road and around Application Site. Therefore, on-site Sewerage Treatment Plant (STP) are proposed for the proposed development.

2.2.4. The expected completion year and operation year of the Proposed Project is in 2032. ***Figure 2.1*** shows the Site location and its environs. The Master Layout Plan and sectional drawings proposed development are shown in ***Appendix A.***

2.3. Planned Sewerage Facilities in the vicinity

2.3.1. With reference to Project Profile prepared for "Remaining Phase Development of the New Territories North (NTN) – NTN New Town and Man Kam To" (NTN Development) in May 2021,

(ESB-341/2021), the application site fall within the NTN development. The NTN includes the following individual works items.

- Item F.1, Part I, Schedule 2 - Sewage treatment works with an installed capacity of more than 15,000 m3 per day
- Item F.2, Part I, Schedule 2 - Sewage treatment works- (a) with an installed capacity of more than 5,000 m3 per day
- Item F.3, Part I, Schedule 2 - A sewage pumping station- with an installed capacity of more than 300,000 m3 per day

2.3.2. In December 2017, Planning Department (PlanD) and Civil Engineering and Development Department (CEDD) completed Preliminary Feasibility Study on Developing the New Territories North (NTN) (the Preliminary NTN Study). It is noted that a proposed sewerage treatment works and a Sewerage Master Layout Plan have been formulated.

2.3.3. After having conversation with CEDD officer (Engr/40(N)) of project team of CE21/2021 Remaining Phase Development of the NTN, no relevant available details and construction programme cannot be obtained from North Development Office (NDO) of CEDD.

3. RELEVANT GUIDELINES & STANDARDS

3.1. Legislation, Standards and Guidelines

3.1.1. Water quality in Hong Kong is legislated by the provisions of Water Pollution Control Ordinance (Cap 358), 1980 ("WPCO"). Territorial Water has been subdivided into ten Water Control Zones ("WCZ") and four supplementary water control zones. The study area lies within the Deep Bay WCZ. A Technical Memorandum on Standards for Effluents discharged into Drainage and Sewerage Systems, Inland and Coastal Water (TMES) has been issued, which requires licensing of all discharges into all public sewers and drains. The water quality standards will have to be met during the construction and operation stages.

3.1.2. With reference to Table 7 of the Technical Memorandum, as the Proposed Development is located within Deep Bay WCZ, the pollutant loading for effluents discharged into coastal waters of the respective WCZ shall be considered. The standards of effluents discharge of Biochemical Oxygen Demand (BOD) and Suspended Solids (SS) are extracted below.

Table 3-1 Standards for Effluents Discharge under TM

Load Type	Standards for Effluents Discharge (mg/L)	
	Flow rate <=1000 m^3/day	**Flow rate >1000 m^3/day and <=6000 m^3/day**
BODs	20	10
SS	50	25

3.1.3. With reference to ProPECC PN 1/23 Drainage Plans Subject to Comment by the Environmental Protection Department ("EPD"), domestic sewage should be discharged to a foul water sewer, whilst commercial and industrial wastewater should be pretreated before being discharged to foul water sewer, under the Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations 40(1), 40(2), 41(1) and 90.

3.1.4. The following standards and guidelines are adopted for estimation, assessment and evaluation of sewerage implication of the proposed development:

- "Water Pollution Control Ordinance" ("WPCO")
- "Hong Kong Planning Standards and Guidelines" issued by the Planning Department;
- "Technical Memorandum on Standards for Effluents Discharged into Drainage and

Sewerage Systems, Inland and Coastal Waters (TM-DSS)";

- "Sewerage Manual Part 1" published by DSD;
- "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning Version 1.0 (Report No.: EPD/TP1/05)" ("GESF") published by Environmental Protection Department ("EPD");
- Water Supplies Department (WSD) Water Quality Criteria; and
- Guidelines for the Design of Small Sewage Treatment Plants issued by EPD.

4. SEWERAGE IMPACT ASSESSMENT

4.1. Methodology for Estimation of Average Dry Weather Flow

4.1.1. The global unit flow factors as recommended in the *Guideline for Estimating Sewage Flows for Sewage Infrastructure Planning* (hereafter as "GESF") published by EPD in 2005 has been adopted in the assessment to estimate sewage flow. Relative unit flow factors applied for the sewage generation estimation are tabulated in ***Table 4-1*** below.

Table 4-1 Unit Flow factors Adopted for the Assessment

Type of People	**Unit Flow Factors [2]**	**Category [1]**
Within Proposed Development [3]		
Residents of the Residential Development R2	0.270 m^3/person/day	Domestic (housing type specific) – R2
Residents of Elderly Day Care Centre	0.190 m^3/person/day	Domestic: Institutional and Special class
Students of Childcare Centre	0.040 m^3/person/day	School Student
Staff of Clubhouse	0.280 m^3/person/day	Commercial Employee + Commercial activities (J11 Community, Social & Personal Services)
Staff of Office	0.080 m^3/person/day	Commercial Employee
Staff of Retail	0.280 m^3/person/day	Commercial Employee + Commercial activities (J4 Wholesale & Retail)
Staff of Hotel/Service apartment	1.580 m^3/person/day	Commercial Employee + Commercial activities (J10 Restaurants & Hotels)
Staff of Elderly Day Care Centre	0.280 m^3/person/day	Commercial Employee + Commercial activities (J11 Community, Social & Personal Services)
Staff of Childcare Centre	0.280 m^3/person/day	Commercial Employee + Commercial activities (J11 Community, Social & Personal Services)

Notes:
[1] Environmental Protection Department, HKSARG [EPD] (2005). Guidelines for estimating sewage flows for sewage infrastructure planning (EPD/TP 1/05). Hong Kong
[2] UFF for various occupancy types are adopted according to Table T-1 and Table T-2 of the GESF.
[3] Type of Residential Development is determined by the average area per flat of the residential development and referred to Table 8 of The Hong Kong Planning Standards and Guidelines (HKPSG) Ch.2 Residential Densities. For Hong Kong & Kowloon area, flat with GFA less than 50 m^2 will be categorized as R1; GFA between 50-110 m^2 will be categorized as R2; GFA between 110-210 m^2 will be categorized as R3; GFA greater than 210 m^2 will be categorized as R4.

4.2. Estimation of Sewage Flow from Proposed Developments

4.2.1. The proposed project comprises of 5 blocks of residential tower ranging from 46 to 47-storey in height, provided 2,205 residential unit, 1 block of commercial tower with 35-storey in height, clubhouse, day care centre for elderly and child care centre. The estimated sewerage flow for proposed developments is given in ***Table 4-2*** and ***Appendix B.***

Table 4-2 Sewage Flow Estimation for the Proposed Development and Existing

Proposed Development		
Generation from operation		**Remark**
Generation from Residential – R2		
Total Number of Residents	6174 persons	Referred to submitted GBP.
Unit Flow Factor	0.27 m^3/person/day	Domestic (housing type specific) – R2 in Table T-1 of GESF.
Average Sewage Discharge	1667.0m^3/day	
Generation from Residential – Day Care Centre for the Elderly		
Total Number of Residents	60 persons	Referred to submitted GBP.
Unit Flow Factor	0.19 m^3/person/day	Domestic (housing type specific) – Temporary and non-domestic in Table T-1 of GESF.
Average Sewage Discharge	11.4 m^3/day	
Generation from Residential – Child Care Centre		
Total Number of Residents	100 persons	Referred to submitted GBP.
Unit Flow Factor	0.04 m^3/person/day	School Students in Table T-2 of GESF.
Average Sewage Discharge	4.0 m^3/day	
Generation from staff (Retail)		
Floor Area	2400.0 m^2	Referred to submitted GBP.
Worker Density	3.5 person/100m^2	Retail Trade (All Types) in Table 8 of CIFSUS.
Total Number of Persons	84 persons	
Unit Flow Factor	0.28 m^3/person/day	Commercial Employee + Wholesale & Retail – J4 in Table T-2 of GESF.
Average Sewage Discharge	23.5 m^3/day	
Generation from staff (Office)		
Floor Area	11500.0 m^2	Referred to submitted GBP.
Worker Density	3.4 person/100m^2	All Economic Activities (All Types) in Table 8 of CIFSUS.
Total Number of Persons	391 persons	
Unit Flow Factor	0.08 m^3/person/day	Commercial Employee in Table T-2 of GESF.
Average Sewage Discharge	31.3 m^3/day	
Generation from staff (Hotel/Service Apartment)		
Floor Area	5703.0 m^2	Referred to submitted GBP.
Worker Density	3.2 person/100m^2	Hotels & Boarding Houses (All Types) in Table 8 of CIFSUS.
Total Number of Persons	183 persons	
Unit Flow Factor	1.58 m^3/person/day	Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
Average Sewage Discharge	289.1 m^3/day	
Generation from staff (Clubhouse)		
Floor Area	3500.0 m^2	Referred to submitted GBP.

Worker Density	3.3 person/100m^2	Community, Social & Personal Services (All Types) in Table 8 of CIFSUS.
Total Number of Persons	116 persons	
Unit Flow Factor	0.28 m^3/person/day	Commercial Employee + Community, Social & Personal Services - J11 in Table T-2 of GESF.
Average Sewage Discharge	32.5 m^3/day	
Generation from staff (Day Care Centre for the Elderly)		
Floor Area	787.6 m^2	Referred to submitted GBP.
Worker Density	3.3 person/100m^2	Community, Social & Personal Services (All Types) in Table 8 of CIFSUS.
Total Number of Persons	26 persons	
Unit Flow Factor	0.28 m^3/person/day	Commercial Employee + Community, Social & Personal Services - J11 in Table T-2 of GESF.
Average Sewage Discharge	7.3 m^3/day	
Generation from staff (Child Care Centre)		
Floor Area	1166.0 m^2	Referred to submitted GBP.
Worker Density	3.3 person/100m^2	Community, Social & Personal Services (All Types) in Table 8 of CIFSUS.
Total Number of Persons	39 persons	
Unit Flow Factor	0.28 m^3/person/day	Commercial Employee + Community, Social & Personal Services - J11 in Table T-2 of GESF.
Average Sewage Discharge	10.9 m^3/day	
Generation from Swimming Pool Backflow		
Swimming Pool Volume	511 m^3	
Maximum Backwash Volume	6 m^3/day	
Sewerage Discharge Rate from residents and services	**2077.0 m^3/day**	
Catchment Inflow Factor	**1.0**	
Revised Total Average dry weather flow of the Proposed Development	**2077.0 m^3/day**	
Generation from Swimming Pool Backflow	**6 m^3/day**	
Total Average dry weather flow of the Proposed Development (residents + services + swimming pool)	**2083.0 m^3/day**	
Peak Flow	**72.1 L/s**	

4.3. Evaluation of Sewerage Impact

4.3.1. With reference to ***Table 4-2***, the sewerage discharge rate from residents and services is 2077.0 m^3/day, and additional 6 m^3/day from the backflow of swimming pool. Thus, total estimated Average Dry Weather Flow ("ADWF") from the proposed development is 2083.0 m^3/day. The population estimated ADWF of proposed development is summarized in ***Appendix B.*** As mentioned in ***Section 2.2.3***, there is no public sewer identified along Ping Che

Road and around Application Site. Therefore, on-site STP are proposed for the proposed development. The sewage generated onsite will be treated by the STP and discharged to the public drainage system at the end. Hence, no sewage generated will be discharged to the public sewerage system and impact is not envisaged.

4.4. On-site Sewage Treatment Plant

4.4.1. "Guidelines for the Design of Small Sewage Treatment Plants" (The STP Guidelines) and WPCO should be followed in designing the on-site STPs in the later detail design stage. The exact treatment process would be subject to later detailed design. It will be necessary for the STP to achieve adequate treatment capacity and the necessary discharge standards, as set out in EPD's Technical Memorandum – Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters.

4.4.2. With reference to clause 2.1.2 of Annex 6 of the Technical Memorandum on Environmental Impact Assessment Process, the acceptable sewage treatment level for Deep Bay WCZ is given in ***Table 4-3***. The proposed STP will be designed to meet the acceptable treatment levels. Detailed design of the proposed STP is not yet available subject to feasibility investigation and water quality assessment. Tentatively, the proposed STP will be provided with Membrane Bioreactor (MBR) technology with ultra-filtration to achieve the acceptable sewage treatment level, with following conditions:

- For nitrogen removal, the target is 75% total inorganic nitrogen reduction with respect to the annual average influent nitrogen loads or concentrations;
- For phosphorus removal, the target is 80% phosphorus reduction with respect to the annual average influent phosphorus loads or concentrations; and
- Disinfection may not be required if membrane filtration is provided which can meet the relevant discharge standards for bacteria.

Table 4-3 Acceptable Sewage Treatment Level of Water Control Zone

Water Control Zone/ Waters Receiving the discharge	Acceptable Sewage Treatment Level
Tolo Harbour and Channel, Deep bay	Secondary treatment, nitrogen removal, phosphorus removal, and disinfection
Other Water Control Zones	Secondary treatment, nitrogen removal, and disinfection

4.4.3. The capacity of the STP shall be designed to cater for the design flow rate from the Proposed Development, the design flow factor of 3 times of the ADWF is adopted for the Proposed Development, with provision of equalization tank. Two duty and one standby pumps will be provided in equalization tanks as far as practicable to limit the flow through the treatment units to within 1.5 times the daily average flow rate during off-peak periods.

4.4.4. The on-site STP will be constructed to cater for the design peak flow of 6237 m^3/d (6231 m^3/d +6 m^3/d), with the provision of an equalization tank with minimum capacity of 519.75 m3 to ensure it fulfills the Guidelines for the Design of Small Sewage Treatment Plant. The calculation is given in ***Table 4-4*** and ***Appendix C***. The preliminary layout plan for the on-site STP is given in ***Figure 4.1***.

Table 4-4 Estimation of the Required Volume for the Sewage Treatment Plant

ADWF (Residents + Services) (m^3/day)	Peaking Factor [1]	Design Peak Flow Rate (Residents + Services) (m^3/day)	Swimming Pool Backwash (m^3/day)	Total Design Peak Flow Rate (m^3/day)	Design Flow Rate from Proposed Project (m^3/hr)
2077.0	3	6231	6	6237	260

Note:
[1] The design peak flow factor is reference from EPD's '"Guidelines for the Design of Small Sewage Treatment Plants". For the Proposed Development, 3 times Average Dry Weather Flow (ADWF) is adopted, with equalization tank provided to equalize excess flow.

4.4.5. Sludge storage tank with deodorization facilities will be provided in the STP. The sludge after having been dewatered and thickened will be tanked away to the landfill for disposal, subject to confirmation with future licensed collector/contractor. All wastewater, if any, generated from the sludge dewatering process should be treated properly by the proposed on-site STP.

4.4.6. As for good practice for STP, measures will be incorporated into the design to minimize the risk of emergency overflow from STP. As the STP is designed to cater for a peak flow of 3 times the daily average flow rate, 2 duty and 1 standby pump should be provided in equalization tanks as far as practicable to limit the flow through the treatment units within 1.5 times the daily average flow rate during off-peak periods. This is to even out the flow as much as possible. Other measures include secure power supplies and appropriate alarms, as well as comprehensive Operation and Maintenance procedures, to keep the facilities in good working order. Holding tank for emergency storage/retention will be included with adequate

capacity (e.g. to store 6-hour of ADWF discharge) to minimize need of emergency discharge. In the event of any emergency overflow, on-call crews will follow the overflow emergency response plan and proceed with the best response to correct the problem at once. For example, the alarm system will be activated once overflow occurs. The on-call crews will provide instant response by acknowledging the alarm, to investigate the cause of overflow and correct the problem. The alarm system will be repeated until it is acknowledged. In addition, the on-call crews will ensure the standby pump is switched on and contains the overflow sewage using temporary weirs or vacuum trucks, where applicable.

4.4.7. The STP will also be subject to regular maintenance to ensure it functions in designed condition and optimal performance and can minimize any emergency situation. Property Management will be responsible for the construction and maintenance of the STP. In addition, regular self-monitoring will be conducted to ensure the quality of the treated effluent shall meet the applicable standard before discharge. Monitoring program will be devised for Terms & Conditions of the system. A discharge license will be applied prior to the development commencement and monitoring requirements under the license would be strictly followed as per WPCO. Necessary discharge standards, as set out in EPD's Technical Memorandum – Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters will be adopted.

4.5. Estimation of Pollutants Loading from Proposed Project

4.5.1. With reference to the EPD's Guidelines, the following unit load factors ("ULFs") for different types of pollutant generated from the Proposed Development as shown in ***Table 4-5*** have been used in calculation of total pollutant loads from the Proposed Development.

Table 4-5 Unit Load Factors

Load Type	Unit Load Factor		
	Residents	Office [1]	Services [2]
BODs (kg/day/person)	0.055	0.023	0.004
SS (kg/day/person)	0.055	0.023	0.004

Noted:
[1]: The recommended loadings for BOD and SS for Office (not including canteen) refer to Appendix 2 in "Guidelines for the Design of Small Sewage Treatment Plants" by EPD are adopted for the calculation for worst case scenario for pollutant loadings generated from the Application Site.
[2]: The recommended loadings for BOD and SS for Services shall be pro-rata to equivalent residential population refer to Appendix 2 in "Guidelines for the Design of Small Sewage Treatment Plants" by EPD.

4.5.2. The loadings of pollutants generated from the raw sewage from the proposed project is summarized in ***Table 4-6***.

Table 4-6 Estimated Pollutant Loadings from Proposed Project

Population		Unit Load Factor (kg/day/person)		Pollutant Loadings (kg/day)	
		BODs	SS	BODs	SS
Residents	6334	0.055	0.055	348.37	348.37
Office	391	0.023	0.023	8.99	8.99
Services	448	0.004	0.004	1.74	1.74
			Total	359.11	359.11

4.6. Pollutant Loads Removal Requirements

4.6.1. According to WPCO-TM, sewage shall be treated to acceptable standards prior discharge to stormwater drainage, before discharging to the Deep Bay WCZ. The STP shall be designed to remove sufficient BOD and SS in the sewage generated from proposed project to the effluent standards set out, for Group II Coastal Waters, in the Technical Memorandum before discharging into the drainage network. The pollutants loading generated from the proposed project, and the standards for effluents discharge are illustrated in ***Table 4-7***.

Table 4-7 Loading from the Proposed Project

Load Type	Loading from the Proposed Project (kg/day)	Sewage Flow Rate (m^3/day)	Loading from the Proposed Project (mg/L) / (CFU/100ml)	Standards for Effluent discharge (mg/L) [1]
BOD	359.11	2082.96	172.40	10
SS	359.11	2082.96	172.40	25

Noted:
[1] Reference to Table 8, Standards for effluents discharged into the coastal waters of Deep Bay Water Control Zones, Technical Memorandum - Standards of Effluent Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters

4.6.2. The treated effluent from STP will be discharged to the terminal stormwater manhole onsite (STMH-01) and meet the acceptable standards prior to the discharge to the proposed storm water manhole (SMH1003243) along North side of the Application Site. The proposed drainage connection between Subject Site, proposed storm water drainage and existing

storm water manhole is illustrated in Drainage Impact Assessment ("DIA").

4.7. Liability

4.7.1. The project proponent will be responsible for the construction and maintenance works for the proposed sewage treatment plant. The STP will be designed in accordance to "Guidelines for the Design of Small Sewage Treatment Plants".

4.7.2. During the operational phase, regular inspections of the STP within the Application Site should be conducted by the property management to ensure proper performance. Regular maintenance should also be carried out in accordance with standard practices stated in the EPD's Guidance Notes and Guidelines.

5. CONCLUSION

5.1.1. A Sewerage Impact Assessment (SIA) has been conducted to evaluate the possible impacts on the public sewerage network due to the proposed development. Since there is no public foul sewer identified at the surrounding of Application Site. Therefore, on-site Sewerage Treatment Plant are proposed for the proposed development. The sewage generated from the proposed development will be collected and treated on-site by STP and discharged into the stormwater manhole (STMH-01). The result showed that total ADWF of 2083.0 m^3/day including sewage discharge from residents, services and backflow from swimming pool are expected to be generated from the proposed development and treated by STP.

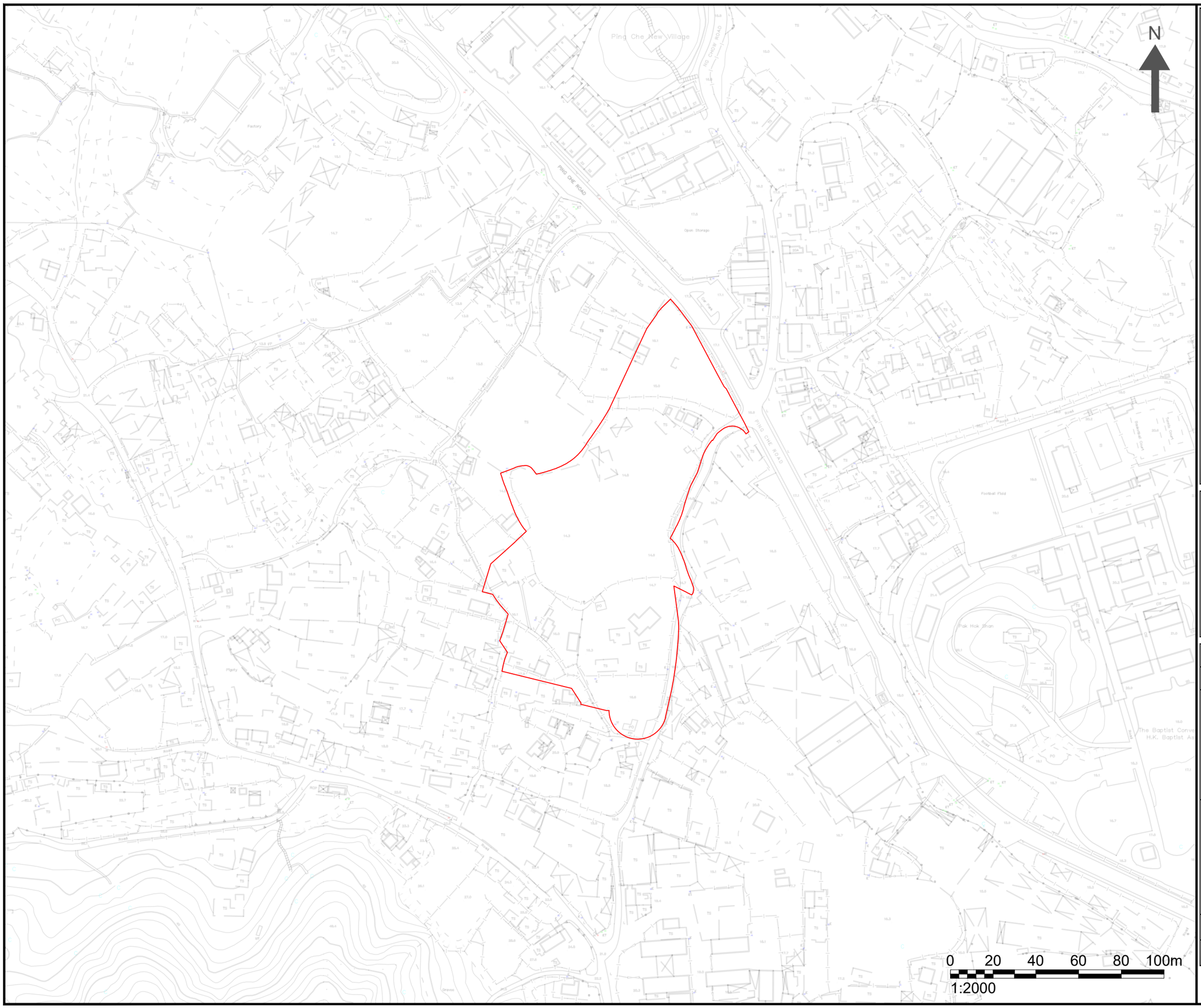
5.1.2. The on-site STP provided with the provision of an equalization tank cater for the design peak flow of 260 m^3/hr is proposed to treat the effluent from daily operation. Details of the proposed STP design and exact treatment process, including emergency discharge, emergency storage/retention arrangement and the sludge disposal arrangement would be subject to later detailed design.

5.1.3. The project proponent will be responsible for the implementation, operation and maintenance of the proposed STP.

5.1.4. The treated effluent will be collected in the storm water terminal manhole on site and then diverted to the proposed public stormwater drainage system via proper connections. Therefore, adverse sewerage impact due to the proposed project is not anticipated.

Figure 2.1

Application Site Location and Its Environs



NOTES :

APPLICATION SITE

Consultant

Allied Environmental Consultants Limited

Project No. :	2127
Drawing By :	CS

Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

APPLICATION SITE LOCATION & ITS ENVIRONS

Drawing No : FIGURE 2.1	Revision : 1
Scale : AS SHOWN	Date : OCT 2023

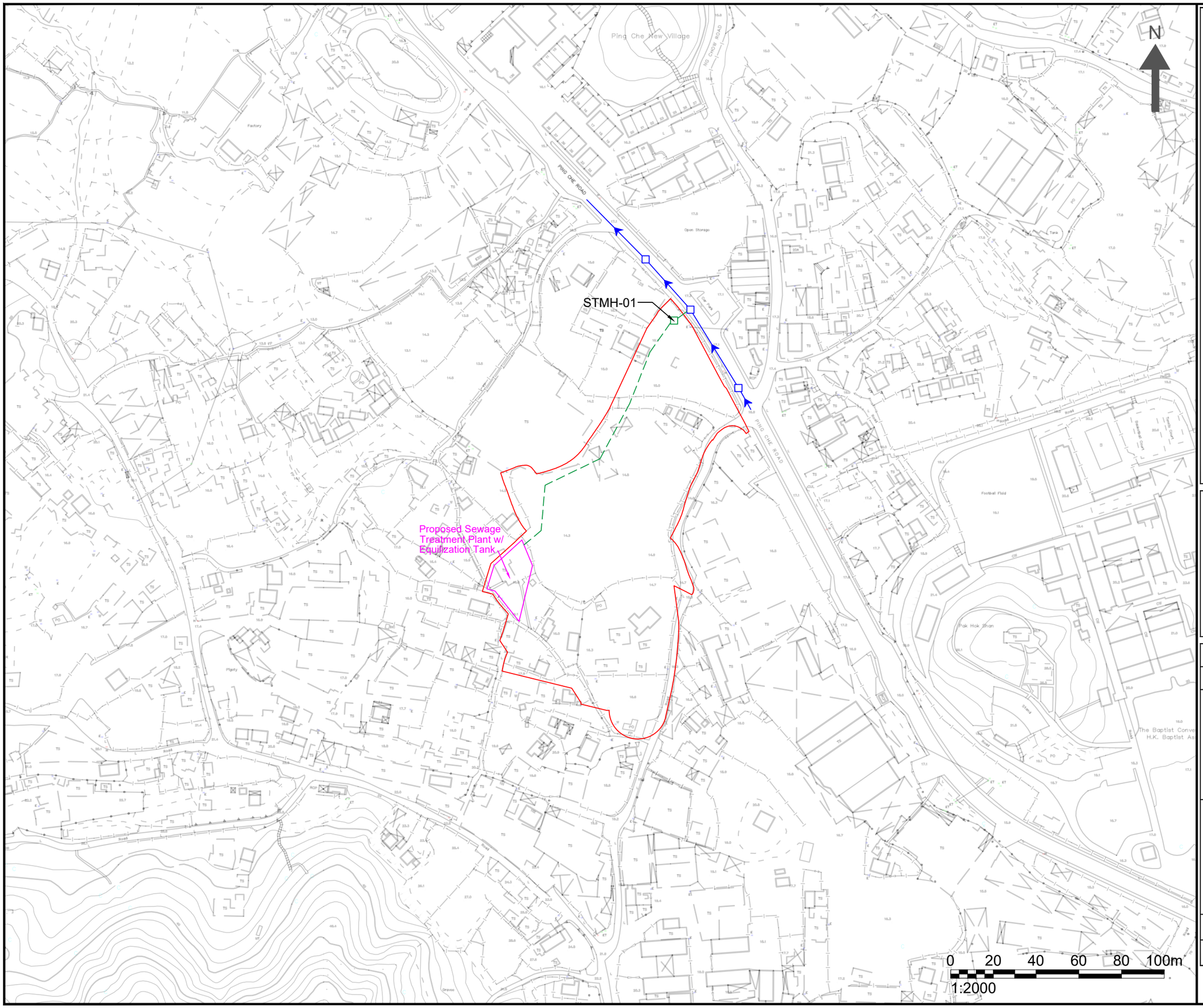
DO NOT SCALE OFF DRAWING. THIS DRAWING IS NOT FOR CONSTRUCTION PURPOSES UNLESS EXPRESSLY STATED. ALL RIGHTS RESERVED AND REPRODUCTION IN ANY FORM MUST BE APPROVED BY ALLIED ENVIRONMENTAL CONSULTANTS LIMITED.

A3 420 x 297

G:\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\02 SIA\ISSUE 2\FIG\[2127] SIA FIG 2.1_SITE LOCATION_DRAFT 2.DWG

Figure 4.1

Preliminary Design of On-site Sewage Treatment Plant



NOTES :

APPLICATION SITE

PROPOSED STP

PROPOSED DRAINAGE

EXISTING DRAINAGE & MANHOLE

Consultant

Allied Environmental Consultants Limited

Project No. :	2127
Drawing By :	CS

Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

OVERVIEW OF PROPOSED SEWAGE TREATMENT PLANT, PROPOSED DRAINAGE & EXISTING DRAINAGE

Drawing No :	Revision :
FIGURE 4.1	1
Scale :	Date :
AS SHOWN	DEC 2023

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A3 420 x 297

G:\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\02 SIA\DRAFT 2\FIG & APP\[2127] SIA FIG 4.1_SEWERAGE OVERVIEW_ISSUE 2.DWG

Appendix A

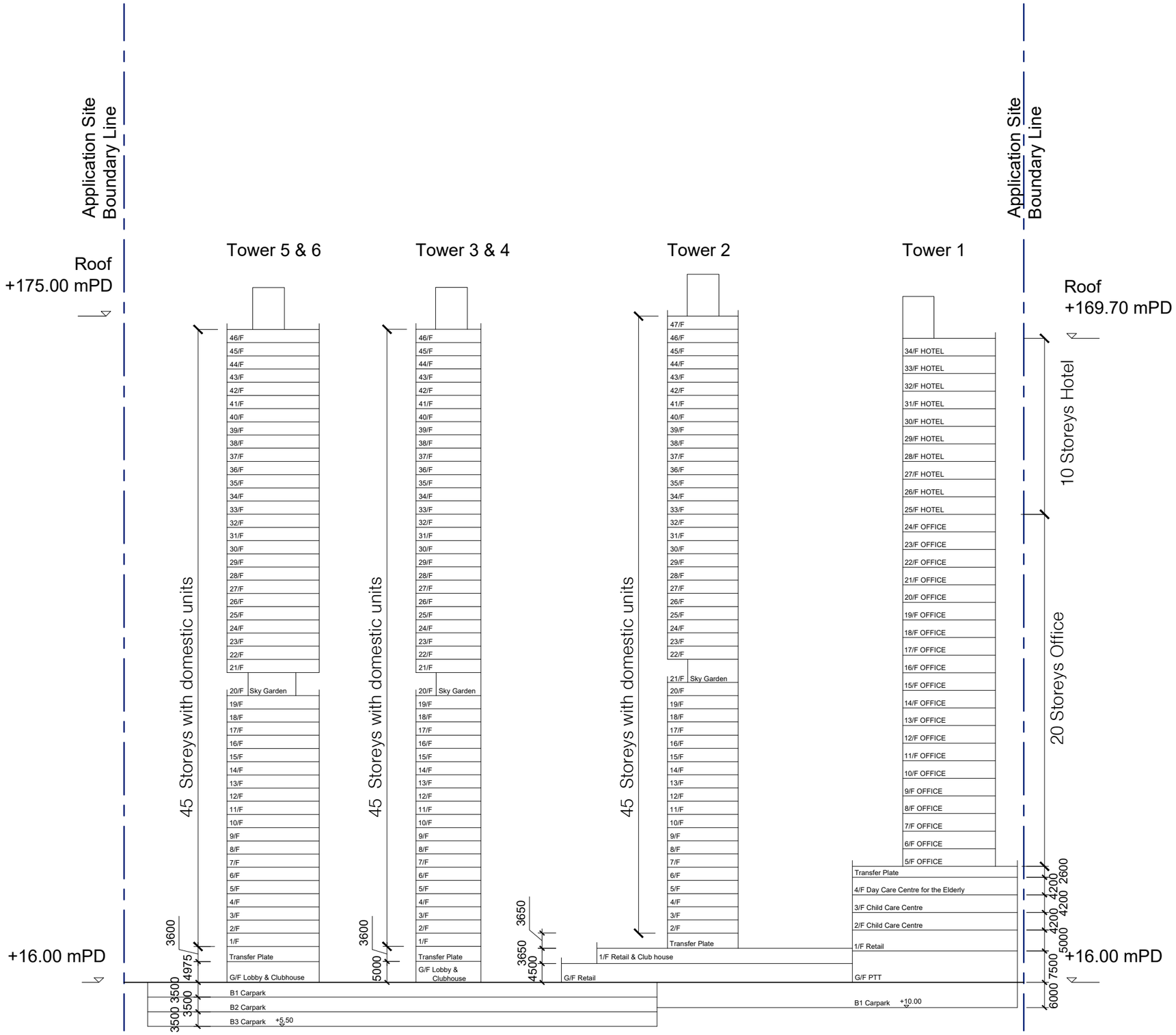
Master Layout Plan and Sectional Drawings



BLOCK PLAN SK-1
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
11 DECEMBER 2023



SCHEMATIC SECTION AA' SK-2
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

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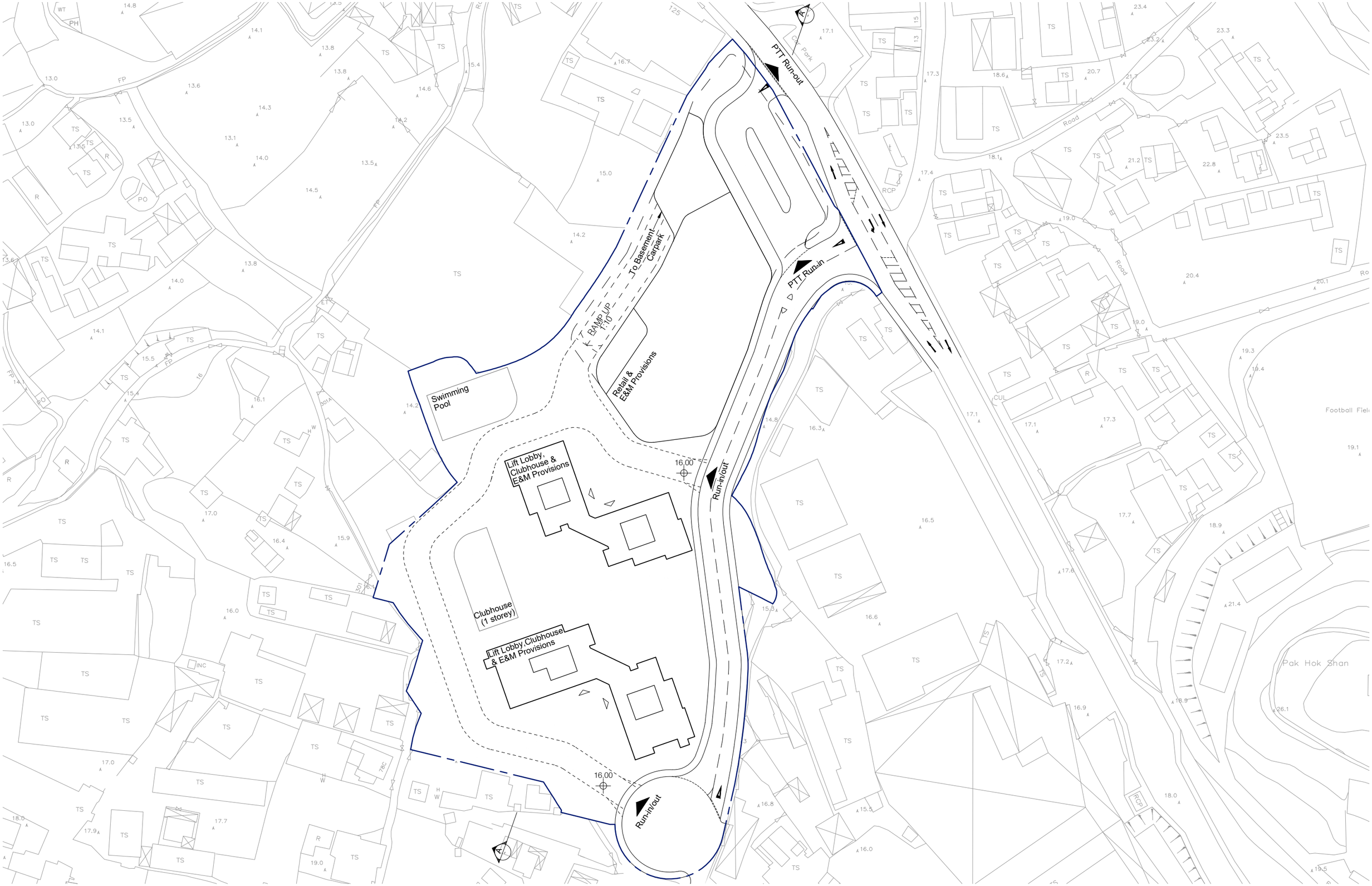
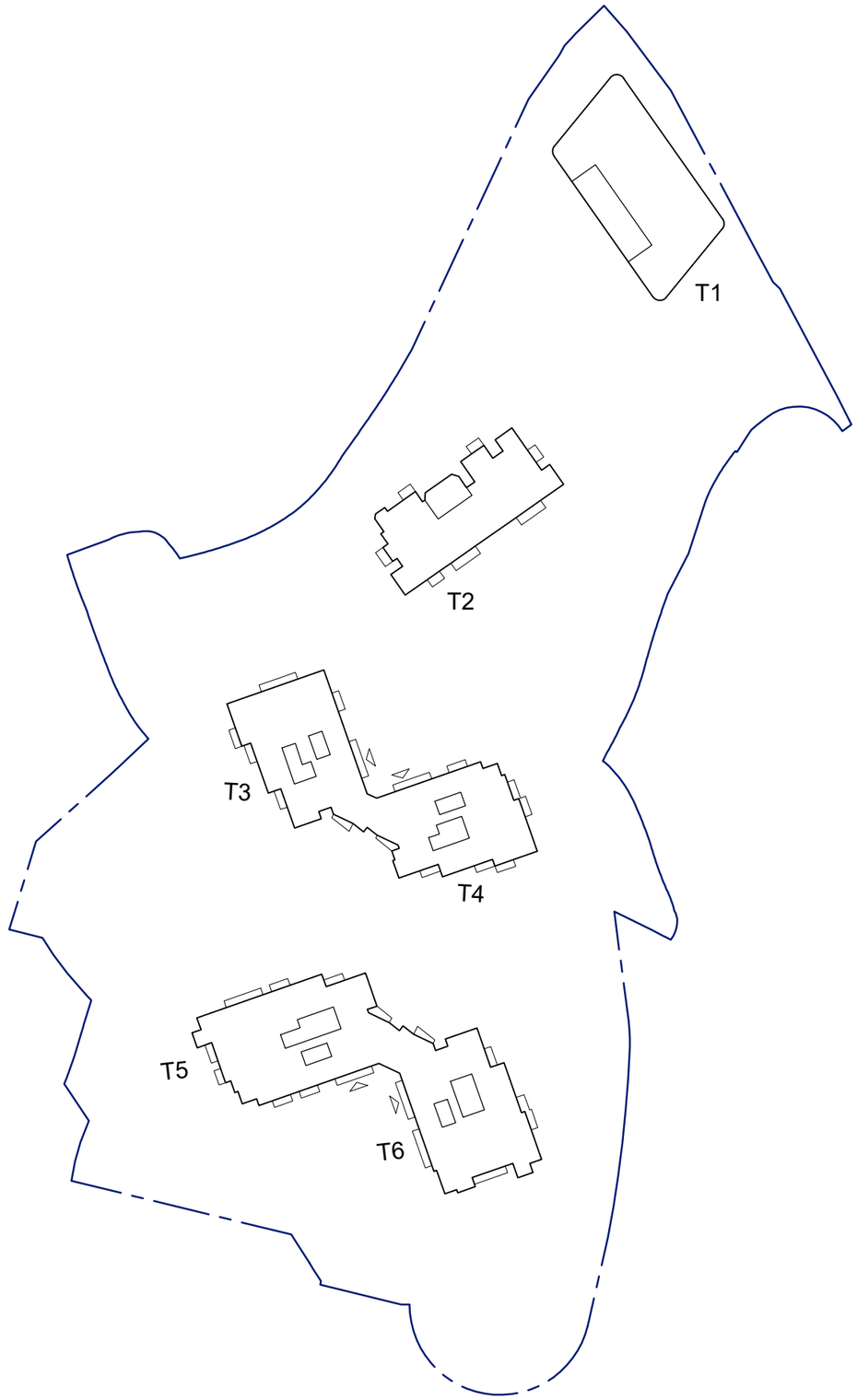
6 OCTOBER 2023



GROUND FLOOR PLAN SK-3
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
11 DECEMBER 2023



TYPICAL FLOOR PLAN SK-9
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

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12 OCTOBER 2023

Appendix B

Sewage Flow Calculation

Table 1 Total Average Sewage Discharge from Proposed Development

Proposed Development			
Residential			
Total Number of Unit	2205	units	Referred to submitted GBP.
Average Household [1]	2.8	persons	Refer to Average Domestic Household Size of North District Council in 2021 Population Census: Summary Result, published by Census and Statistics Department
Total Number of Residents	6174	persons	Referred to submitted GBP.
Unit Flow Factor [2]	0.27	m3/person/day	Referred to the planning unit flow for Domestic (Private - R2) in Table T-1 of GESF.
Average Sewage Discharge	1667.0	m^3/dav	
Retail			
Total Floor Area	2400.0	m2	Referred to submitted GBP.
Worker Density per GFA (in 100m2)	3.5	person/100 m2	Referred to the worker density of Retail Trade (All Types) in Table 8 of CIFSUS
Total number of person	84	persons	
Unit flow	0.28	m^3/person/dav	Commercial Employee + Wholesale & Retail - J4 in Table T-2 of GESF.
Average Sewage Discharge	23.5	m^3/dav	
Office			
Total Floor Area	11500.0	m2	Referred to submitted GBP.
Worker Density per GFA (in 100m2)	3.4	person/100 m2	Referred to the worker density of All Economic Activities (All Types) in Table 8 of CIFSUS
Total number of person	391	persons	
Unit flow	0.08	m^3/person/dav	Commercial Employee in Table T-2 of GESF.
Average Sewage Discharge	31.3	m^3/dav	
Hotel/Service Apartment			
Total Floor Area	5703.3	m2	Referred to submitted GBP.
Worker Density per GFA (in 100m2)	3.2	person/100 m2	Referred to the worker density of Hotels and Boarding Houses (All Types) in Table 8 of CIFSUS
Total number of person	183	persons	
Unit flow	1.58	m^3/person/dav	Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
Average Sewage Discharge	289.1	m^3/dav	
Clubhouse			
Total Floor Area	3500.0	m2	Referred to submitted GBP.
Worker Density per GFA (in 100m2)	3.3	person/100 m2	Referred to the worker density of Community, Social & Personal Services (All Types) in Table 8 of CIFSUS
Total number of person	116	persons	
Unit flow	0.28	m^3/person/dav	Commercial Employee + Community, Social & Personal Services - J11 in Table T-2 of GESF.
Average Sewage Discharge	32.5	m^3/dav	
Day Care Centre for the Elderly			
Number of Residential Places	60	units	Referred to submitted GBP.
Unit flow	0.19	persons	Referred to the planning unit flow for Domestic: Institutional and Special Class
Total Floor Area	787.6	m2	Referred to submitted GBP.
Worker Density per GFA (in 100m2)	3.3	person/100 m2	Referred to the worker density of Community, Social & Personal Services (All Types) in Table 8 of CIFSUS
Total number of person	26	persons	
Unit flow	0.28	m^3/person/dav	Commercial Employee + Community, Social & Personal Services - J11 in Table T-2 of GESF.
Average Sewage Discharge	18.7	m^3/dav	
Child Care Centre			
Number of Residential Places	100	units	Referred to submitted GBP.
Unit flow	0.04	persons	Referred to the planning unit flow for School Student in Table T-2 of GESF.
Total Floor Area	1166	m2	Referred to submitted GBP.
Worker Density per GFA (in 100m2)	3.3	person/100 m2	Referred to the worker density of Community, Social & Personal Services (All Types) in Table 8 of CIFSUS
Total number of person	39	persons	
Unit flow	0.28	m^3/person/day	Commercial Employee + Community, Social & Personal Services - J11 in Table T-2 of GESF.
Average Sewage Discharge	14.9	m^3/dav	
Swimming Pool			
Swimming pool area	340.7	m^2	Refer to MLP
Height of swimming pool	1.5	m	Assumed height of swimming pool is 1.5m
Estimated volume of the swimming pool	511.0	m^3	
Turnover rate	6.0	hour	General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the Hong Kong Specail Administrative Region (6hr for outdoor swimming pool)
Surface loading rate of filter	50.0	$m^3/m^2/hr$	Swimming Pools: Design and Construction, Fourth Edition By Philip H. Perkins (50 m3/m2/hr adopted)
Required filter area	1.7	m^2	
Backwash duration	7.0	mins/day	With reference to Section B8.5.5 of General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the HKSAR
Backwash flowrate	30.0	$m^3/m^2/hr$	Technical Paper - Domestic Swimming Pool Filtration by European Union of Swimmingpool and Spa Associations
Maximum backwash volume	5.96	m^3/day	
	0.000069	m^3/s	
	0.069	L/s	
Total			
Sewage Generation Rate (residents +	**2077.0**	**m^3/dav**	
Catchment Inflow Factor	**1.0**		
Revised Total Sewage Generation Rate	**2077.0**	**m^3/dav**	
Swimming Pool Backwash	**6.0**	**m^3/dav**	
Peaking Factor	**3**		Refer to Section 3.3 of Guidelines for the Design of Small Sewerage Treatment Plant
Peak Flow	**0.07219**	**m^3/s**	
	72.187	**L/s**	

Notes:

[1] The average household size is made reference to "*2021 Population Census Summary Results*", published by C&SD.

[2] The unit flow factor is made reference to "*Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (Version 1.0)*", published by EPD.

[3] The worker density is made reference to Table 8 of CIFSUS, published by PlanD.

Average Dry Weather Flow Estimation for Proposed Development

PROJECT SITE

Population Description	Type of Development	Estimated Residential Units / Service GFA [1]		Estimated Population [2]		Recommeded Design Flow Rate	Dry Weather Flow
						(m3/persons/day) [b]	(m3/day)
Residential	R2 (45-60m2)	Units	2205	Population	6174	0.27	1667.0
	Elderly care	Person	60	Population	60	0.19	11.4
	Child care	Person	100	Population	100	0.04	4.0
Services	Clubhouse	m2	3500	Population	116	0.28	32.5
	Office	m2	11500	Population	391	0.08	31.3
	Retail	m2	2400	Population	84	0.28	23.5
	Hotel	m2	5703	Population	183	1.58	289.1
	Elderly care	m2	788	Population	26	0.28	7.3
	Child care	m2	1166	Population	39	0.28	10.9
Swimming Pool	Swimming Pool	m2	-	Population	-	-	6.0
				SUM	7,173	**SUM (Residential + Services)**	2077.0
						SUM (Total)	2083.0

Notes:

[1] Information referred to development schedule_20230802

[2] Avg household size 2.7 (Refer to Average Domestic Household Size of North District Council in 2021 Population Census: Summary Result, published by Census and Statistics Department)
Worker Density per GFA (person/100 m2) for Commercial/office (3.4); for retail (3.5); for Hotels and Boarding Houses (3.2); for Community, Social & Personal Services (3.3) referred to the worker density of (All Types) in Table 8 of CIFSUS.

[2] The Recommended Design Flow Rate of the Proposed House reference to Appendix 3 of Guidelines for the Design of Small Sewage Treatment Plants by EPD.

Table 8 Initial Flat Size Assumptions

GFA per flat (m^2)

	Hong Kong & Kowloon	Tsuen Wan, Kwai Chung & Tsing Yi	Other New Towns
R1	50	45	45
R2	110	60	60
R3	210	130	130

Appendix C

Pollutants Load and Required Volume for Proposed STP

Proposal for Sewage Treatment Plant with Equalisation Tank

Estimation of the Required Volume for the Sewage Treatment Plant

Dry Weather Flow (DWF) (m3/day) Sewage generated (Residents and Service)	Peaking Factor[1]	Swimming Pool Backwash (m3/day)	Minimum Sewage Treatment Plant Capacity Required (m3)
2077	3	6	6237

Estimation of the Required Volume for the Equalisation Tank

Dry Weather Flow (DWF) (m3/day) Sewage (Residents and Service)	Peaking Factor [1]	Swimming Pool Backwash (m3/day)	Time Required to Hold Excess Flow (hrs) [3]	Minimum Equalisation Tank Capacity Required (m3)
2077	3	6	2	519.75

Remarks:

[1]: With reference from EPD's "Guidelines for the Design of Small Sewage Treatment Plants". For the Proposed Development, the factor of 3 x DWF is adopted for development with the use of equalisation tank.

[2]: This is reference from section 12 of the Guidance Notes on Discharges from Village Houses from the EPD. A maximum of 30 cm of sludge, or 1/4 of the sewage holding tank's volume of sludge is allowed, before desludging is required.

[3]: With reference to EPD's "Guidelines for the Design of Small Sewage Treatment Plants", if an equalisation tank is used, the equalisation tank shall be designed to hold excess flow for a period of 2 hours.

3.3 The design peak flow arriving at the STP as a proportion of dry weather flow (DWF) shall be taken as:

- 6 DWF for population equal to or under 1 000
- 4 DWF for population over 1 000 but not less than that based on 1 000 population.

Either the STP can be designed for the above peak flow rate or it can be designed to cater for a peak flow of 3 DWF, excess flow over 3 DWF being equalized in an equalization tank. In the latter case the feed pumps must be sized accurately to avoid excessive peak flow rate production.

Equalization tanks should be designed to hold the excess flow for a period of two hours. Only the tank volume above the duty pump cut-in level should be considered as effective equalization volume. Air ejectors should be provided to prevent septicity of sewage.

Estimation of the Loading Requirements for the Sewage Treatment Plant

BODs

Population Description	Estimated Population		Recommeded Loading Rate for BODs [4]	Loading Rate for BODs
			(g/persons/day) [b]	(kg/day)
Residential	Person	6334	55.00	348.37
Office	Person	391	23.00	8.99
Services	Person	448	3.89	1.74
	SUM	7,173	**SUM**	359.11

SS

Population Description	Estimated Population		Recommeded Loading Rate for SS [4]	Loading Rate for SS
			(g/persons/day) [b]	(kg/day)
Residential	Person	6334	55.00	348.37
Office	Person	391	23.00	8.99
Services	Person	448	3.89	1.74
	SUM	7,173	**SUM**	359.11

Remarks:

[4]: With reference to Appendix 2 of EPD's "Guidelines for the Design of Small Sewage Treatment Plants", the BODs and SS loads for Services shall be pro-rata to equivalent residential population

Appendix I Water Supply Impact Assessment

Issue No. : 6

Issue Date : July 2024

Project No. : 2127

WATER SUPPLY IMPACT ASSESSMENT

FOR

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOTS 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

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Document Verification

Project Title	APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOTS 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES	**Project No.**	2127
Document Title	WATER SUPPLY IMPACT ASSESSMENT		

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
1	Oct 2023	1st Submission	Various	Cathy Man	Grace Kwok
2	Dec 2023	2nd Submission	Various	Cathy Man	Grace Kwok
3	Jan 2024	3rd Submission	Various	Cathy Man	Grace Kwok
4	Apr 2024	4th Submission	Various	Cathy Man	Grace Kwok
5	June 2024	5th Submission	Various	Cathy Man	Grace Kwok
6	July 2024	6th Submission	Various	Cathy Man	Grace Kwok

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Appendix C Hydraulic Review of Water Main

1. INTRODUCTION

1.1.1. Allied Environmental Consultants ("AEC") has been appointed to conduct a Water Supply Impact Assessment ("WSIA") to support of a Section 12A application for the mixed use development at Lot 796 & 1008 RP at D.D. 77 and adjoining government land in Ping Che, Ta Kwu Ling, New territories (hereinafter referred to as "Application Site").

1.2. OBJECTIVES

1.2.1. This WSIA is conducted to examine the technical feasibility of the Proposed Development.

1.2.2. The report outlines the assessment results of the potential water supply impacts caused by the Proposed Development. The main objectives of the study include the following:

- Review the existing supply condition of the Application Site;
- Estimate the water demand of the Proposed Development;
- Identify any potential impact on the current water supply system due to the additional water supply demand from the proposed development;
- Propose water supply mitigation measures where appropriate to mitigate the potential water supply impact.

1.3. Report Structure

1.3.1. The remaining chapters of this report are shown below:

Chapter 2 – Site Context
Chapter 3 – Assessment Methodology
Chapter 4 – Water Supply Impact Assessment
Chapter 5 – Result and Discussion
Chapter 6 – Conclusion

2. SITE CONTEXT

2.1. Site Location and Its Environs

2.1.1. The proposed development is located at Ping Che Road from the north to northeast, the unnamed village road to the east, village, agricultural land and open storage area to the south and west.

2.1.2. ***Figure 2.1*** shows the Site location and its environs.

2.1.3. According to the approved Ping Che and Ta Kwu Ling Outline Zoning Plan (OZP No.: S/NE-TKL/14) gazette on 12/03/2010, the Application Site is currently zoned as "Open Storage" ("OS"), the southern part of the Application Site is zoned as "Agriculture" ("AGR") and a minor portion of the Application Site is shown as "Road". Re-zoning is required of the Proposed Development.

2.1.4. The surrounding areas of the Application Site are characterized by a mixture of various land uses. These include villages, workshops, open storage uses and major roads.

2.1.5. According to the Study Brief ESB-341/2021, the Application Site is within the New Territories North (NTN) New Town and Man Kam To Development plan under the New Territories. No relevant development plan and programme can be obtained during the course of study.

2.2. Proposed Development Scheme

2.2.1. The proposed site area of the subject site is 17,822m^2, with a plot ratio of 5.9 for domestic use and 1.1 for non-domestic use. The total GFA for domestic use is 105,145 m^2, and the 19,603 m^2 for non-domestic use. The proposed development will consist of 5 blocks of residential tower ranging from 47 to 48-storey (excluding basement) in height, provided 2,205 residential unit, and 1 block of commercial tower with 35-storey (excluding basement) in height.

2.2.2. The commercial tower accommodating retail facilities, office, hotel or service apartment and social welfare facilities are planned strategically along Ping Che Road.

2.2.3. Key Development Parameters are summarized in ***Table 2-1*** below. The Master Layout Plan (MLP) and sectional drawing is shown in ***Appendix A***.

Table 2-1 Key Development Parameters

Key Development Parameters	**Indicative Scheme**		
Site Area (About)	17,822 sq.m		
GFA and PR		GFA (sq.m)	Plot Ratio
	Domestic	105,145	5.9
	Non-domestic	19,603	1.1
No. of Blocks	Domestic	5.9	
	Non-domestic	1.1	
Building Height (Main Roof) (About) No. of Storeys	Domestic	Not more than 175 mPD	
		47 to 48 storeys (excluding basement)	
	Non-domestic	Not more than 170 mPD	
		35 storeys (excluding basement)	
Site Coverage	Domestic	Below 15m	Not more than 75%
		Above 15m	Not more than 37.5%
	Non-domestic	Below 15m	Not more than 100%
		Over 24m but not exceeding 27m	Not more than 90%
		Above 27m	Not more than 62.5%
No. of Flats	2,205		
Anticipated Population (About) [1]	6,174		
No. of Hotel Rooms	About 70 rooms		
Local Open Space	Not less than 6,174m^2		
Greenery Provision	Not less than 3,565m^2 (20%)		
No. of Parking Spaces and Loading / Unloading Spaces	Private Car Parking Spaces:	725 (including 6 no. of parking space for disabled users)	
	Motorcycle parking spaces:	33	
	Goods vehicle loading / unloading bays:	18	
	Lay-bys for taxi and private car:	2	
	Lay-by for single deck tour bus:	1	
Anticipated Completion Year	**2032**		

2.2.4. Based on the tentative implementation programme, the planned population intake would be

in year 2032.

2.3. Existing Water Supply Condition

2.3.1. The Application Site is within the supply zone of Ping Che Fresh Water Service Reservoir (PCFWSR) located around 1km away from the Application Site. According to information obtained from WSD, the capacity of PCFWSR is 20,000 m^3.

2.3.2. Based on the fresh water record plan provided by WSD, here is an existing 900mm raw water pump main and existing 300mm freshwater distribution main running at the northeast of the Application Site along Ping Che Road. From there, a 150mm freshwater distribution main branches off from the 300mm distribution main at the northeast of the Application Site, then an 80mm water supply main branch off again from the 150mm main and running at the east of the Application Site, along the village road. Additionally, a 40mm freshwater distribution main then branch off from the 80mm main at the southeast side of the Application Site and run along the southern side of the Application Site. The existing water supply condition is shown in ***Figure 2.1***.

3. ASSESSMENT METHODOLOGY

3.1. Design Guidelines

3.1.1. The following approach is adopted in carrying out this WSIA:

a) Review interface projects which may have bearing on the development;
b) Identify existing and planned water supply systems within the study area;
c) Assess the water demands for the development;
d) Propose the water supply scheme arising from the development including preparation of a hydraulic analysis;
e) Examine the short- and long-term impacts on existing water mains and any interface projects;
f) Recommend suitable mitigation measures and/or diversion schemes and arrangement to mitigate the permanent impacts on existing water supply system and minimize the disturbance to the normal operation of the system during construction stage.

3.1.2. The estimate of water demands for the proposed development is based on the development parameters shown in ***Section 2***. Estimates are generally based on unit water demands provided by WSD Departmental Instruction (DI) No. 1309.

3.2. Unit Demand

3.2.1. Assumptions have been made for the unit daily demand (UDD) for each type of land use, for both fresh water and flush water. The UDD is used for estimating the total demand of the proposed development and the required water supply capacity to support the development.

3.2.2. The water supply demand estimation is presented in ***Appendix B***.

3.2.3. The unit flow factors adopted for water demand estimation and calculation are summarized in ***Table 3-1***.

Table 3-1 Unit Daily demand Adopted in Water Supply Impact Assessment

Development Type	**Flow Type**	**Fresh Water UFF [1] (m^3/person or room/day)**	**Flush Water UFF [1] (m^3/person or room/day)**
Domestic	Residential R2 + Service Trade	0.34 m^3/h/d	0.104 m^3/h/d

Office	Wholesale & Retail – J4	0.04 m^3/h/d	-
Hotel/Service Apartment	Restaurants & Hotels – J10	1.0 m^3/room/d	0.36 m^3/room/d

Note:
[1] Referred to Table 1 & Table 2 of WSD Departmental Instruction (DI) No. 1309

3.3. PEAKING FACTORS

3.3.1. The peaking demand factors below shall be adopted for design:

- Peak flow rate in fresh water distribution mains = 3 x mean daily demand
- Peak flow in flushing water distribution mains = 2 x mean daily demand
- Peak flow rate in fresh water trunks mains = 1.5 x mean daily demand
- Peak flow rate in flushing water trunks mains = 1.2 x mean daily demand

3.4. FIRE-FIGHTING

3.4.1. In addition to the aforementioned facilities of the Proposed Development, water supply for fire-fighting service has been considered in this WSIA. Fire-fighting requirement for residential zone is 6,000 m^3day with discharge pressure of 17m head. The fire hydrant should be of standard pattern with minimum output pressure of not less than 25 psi. With multiple hydrants operating at the same time, total output of not less than 4,000 L/min shall last for 60 minutes. ***Table 3-2*** summarises the fire-fighting requirements.

Table 3-2 Fire-Fighting Requirements

Requirements	Minimum Values
Minimum fresh water supply	6000 m^3/day
Discharge pressure	17 m
Minimum output not less than 25 psi	Not less than 4,000 L/min to last for an hour

3.5. RESIDUAL HEADS

3.5.1. The minimum residual heads at extremely of the fresh water and flush water supply systems for the Proposed Development are adopted as follow:

- Fresh Water: 20 m
- Flush Water: 15 m

3.6. DESIGN VELOCITY

3.6.1. The desirable flow velocities for hydraulic checking are as follows:

Maximum velocity (under peak flow condition)

Fresh water mains:

>DN700	≤ 3 m/s
DN700 – DN525	≤ 2.5 m/s
DN450 – DN375	≤ 2 m/s
DN300 – DN200	≤ 1.5 m/s

Flush water mains:

>DN1000	≤ 3 m/s
DN900 – DN800	≤ 2.5 m/s
DN700 – DN300	≤ 2 m/s
DN450 – DN300	≤ 1.5 m/s

Minimum velocity (under peak flow condition)

Fresh water mains: ≥ 0.9 m/s

Flush water mains: ≥ 0.9 m/s

3.6.2. The pipeline shall have a minimum gradient of 1:400. Pipes shall be laid at a minimum separation of 300mm away from existing utilities and underground structures.

4. WATER SUPPLY IMPACT ASSESSMENT

4.1. Estimation of Water Demand for Proposed Development

4.1.1. The estimated daily fresh water demand for the proposed development is 2184.8 m^3/day and the estimated daily flush water demand is 667.3 m^3/day. The detailed calculation of water demand estimation is shown in ***Table 4-1*** and ***Appendix B***.

Table 4-1 Water Demand of Proposed Development

Type of Development	**Fresh Water Demand (m^3/day)**	**Flush Water Demand (m^3/day)**	**Total Water Demand (m^3/day)**
Residential + Service Trades	2099.2	642.1	2741.3
Office	15.64	-	15.64
Hotel/Service Apartment	70.0	25.2	95.2
Total	**2184.8**	**667.3**	**2852.1**

4.1.2. The peaking factor adopted for the sizing of distribution main is 3 for fresh water and 2 for flush water. According to the calculation, the total water demand is 2852.1 m^3/day and the required peak flow rate for the proposed development is 0.076 m^3/s for fresh water and 0.015 m^3/s for flush water.

5. RESULTS AND DISCUSSION

5.1.1. Based on WSD, the total capacity of PCFWSR is 20,000 m^3/day. The water demand from the proposed development will utilize approximately 14.3% of the design capacity of PCFWSR and occupied approximate 51.7% capacity of existing 300mm freshwater distribution main.

5.1.2. Currently there is no salt water supply system at the nearby area of the Application Site. Therefore, the fresh water supply will also cater for flushing demand of the proposed development. The fresh water and flush water supplied will be connected to Application Site in 2 different main.

5.1.3. Based on the water demand of proposed development discussed in ***Section 4*** and ***Appendix B***, a DN250 fresh water supply and a lead-in valve is proposed to be tee-off from existing DN300 fresh water main along Ping Che Road, and the proposed DN100 flush water supply main is proposed to be tee-off from the proposed DN250 fresh water supply main. The fresh water demand will be occupied approximately 61.8% of the proposed DN250 freshwater distribution main, and the flush water demand will be occupied approximately 78.7% of the proposed DN100 flush water distribution main. The detailed calculation is shown in ***Appendix C***. It is recommended to construct the inlet at the northeast side of the Application Site which is tee-off from Ping Che Road located at northeast of the application site.

5.1.4. The proposed fresh water supply system within the site will be further developed in detailed design stage.

5.1.5. The indicative location of the proposed water supply main to be tee-off from public water supply system refer to ***Figure 5.1***. Detailed water mains calculation can be referred to ***Appendix C***.

5.1.6. Based on the fresh water main record plan provided by WSD, there are existing water mains found within the Application Site. The option of diversion of water main is proposed to protect the water main. The existing water mains falls within Application Site will be diverted and running along the southern site boundary outside the Application Site to lie in Government land and connected to the existing water main at the southeast and southwest of the site. The preliminary proposed routing for diversion of water main can be referred to

Figure 5.2.

5.1.7. The diverted water main will be fulfilled the requirement by WSD, such as:

- The proposed diverted water main will be lied outside the Application Site and lie in Government Land;
- A strip of land with minimum of 1.5m in width will be provided for the diverted water main;
- Free access for staff of the WSD to carry out construction, inspection, operation, maintenance and repair works;
- The cost of diversion of existing water mains upon request will be borne by the Applicant; and
- The detail of diversion will be further provided during the detailed design stage, and the relevant proposal will submit to WSD for consideration and agreement before the work commence.

5.2. Proposed Fire-fighting System

5.2.1. The provision of fire-fighting requirement is discussed in ***Section 3.4***.

5.2.2. The provision of fire hydrants and fire mains is in accordance with the relevant stipulations in "Technical Circular No. 4/2010: Fire Mains and Hydrants on New Trunk Roads and Elevated Highway Structures" published by Highway Department (HyD). The average spacing of fire hydrants to at-grade trunk road shall be at a distance of 100m. The detailed arrangement will be submitted to Fire Services Department (FSD) for approval during detailed design stage.

5.3. Liability

5.3.1. The Applicant will be responsible for the construction works of all water supply facilities, including all internal watermains and water supply lead-in valves. The regular inspection and maintenance work of the facilities within the Application Site should be conducted by the property management.

5.3.2. During operational phase, regular inspection and maintenance works of the facilities outside the Application Site boundary will be carried out by the WSD.

6. CONCLUSION

6.1.1. The WSIA has been carried out to evaluate the possible impact on the existing water supply system due to the proposed development. The Application Site is within the supply zone of the PCFWSR, supply by the existing 300mm water distribution main running along Ping Che Road.

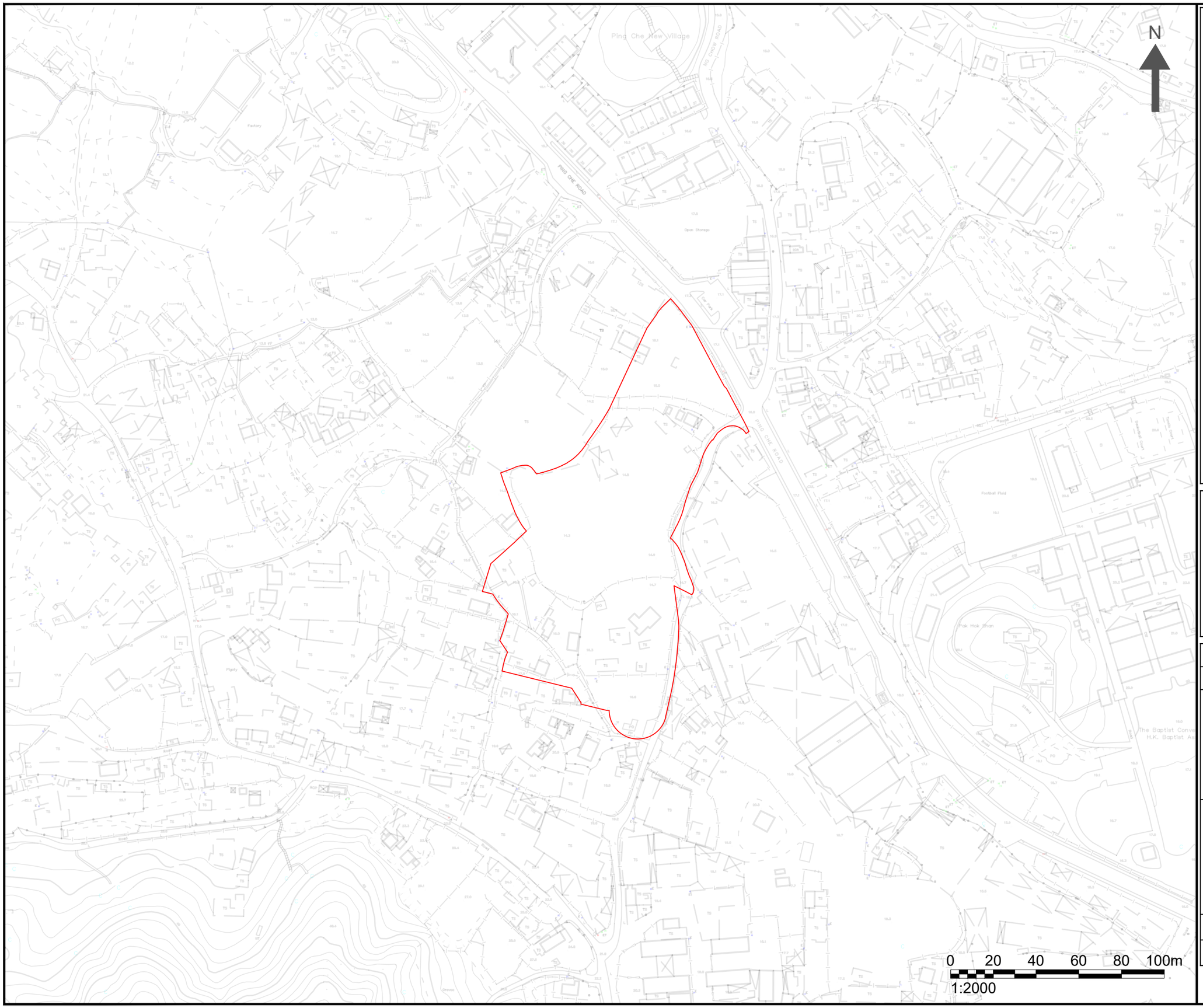
6.1.2. The estimated daily fresh water demand for Proposed Development is 2184.8 m3/day and the estimated daily flush water demand is 667.3 m3/day. The existing water supply is enough to cater with the addition water demand due to proposed development, which will utilize approximately 14.3% of the design capacity of PCFWSR. Therefore, significant water supply impact arising from the proposed development on the existing water supply is not expected, no mitigation measures are considered necessary.

6.1.3. There are existing water mains found within the Application Site. To protect the water main, the diversion of water main is proposed and will be fulfilled the requirement by WSD. The proposal will be provided during the detailed design stage later.

6.1.4. Based on the above, it is concluded that the water supply impact arising from the proposed development should be acceptable.

Figure 2.1

Application Site Location & Its Environs



NOTES :

APPLICATION SITE

Consultant

Allied Environmental Consultants Limited

Project No. :	2127
Drawing By :	CS

Project :

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :

APPLICATION SITE LOCATION & ITS ENVIRONS

Drawing No : FIGURE 2.1	Revision : 1
Scale : AS SHOWN	Date : OCT 2023

DO NOT SCALE OFF DRAWING. THIS DRAWING IS NOT FOR CONSTRUCTION PURPOSES UNLESS EXPRESSLY STATED. ALL RIGHTS RESERVED AND REPRODUCTION IN ANY FORM MUST BE APPROVED BY ALLIED ENVIRONMENTAL CONSULTANTS LIMITED.

A3 420 x 297

G:\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\05 WSIA\ISSUE 2\[2127] PING CHE WSIA_FIG 2.1 SITE LOCATION_DRAFT 2.DWG

Figure 5.1

Overview of Existing & Proposed Water Supply Main

Proposed DN250 Fresh Water Supply
Tee-off from Supply Main

The proposed DN100
Flush Water supply
main to be tee-off from
the proposed DN250
fresh water supply main

ø300
ø250
ø100
ø150
ø900
ø80
ø40
ø900

N

0 10 20 30 40 50m
1:1000

NOTES :

APPLICATION SITE

EXISTING FRESH WATER SUPPLY

EXISTING RAW WATER SUPPLY

PROPOSED TEE-OFF FROM EXISTING SUPPLY MAIN

Consultant

Allied Environmental Consultants Limited

Project No. : 2127

Drawing By : CS

Project :
APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR THE TOWN PLANNING ORDINANCE (CAP. 131) FOR MIXED USE DEVELOPMENT AT LOT 796 AND 1008RP IN D.D. 77 AND ADJOINING GOVERNMENT LAND IN PING CHE, TA KWU LING, NEW TERRITORIES

Drawing Title :
OVERVIEW OF EXISTING & PROPOSED WATER SUPPLY MAIN

Drawing No :	Revision :
FIGURE 5.1	4
Scale :	Date :
AS SHOWN	JUL 2024

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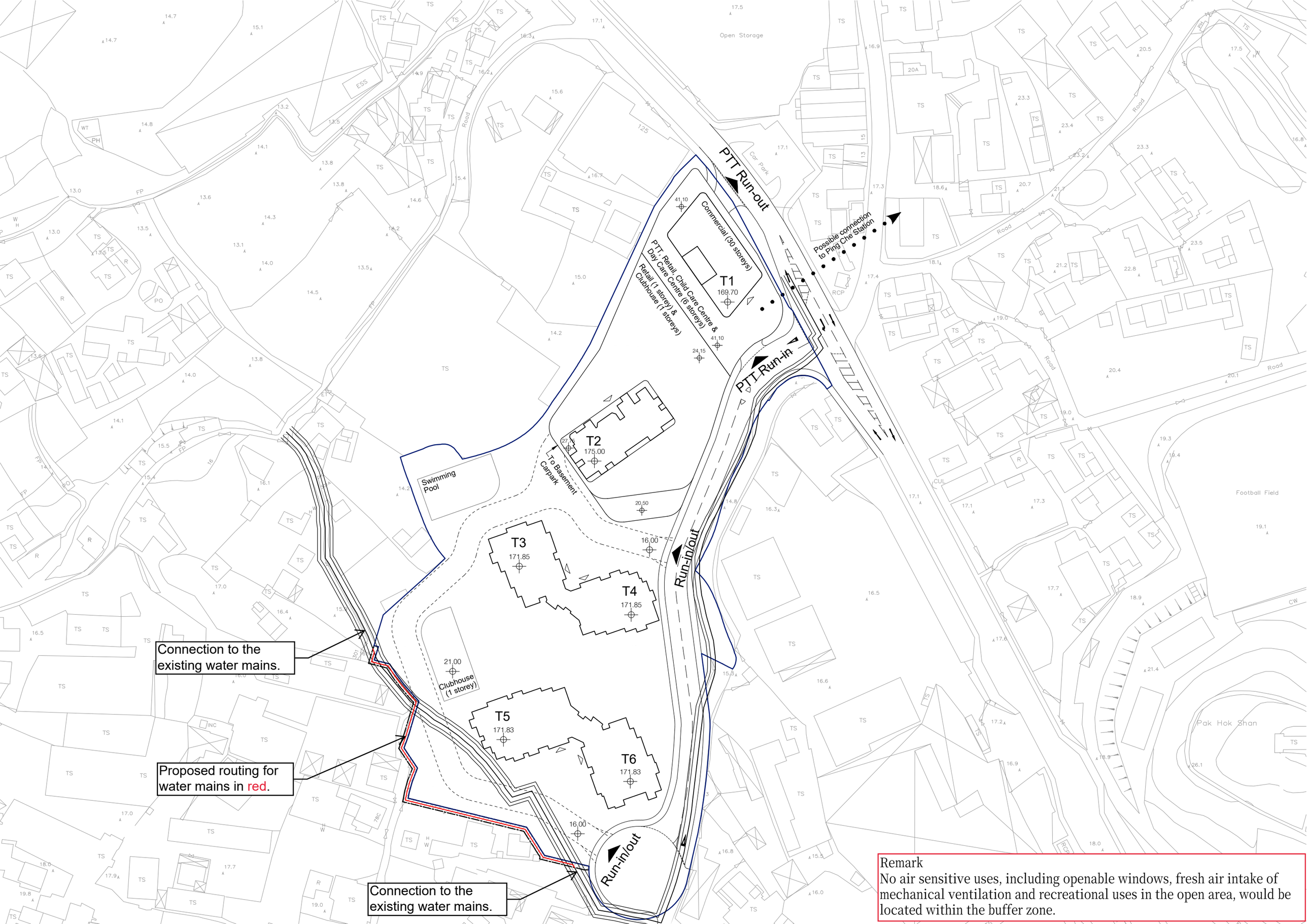
A3 420 x 297

C:\USERS\NGANCHUNSANG\SYNOLOGYDRIVE\2127 PING CHE DD77\05 REPORT\01 AEC REPORT\05 WSIA\ISSUE 6\FIG\[2127] PING CHE WSIA_FIG 5.1 OVERVIEW OF WATER SUPPLY_ISSUE 6.DWG

Figure 5.2

Preliminary Proposed Routing for Diversion of Water Mains



Remark
No air sensitive uses, including openable windows, fresh air intake of mechanical ventilation and recreational uses in the open area, would be located within the buffer zone.

Appendix A

Master Layout Plan and Sectional Drawings



BLOCK PLAN SK-1
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

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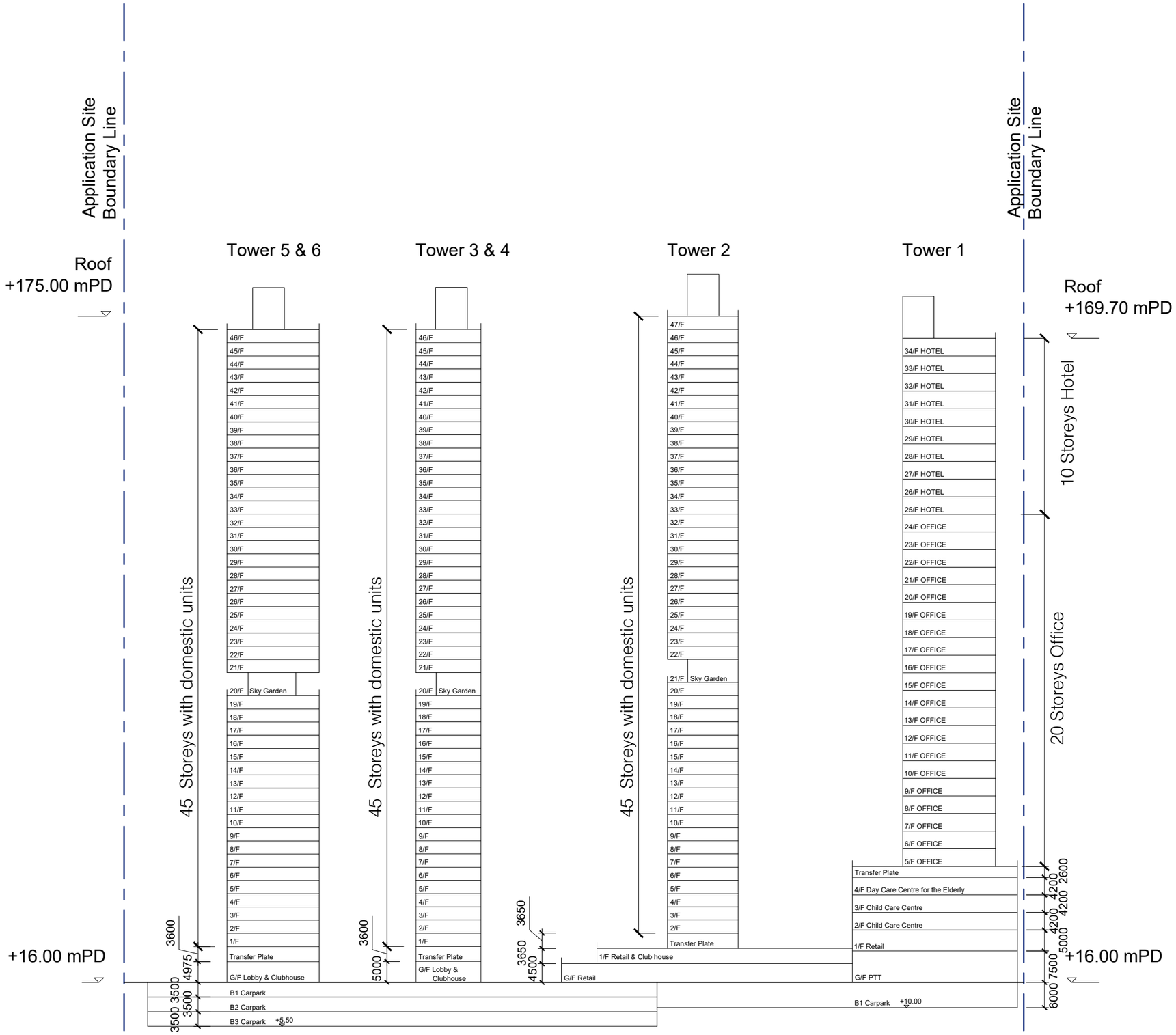
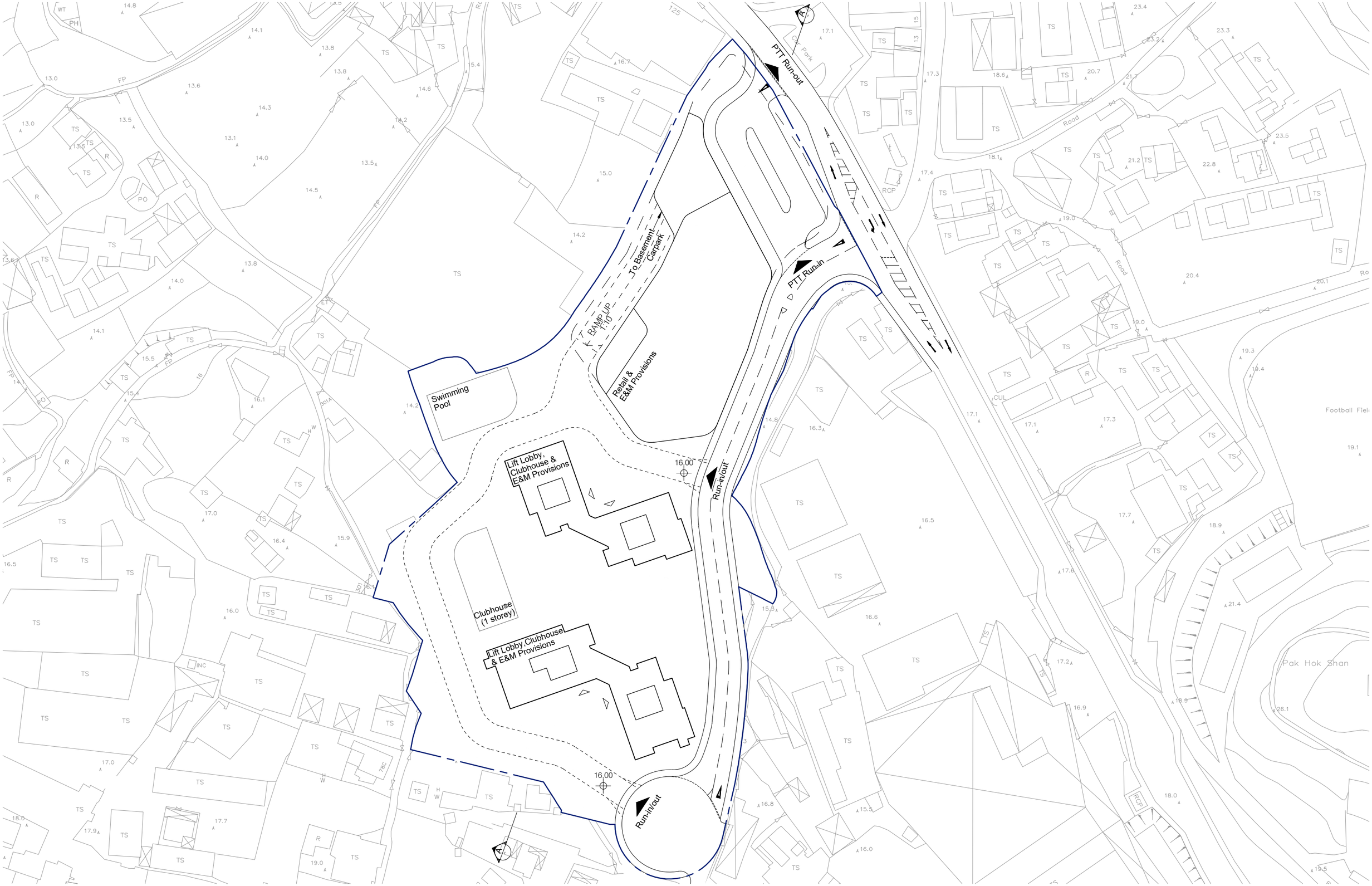
11 DECEMBER 2023



SCHEMATIC SECTION AA' SK-2
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

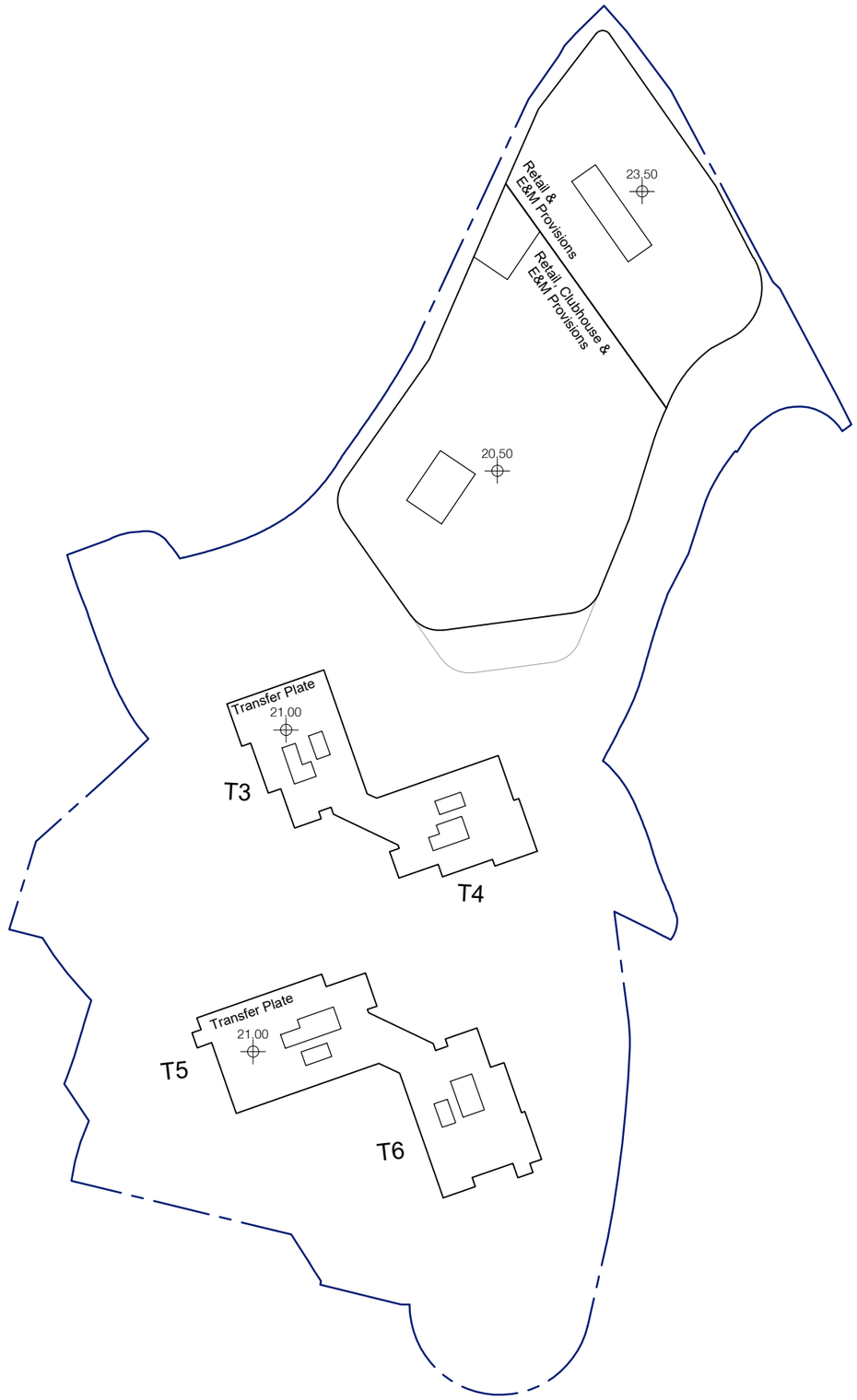
SINGULAR STUDIO LTD
6 OCTOBER 2023



GROUND FLOOR PLAN SK-3
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

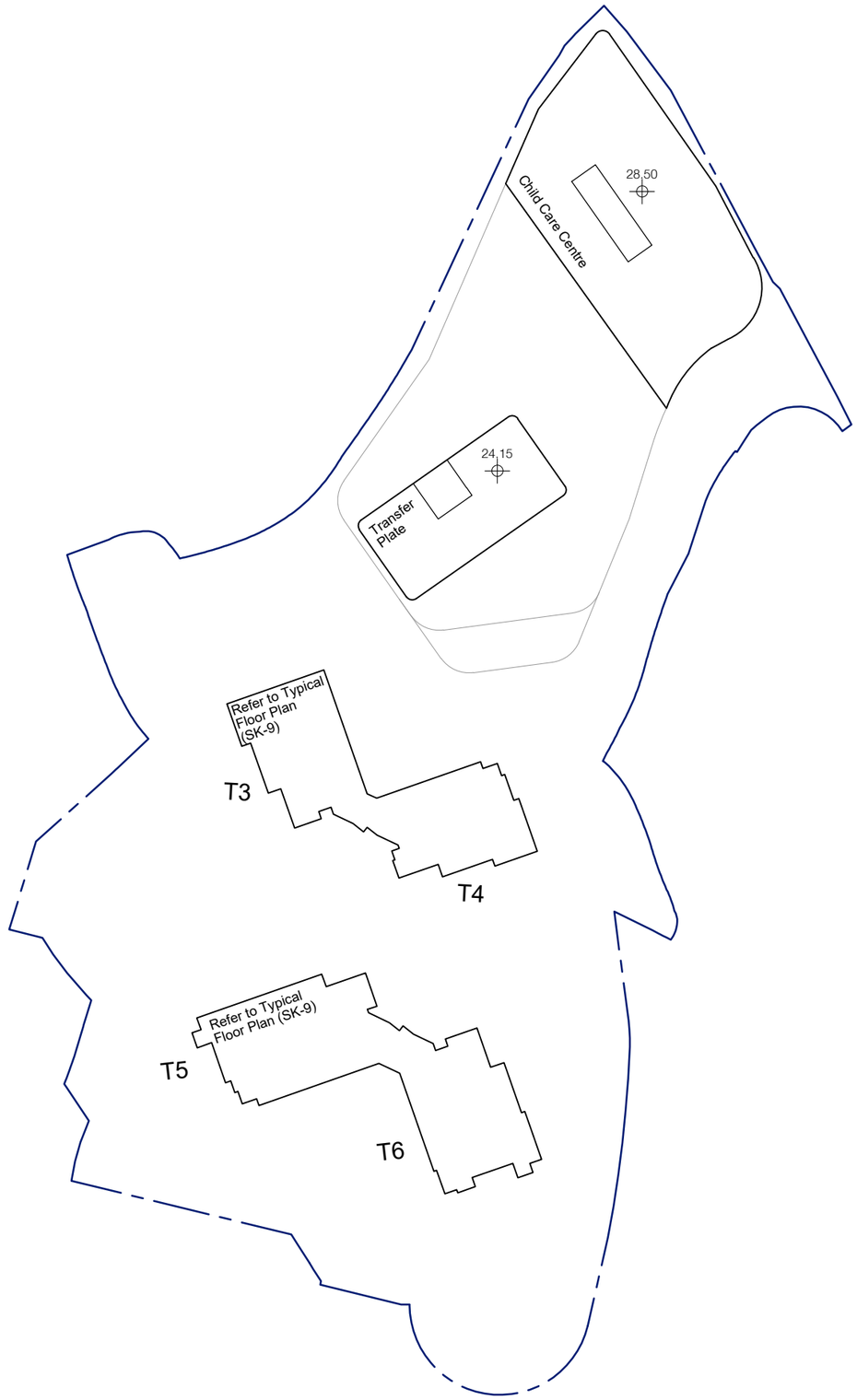
SINGULAR STUDIO LTD
11 DECEMBER 2023



FIRST FLOOR PLAN SK-4
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

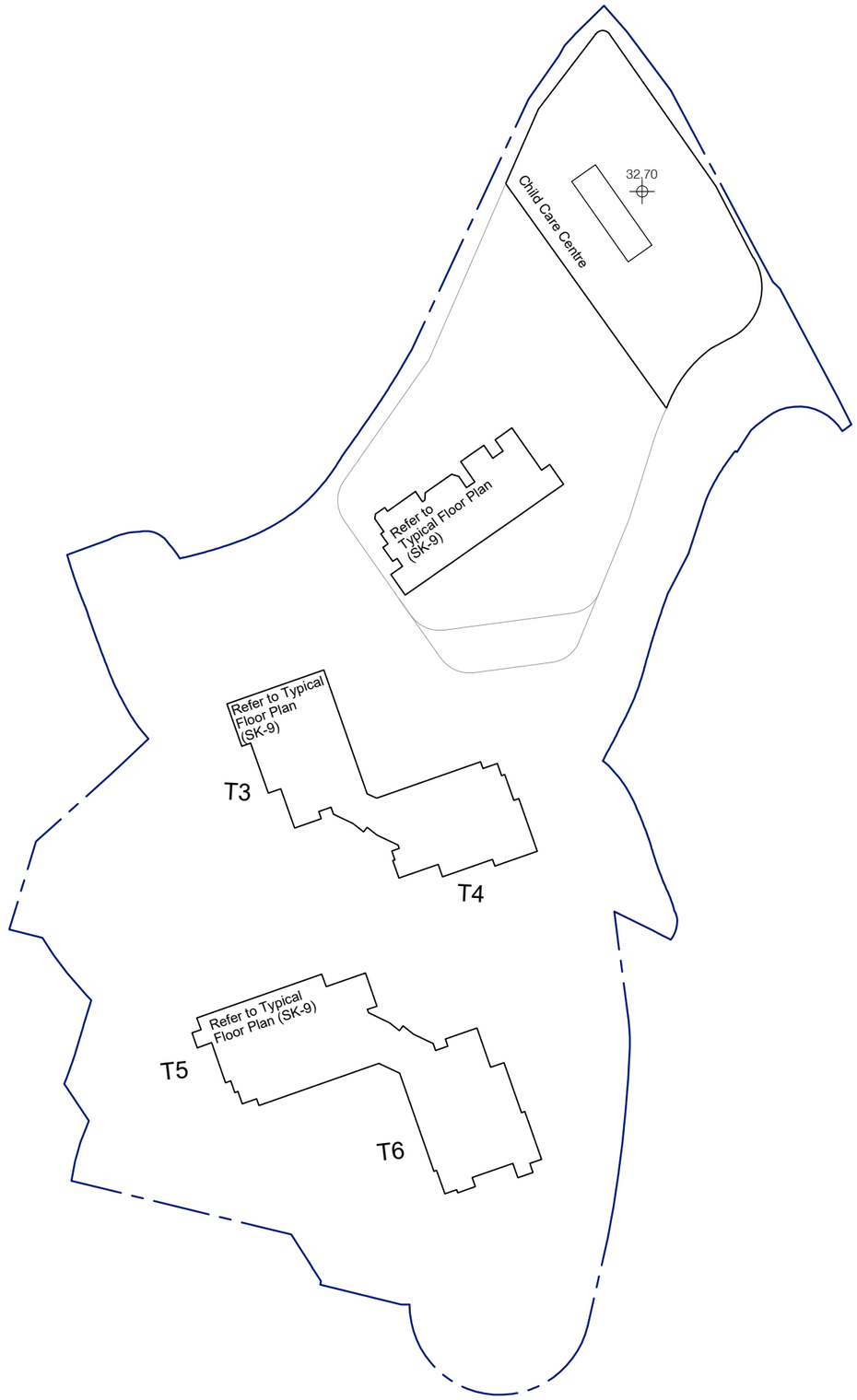
SINGULAR STUDIO LTD
12 OCTOBER 2023



SECOND FLOOR PLAN SK-5
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

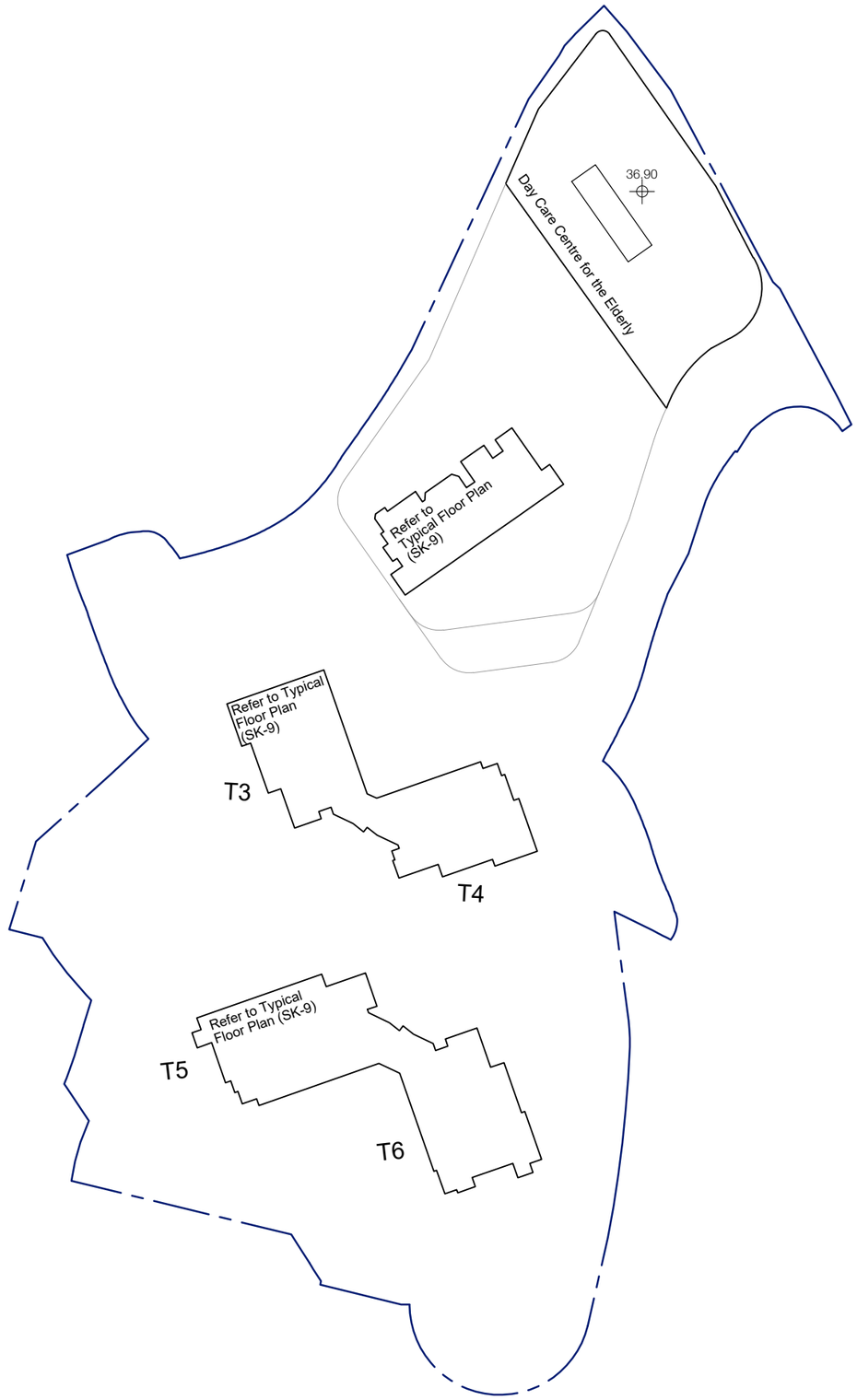
SINGULAR STUDIO LTD
12 OCTOBER 2023



THIRD FLOOR PLAN SK-6
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

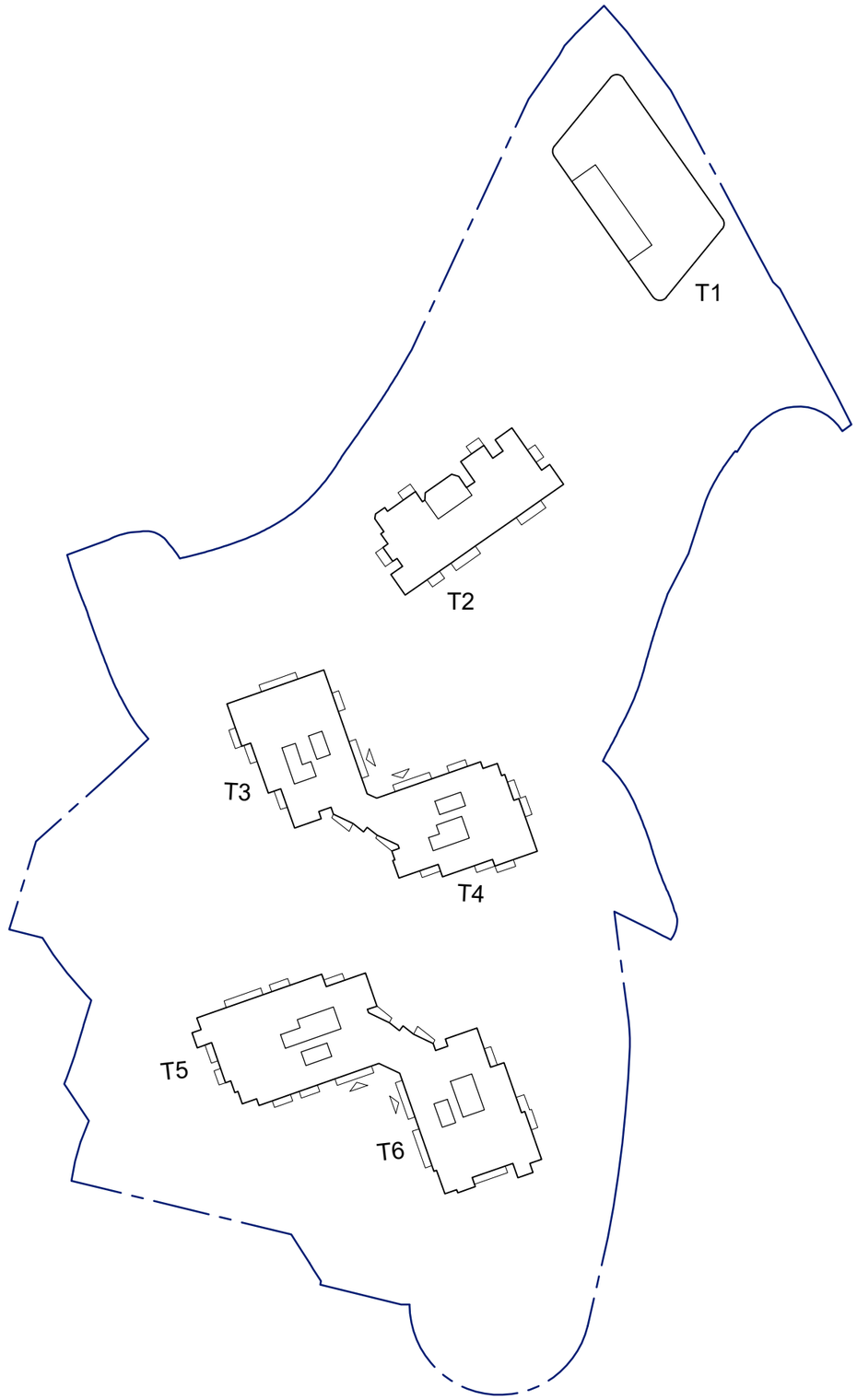
SINGULAR STUDIO LTD
12 OCTOBER 2023



FOURTH FLOOR PLAN SK-7
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

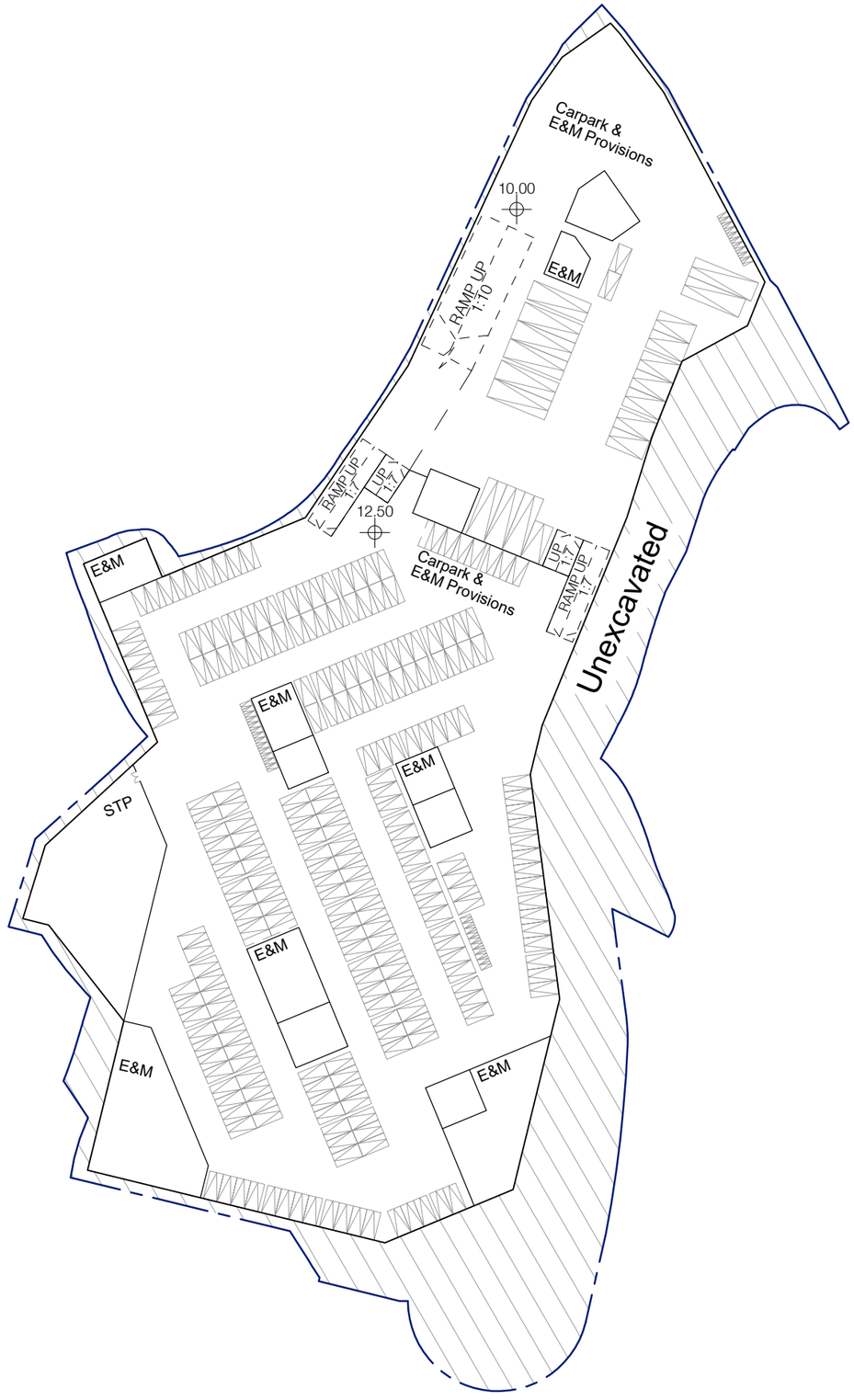
SINGULAR STUDIO LTD
12 OCTOBER 2023



TYPICAL FLOOR PLAN SK-9
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

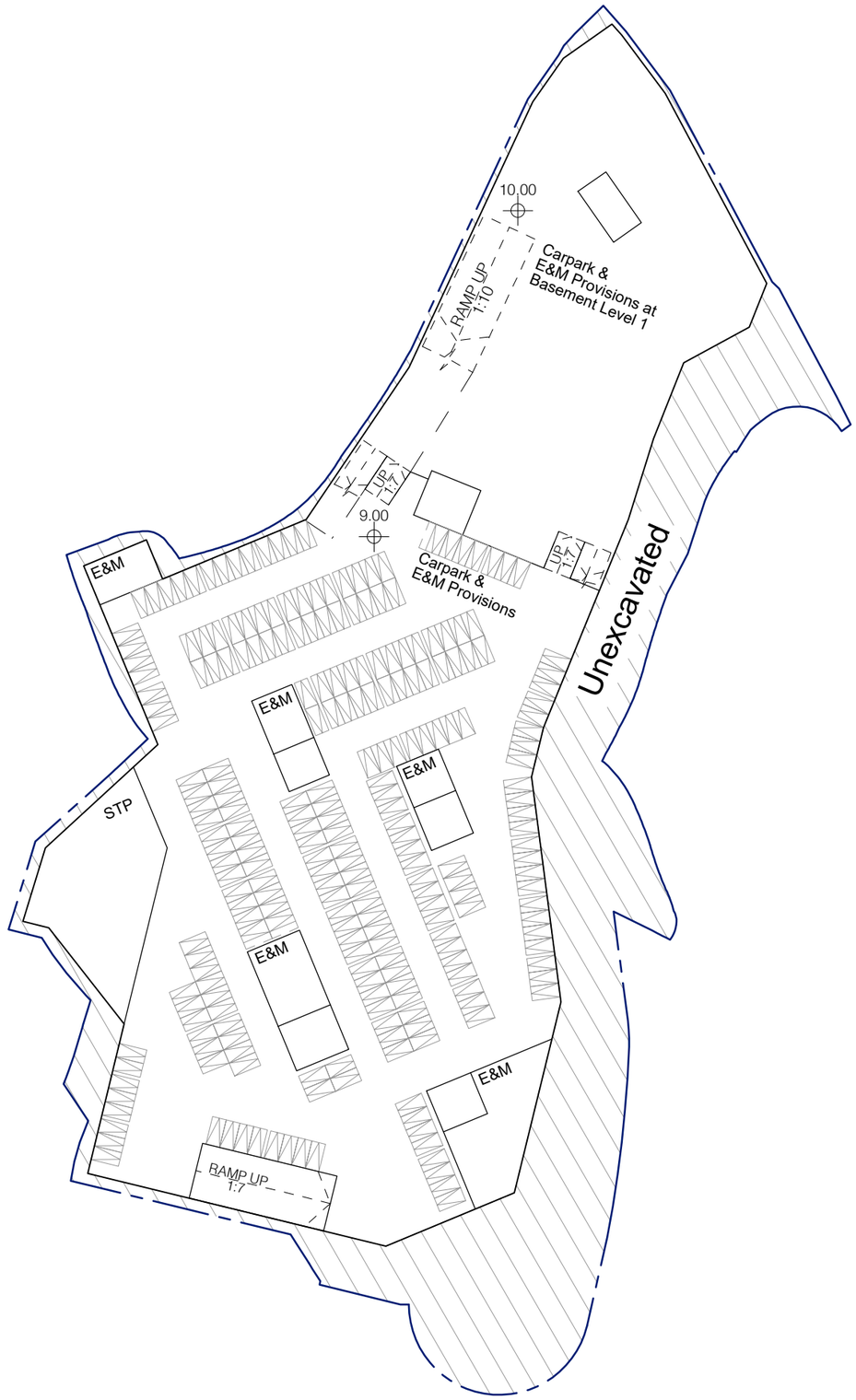
SINGULAR STUDIO LTD
12 OCTOBER 2023



BASEMENT LEVEL 1 PLAN SK-10
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

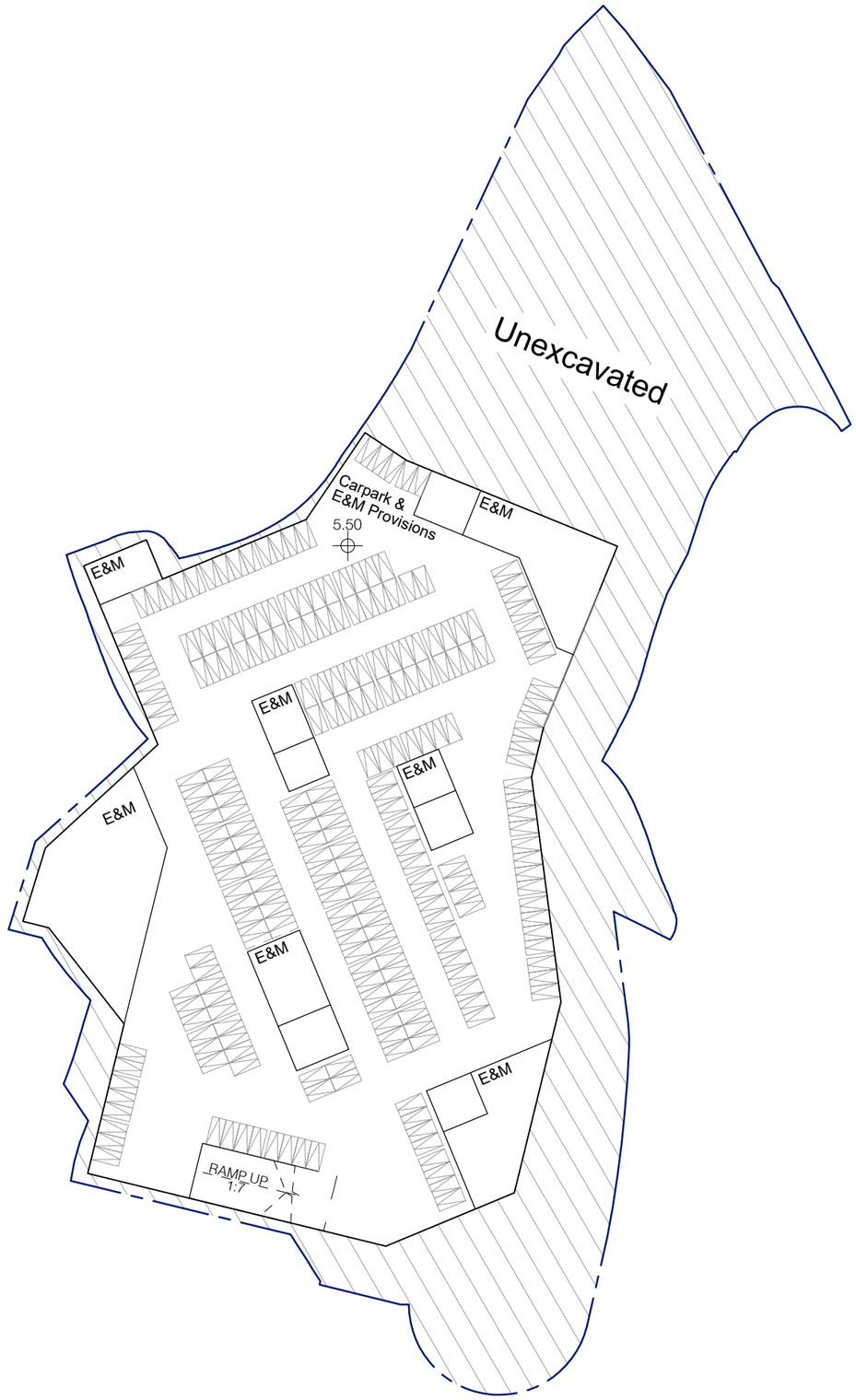
SINGULAR STUDIO LTD
15 MARCH 2024



BASEMENT LEVEL 2 PLAN SK-11
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

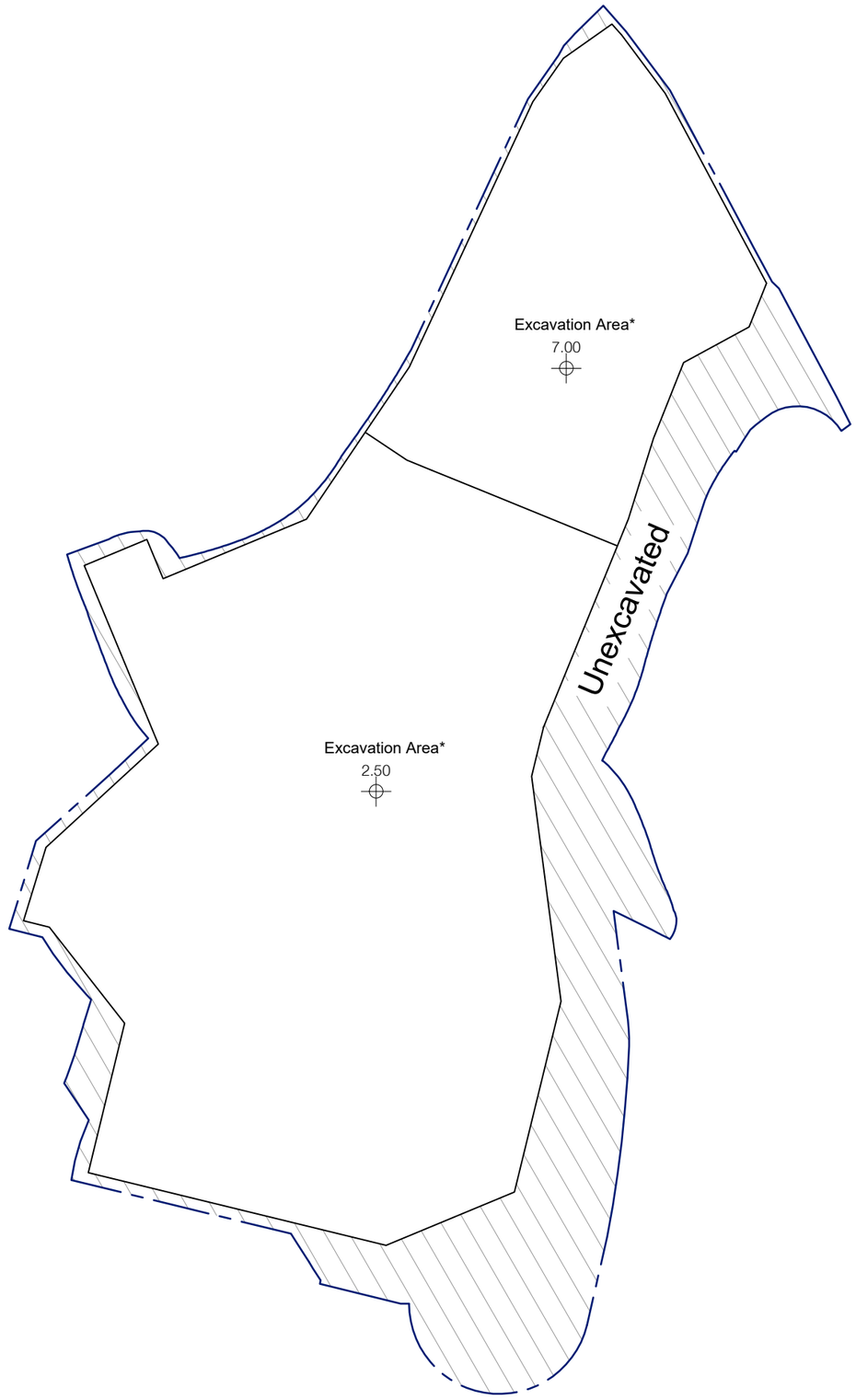
SINGULAR STUDIO LTD
15 MARCH 2024



BASEMENT LEVEL 3 PLAN SK-12
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
15 MARCH 2024



*The excavation area is about 13,500m^2 and the excavation depth is about 13.5m. The excavation area and depth are subject to future detailed design on foundation based on further geotechnical information.

EXCAVATION PLAN SK-13
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

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11 DECEMBER 2023



BLOCK PLAN (BASELINE SCHEME) SK-14
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
12 OCTOBER 2023



BLOCK PLAN (WITH DIVERSION OF WATER MAINS) SK-15
PROPOSED DEVELOPMENT AT PING CHE DD77, N.T.

0 10 20 50m

SINGULAR STUDIO LTD
11 DECEMBER 2023

Appendix B

Water Demand Estimation

Project No. 2127

Water Demand Estimation of Proposed Development

Proposed Development			
Domestic			
Residential + Service Trade			
Total Number of Residents	6174	persons	Referred to submitted GBP.
Fresh Water Unit Daily Demand	0.340	m^3/person/day	Referred to input from WSD
Average Fresh Water Demand	**2099.16**	**m^3/day**	
Flush Water Unit Daily Demand	0.104	m^3/person/day	Referred to WSD Departmental Instruction (DI) No. 1309 Table 1 - Flushing Water for Residential R2 All Area
Average Flush Water Demand	**642.1**	**m^3/day**	
Commercial			
Office			
Total Floor Area	11500.0	m2	Referred to submitted GBP.
Worker Density per GFA (in 100m2)	3.4	person/100 m2	Referred to the worker density of All Economic Activities (All Types) in Table 8 of CIFSUS
Total number of person	391	persons	
Fresh Water Unit Daily Demand	0.04	m^3/person/day	Referred to WSD Departmental Instruction (DI) No. 1309 Table 2 - Yuen Long, Fanling/Sheung Shui
Average Fresh Water Demand	**15.64**	**m^3/day**	
Hotel/Service Apartment			
Total Floor Area	5703.0	m2	Referred to submitted GBP.
Total No. of Rooms	70	rooms	Referred to submitted GBP.
Fresh Water Unit Daily Demand	1.00	m^3/room/day	Referred to input from WSD
Average Fresh Water Demand	**70**	**m^3/day**	
Flush Water Unit Daily Demand	0.36	m^3/room/day	Referred to input from WSD
Average Flush Water Demand	**25.2**	**m^3/day**	
Total Fresh Water Demand	2184.8	m^3/day	
Total Flush Water Demand	667.3	m^3/day	
Total Water Demand	**2852.1**	**m^3/day**	

Appendix C

Hydraulic review of Water Main

Calculation of Flow Capacity of Proposed Development (Fresh Water)

Sewer No.				Material	Internal Diameter (m) [a]	Cross-section Area (m^2)	Mean Velocity (m/s) [c]	Peak Flow rate of existing pipe (m^3/s)	Total Fresh Water Demand	Peaking Factor	Total Water Demand	Peak Flow Rate	Percentage of Contribution by Development	Remark
ID	From	ID	To		D	A	V		m^3/day		m^3/day	m^3/s		
Existing DN300				Ductile Iron	0.300	0.071	2.50	0.177	2184.8	3.0	6554.4	0.076	42.9%	Demand from Proposed Site
Proposed DN250 Tee-off from Supply Main				Lined Galvanised Iron	0.250	0.049	2.50	0.123	2184.8	3.0	6554.4	0.076	61.8%	Demand from Proposed Site

Calculation of Flow Capacity of Proposed Development (Flush water)

Sewer No.				Material	Internal Diameter (m) [a]	Cross-section Area (m^2)	Mean Velocity (m/s) [c]	Peak Flow rate of existing pipe (m^3/s)	Total Flush Water Demand	Peaking Factor	Total Water Demand	Peak Flow Rate	Percentage of Contribution by Development	Remark
ID	From	ID	To		D	A	V		m^3/day		m^3/day	m^3/s		
Existing DN300				Ductile Iron	0.300	0.071	2.50	0.177	667.3	2.0	1334.6	0.015	8.7%	Demand from Proposed Site
Proposed DN100 Tee-off from Supply Main				Lined Galvanised Iron	0.100	0.008	2.50	0.020	667.3	2.0	1334.6	0.015	78.7%	Demand from Proposed Site

Calculation of Flow Capacity of Proposed Development

Sewer No.				Material	Internal Diameter (m) [a]	Cross-section Area (m^2)	Mean Velocity (m/s) [c]	Peak Flow rate of existing pipe (m^3/s)	Total Fresh Water Demand	Peaking Factor	Total Flush Water Demand	Peaking Factor	Total Water Demand	Peak Flow Rate	Percentage of Contribution by Development	Remark
ID	From	ID	To		D	A	V		m^3/day		m^3/day		m^3/day	m^3/s		
Existing DN300				Ductile Iron	0.300	0.071	2.50	0.177	2184.8	3.0	667.3	2.0	7889.0	0.091	51.7%	Demand from Proposed Site
Proposed DN250 Tee-off from Supply Main				Lined Galvanised Iron	0.250	0.049	2.50	0.123	2184.8	3.0	667.3	2.0	7889.0	0.091	74.4%	Demand from Proposed Site

Attachment B

Further Information (1) –
Responses to Comments Tables

Your ref Y/NE-TKL/5
Our ref 295450/00/WSTY/MYNL/CYSL/CKGF/05193

By Hand

The Secretary
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14 December 2023

Dear Sir/Madam,

Application for Amendment of Plan
Under Section 12A of the Town Planning Ordinance (Cap.131),
to Rezone the Application Site from "Open Storage", "Agriculture" Zones and an area shown as 'Road' to "Other Specified Uses" annotated "Mixed Use" Zone,
for Proposed Mixed Use Development at Lots 796 and 1008 RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories
(Planning Application No. Y/NE-TKL/5)

Submission of Further Information

We refer to the comments received from various Government departments from 29 November 2023 to 8 December 2023 on the captioned Planning Application.

We are pleased to submit herewith a Response-to-Comments Table **(Attachment 1)** together with relevant supporting documents **(Appendices A-E)** for your consideration.

Please also be noted that in response to comments from Water Supplies Department, there will be minor adjustment to the layout of the Indicative Scheme, which are reflected in the Updated Landscape Master Plan and Tree Preservation Proposals (**Appendix B**) and the Updated Indicative Architectural Drawings (**Appendix D**). Yet, there will be no change to the Application Site boundary and key development parameters of the Indicative Scheme.

The softcopy of the Further Information will be uploaded to the hyperlink provided by the Town Planning Board.

We sincerely seek favourable consideration from the Town Planning Board to approve the captioned S12A Planning Application.

Should you have any queries, please contact the undersigned or our Ms. Natalie LEUNG at 2268 3612 or our Mr. Gordon FOO at 2268 3709.

Yours faithfully,

Theresa YEUNG
Director

Encl.
- **Attachment 1** – Response-to-Comments Table
- **Appendices A – E**

c.c.
- DPO/STN, PlanD (Attn: Mr. Tim FUNG) (By email: ttyfung@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Amy CHONG) (By email: aytchong@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Markie AU) (By email: mwlau@pland.gov.hk)
- Client

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Comments from Related Departments — Page No.

1. Agriculture Fisheries and Conservation Department, dated 6 December 2023 2
2. Architectural Services Department, dated 6 December 2023 3
3. Civil Engineering and Development Department, Project Manager (North), dated 6 December 2023 3
4. Civil Engineering and Development Head of the Geotechnical Engineering Officer, dated 6 December 2023 3
5. Fire Services Department, Director, dated 6 December 2023 4
6. Food and Environmental Hygiene Department, Administration & Development Branch, Administration Division, Planning & Development Section, dated 6 December 2023 4
7. Highways Department, New Territories East, Chief Highway Engineer, dated 6 December 2023 8
8. Home Affairs Department, District Officer dated 6 December 2023 9
9. Hong Kong Police Force, Commissioner of Police, dated 6 December 2023 9
10. Lands Department, Lands Administration Office, District Lands Office, North dated 8 December 2023 10
11. Leisure and Cultural Services Department, Administration Division, Planning Section dated 7 December 2023 14
12. Planning Department, Urban Design and Landscape, Chief Town Planner dated 6 December 2023 15
13. Social Welfare Department, dated 4 December 2023 28
14. Water Supplies Department, dated 29 November 2023 28

1.	**Agriculture Fisheries and Conservation Department, dated 6 December 2023** **Agricultural Perspective** • The subject site falls within the "AGR" zone, amongst other zonings, and is generally used as an open storage. The agricultural activities are active in the vicinity, and agricultural infrastructures such as road access and water source are also available. The subject site can be used for agricultural activities such as open-field cultivation, greenhouses, plant nurseries, etc. As the subject site possesses potential for agricultural rehabilitation, the proposed rezoning is not supported from agricultural perspective.	It should be noted that majority part of the Application Site (about 59%) fall within area zoned as "Open Storage", with only a minor portion of area zoned as "AGR" (about 29.6%), followed by a small area fall within area shown as 'Road' (about 11.4%). Currently, majority part of the Application Site is paved, while most part of it are used as open storage for construction materials. The minor portion of "AGR" zone within the Application Site is located at the fringe of the wider "AGR" zone of the OZP. From site inspection, "AGR" zone in the immediate surrounding are also predominantly occupied by brownfield uses, barely used for agricultural activities. It is noteworthy that under the NTN Study published by the Government in 2017, Ping Che area has been earmarked to form part of the NTN New Town, modern new town for the next generation. The Application Site, located at the centre of the NTN New Town, is positioned for a high-density development with PR of 6.5 at that time. Since then, the Government has shown stronger commitment for developing Ping Che area. The promulgation of the Northern Metropolis Development Strategy (NMDS) in 2021 reaffirmed the planning intention of NTN New Town to accommodate a population of 200,000 by fully unleashing its development potential with more efficient use of abandoned agricultural land and brownfield sites. There is a planned Ping Che Station, which is in close proximity to the Application Site, under the proposed Northern Link Eastward Extension. In the more recent Northern Metropolis Action Agenda announced in Chief Executive's Policy Address 2023, the NTN New Town, with Ping Che locating at its core, is positioned as "Boundary Commerce and Industry Zone" with the intention to develop into a business district and a base for emerging industries to complement the I&T industry in San Tin Technopole and collaborate with the development of the Luohu District in Shenzhen.

		In view of the existing condition and confirmed planning intention of NTN New Town, the Proposed Mixed Use Development at the Application Site, located at the centre of Ping Che, is considered fully justified.
	Nature Conservation Perspective • It is noted from Appendix B Landscape and Master Plan and Tree Preservation Proposals that the trees to be affected are all common species. This office has no comment on the subject rezoning application from nature conservation perspective.	Noted.
2.	**Architectural Services Department, dated 6 December 2023** • Based on the information provided. it is noted that a total of six nos. of 35 to 48 storeys building blocks with building heights (BH) ranging from about 169.7mPD to 175mPD has been proposed to the site. The proposed BH, according to the photomontages shown in the VIA report and Figure 2.4, is notably higher than the existing neighboring low to medium-rise buildings in the surrounding area, hence there may be considerable visual impact to. The existing neighbourhood. which is subject to Plan D's view. • Our comments on the submitted development proposal are mainly from architectural and visual impact point of view. The planning context and development intensity in the future as mentioned by the applicant are land use and planning issues outside the purview of this Department.	Noted. Noted.
3.	**Civil Engineering and Development Department, Project Manager (North), dated 6 December 2023** • No comment from project interface point of view	Noted.
4.	**Civil Engineering and Development Head of the Geotechnical Engineering Officer, dated 6 December 2023**	

	• No geotechnical comment on the application. 1. Please explain the treatment level of the proposed sewage treatment plant and provide design and relevant details of the sewage treatment plant with figure illustration. 2. Please provide details of emergency bypass for emergency discharge of effluent and illustrate with figure.	Noted.
5.	**Fire Services Department, Director, dated 6 December 2023** • No specific comment. • For the proposed development, detailed fire services requirements will be formulated upon receipt of formal submission of general building plans. • Furthermore, the EVA provision in the captioned work shall comply with the standard as stipulated in Section 6, Part D of the Code of Practice for Fire Safety in Buildings 2011, which is administered by the Buildings Department.	Noted. Noted. Noted.
6.	**Food and Environmental Hygiene Department, Administration & Development Branch, Administration Division, Planning & Development Section, dated 6 December 2023** • No Food and Environmental Hygiene Department's (FEHD) facilities should be affected.	Noted.

	• In accordance with Section 4 of Food Business Regulation, Cap. 132X, the expression "food business" means, any trade or business for the purpose of which any person engages in the handling of food or food is sold by means of a vending machine. But it does not include any canteen in work place (other than a factory canteen referred to in section 31) for the use exclusively of the persons employed in the work place. As such, a staff canteen that exclusively use by the staff members of that working place does not require a food business licence from this department. However, if the said canteen provided foods to the outsiders with payment, a food business licence is required. Furthermore, pursuant to section 4 of the Food Business Regulation (Cap. 132X) , the expression of "food business" does not include any club.	Noted.
	• Proper licence / permit issued by this Department is required if there is any food business / catering service / activities regulated by the Director of Food and Environmental Hygiene (DFEH) under the Public Health and Municipal Services Ordinance (Cap. 132) and other relevant legislation for the public:	Noted.
	(a) Under the Food Business Regulation, Cap. 132X, a food business licence is required for the operation of the relevant type of food business listed in the Regulation. For any premises intended to be used for food business (e.g. a restaurant, a food factory, a fresh provision shop, etc.), a food business licence from the FEHD in accordance with the Public Health and Municipal Services Ordinance (Cap. 132) shall be obtained. The application for licence, if acceptable by the FEHD, will be referred to relevant government departments such as the Buildings Department, Fire Services Department and Planning Department for comment. If there is no objection from the departments concerned, a letter of requirements will be issued to the applicant for compliance and the licence will be issued upon compliance of all the requirements.	Noted.

	(b) Depending on the mode of operation, generally there are three types of food business licence and various types of restricted food permit that the operator of shop and services may apply for under the Food Business Regulation:	Noted.
	(i) if food is sold to customers for consumption on the premises, a restaurant licence should be obtained;	Noted.
	(ii) if food is only prepared for sale for consumption off the premises, a food factory licence should be obtained;	Noted.
	(iii) if fresh, chilled or frozen beef, mutton, pork, reptiles (including live snake), fish (including live fish) and poultry is sold, a fresh provision shop licence should be obtained.	Noted.
	(iv) if milk, frozen confections, non-bottled drinks, cut fruit etc. are to be sold without preparation of other kind of food, relevant restricted food permits should be obtained.	Noted.
	(c) The operation of the eating place must not cause any environmental nuisance to the surrounding. The refuse generated by the proposed eating place are regarded as trade refuse. The management or owner of the site is responsible for its removal and disposal at their expenses. The operation of any business should not cause any obstruction or environmental nuisance in the vicinity.	Noted.

	• Proper licence issued by this Department is required if related place of entertainment is involved. Any person who desires to keep or use any place of public entertainment for example a theatre and cinema or a place, building, erection or structure, whether temporary or permanent, on one occasion or more, capable of accommodating the public presenting or carrying on public entertainment within Places of Public entertainment (PPE) Ordinance (Cap. 172) and its subsidiary legislation, such as a concert, opera, ballet, stage performance or other musical, dramatic or theatrical entertainment, cinematograph or laser projection display or an amusement ride and mechanical device which is designed for amusement, a Place of Public Entertainment Licence (or Temporary Place of Public Entertainment Licence) should be obtained from FEHD whatever the general public is admitted with or without payment.	Noted.
	• A swimming pool licence must be obtained from FEHD for any artificially constructed pool used for swimming or bathing and to which the public have access (whether on payment or otherwise) or which is operated by any club, institution, association or other organization. A swimming pool licence is not required for any swimming pool which serves not more than 20 residential units and to which the public have no access.	Noted.
	• There should be no encroachment on the public place and no environmental nuisance should be generated to the surroundings. Its state should not be a nuisance or injurious or dangerous to health and surrounding environment. Also, for any waste generated from such activities/ operation, the applicant should arrange disposal properly at their own expenses.	Noted.
	• If FEHD is requested to take up management responsibility of new facilities (e.g. public toilets and refuse collection points), FEHD should be separately consulted. Prior consent from FEHD must be obtained and sufficient amount of recurrent cost may have to be provided to us.	Noted.

	• If provision of cleansing service for new roads, streets, cycle tracks, footpaths, paved areas etc, is required, FEHD should be separately consulted. Prior consent from FEHD must be obtained and sufficient amount of recurrent cost may have to be provided to us.	Noted.
	• If domestic waste collection service of FEHD is required in future, prior comments from this Department on the waste collection plan, including the accessibility and maneuverability of RCV to RCP, should be sought.	Noted.
7.	**Highways Department, New Territories East, Chief Highway Engineer, dated 6 December 2023**	
	• The proposed access arrangement and the Traffic Impact Assessment for the run-in/out at Ping Che Road should be commented and approved by TD.	Noted.
	• The run-in/ out should be designed and constructed in accordance with prevailing HyD Standard Drawings to the satisfaction of HyD and TD.	Noted.
	• Adequate drainage measures should be provided to prevent surface water running from the application site to the nearby public roads and drains.	Noted.

8.	**Home Affairs Department, District Officer dated 6 December 2023** • The Indigenous Inhabitant Representative (IIR) of Ha Shan Kai Wat objected to the application with additional views at **Annex.** 1. 這個大型發展項目顯示範圍，令坪輋人村路會對頭，車輛行人冇法出入，整條坪輋路、交通非常擠塞惡劣。 2. 由於工程時間長達多年，會影響整個下山雞乙村所有居民出入，包括環境噪音污染，村民精神壓力。 3. 由於以上問題，所以極力反對這大型發展項目。	As part of the Indicative Scheme, the Applicant is committed for a proposed road improvement work to upgrade the existing substandard local access road to the east of the Application Site (connecting Ping Che Road to the further south) to a standard 7.3m single carriageway with pedestrian footpaths on both sides for public use. Completion of the road improvement work will help to provide adequate road space for vehicles, while at the same time enhance pedestrian safety as compared to the current condition. Please also be noted that various technical assessments have been conducted to ascertain the feasibility of the Proposed Amendment. Findings of the technical assessments confirmed that the Proposed Amendment will not generate adverse traffic, visual, air ventilation, environmental, drainage, sewerage and water supply impact to the surroundings. Instead, with the Indicative Scheme, the overall built environmental quality will be enhanced by replacing the existing open storages uses by modern commercial and residential development with ample landscape treatments. Numerous planning gains are also proposed as part of the Indicative Scheme, including the provision of a Public Transport Terminus, retail facilities, a 60-place day care centre for the elderly as well as a 100-place child care centre, which will also serve the local community nearby. During construction stage, suitable mitigation measures will be undertaken by the Applicant to minimize impact to the vicinity of the Application Site. For details, please refer to **Appendix F – Environmental Assessment** of the submitted planning application for good practices to be adopted during construction stage.
9.	**Hong Kong Police Force, Commissioner of Police, dated 6 December 2023**	

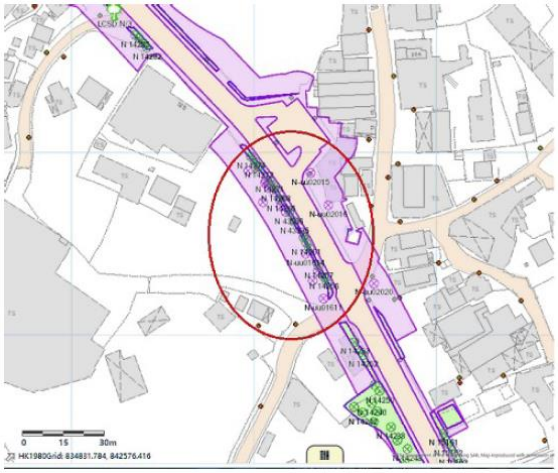
	Nil comment.	Noted.
10.	**Lands Department, Lands Administration Office, District Lands Office, North dated 8 December 2023**	
	1. The application site comprises the entire 2 old schedule agricultural lots held under Block Government Lease and some unleased and unallocated Government land ("UUGL"). It also comprises fully or partly 2 Short Term Tenancies ("STT"), 1 Short Term Waiver ("STW") (including right of way granted to STT or STW) as well as 7 Government Land Licences / Permits ("GLL").	Noted.
	2. Besides, this office has the following comments on the subject s.12A planning application from land administration point of view:-	
	(i) This office has not verified the site area figures quoted by the applicant. More importantly, please note that no agreement has been given for inclusion of the concerned Government land in this planning application, which amounts to ~56% of the entire application site in terms of site area. The inclusion of Government land is subject to application and approval for a land exchange. There is no guarantee that the land exchange application (if submitted) will be approved and such application will be considered by Lands Department acting in the capacity of the Landlord at its sole discretion. The subject rezoning application or approval (if given) shall not pre-empt the consideration and decision of the approving authority for the land exchange, if submitted by the applicant. And there should be no assumption that the inclusion of Government land in the land exchange application would be approved.	Noted. This will be further discussed and liaised with Lands Department during land exchange stage.

	(ii) Regarding the proposed Government, Institution or Community ("G/IC") facilities (i.e. the welfare facilities including Child Care Centre and Day Care Centre for the Elderly), the applicant should clarify if they are proposed to be owned by the applicant or intended to be handed over to relevant bureaux/departments ("B/Ds") (e.g. SWD). Besides, comments from relevant B/Ds on the provision, scope, management and maintenance of these facilities shall be sought. In particular, the B/Ds shall advise whether these facilities are required by the Government and whether the B/Ds would take up the monitoring role at development stage and also take up the concerned facilities upon completion.	Noted. As per discussion with SWD, please be confirmed that the proposed Child Care Centre and Day Care Centre for the Elderly will be privately-owned and to be operated by the owner of the Proposed Development.
	(iii) For the proposed public transport terminus ("PTT"), please seek TD's comments and confirmation on taking up the monitoring role of the PTT at development stage and taking up the PTT after completion.	Noted and the submission has been circulated to TD for their comment.
	(iv) The requirements for G/IC facilities and the PTT will only be imposed in the lease conditions if they are required by the Government and monitored by the relevant B/Ds.	Noted.

	(v) Regarding the proposed access road (by upgrading and realignment of the unnamed local access road along the eastern side of the application site), as it is proposed to be for public use, its management and maintenance responsibility must be properly addressed. There should be no commitment on using Government land for vehicular access for the proposed development. In addition, comments from TD and HyD should be sought on (a) the design, construction and implementation of the proposed access road for public use and (b) the future village access arrangement noting that the portions of the existing unnamed local access road falling outside the application boundary would be substituted by the said proposed access road.	Noted. The management and maintenance responsibility of the proposed access road will be subject to liaison with relevant B/Ds in detailed design stage.
	(vi) the subject 2 private lots (Lot Nos. 796 and 1008 RP in D.D. 77) do not directly front onto Ping Che Road. Our comment in para. 4(i) above is reiterated that there should be no assumption that the inclusion of Government land in the land exchange application (if submitted) would be approved.	Noted.
	(vii) As small part of the application site (being part of Lot 796 in D.D. 77) would be "isolated" from the major part of the private development by the proposed access road (which may be handed over to TD and HyD as public road subject to their agreement). As shown from the Block Plan SK-1, no development is proposed within the said blue area. Reference is also made to the Landscape Master Plan (i.e. Figure 1.5 of Appendix B of the submission). Neither is there any proposed landscaping treatment within such blue area. The applicant is requested to elaborate their proposal in respect of this blue area.	The concerned area in Lot 796 in D.D. 77 currently forms part of the existing un-named local road. Due to the realignment of the existing local road as part of the road improvement work to be undertaken by the Applicant, the concerned area, which will remain under private landownership, could serve as a works area/ amenity area for the future access road. Opportunity for landscaping could be explored in detailed design stage.

	(viii) From the attached Block Plan SK-I, it appears that some road works are proposed along Ping Che Road. You may wish to seek comments from TD and HyD in this aspect on the management and maintenance parties. Noting that the works are outside the application site and along Ping Che Road being a public road, such requirement would not be incorporated under lease. Notwithstanding this, as the necessity of such provision falls outside the purview of this office, we have no particular comment on it if it is to be provided at the applicant's initiatives.	Noted.
	(ix) According to para. 3.2.1 to 3.2.2 on Page 6 of Appendix B (Landscape Master Plan and Tree Preservation Proposal), a total of 130 trees would be felled and 126 new trees would be planted all within the application site. The Applicant is reminded that compensatory plantings should be provided within private lot(s) and no Government Land should be involved. Unless otherwise specified, LandsD will not process tree preservation and removal proposal submitted for planning application and therefore comments are reserved.	Noted. Details of the Tree Preservation and Removal Proposal will be further confirmed at land exchange stage in accordance with LAO-PN 6/2023 within the future private lots.

	(x) In the event the subject application under S.12A of the Town Planning Ordinance ("TPO") is accepted or partially accepted by the Town Planning Board ("TPB") with a set of clear development parameters (including but not limited to the proposed user, gross floor area and car parking provisions, as appropriate) defined / firmed up and further submission to the TPB (including application(s) for permission under S.16 of the TPO after the corresponding amendment to the OZP has been made is not required, the applicant may submit request for streamlined processing of land exchange application. Depending on the circumstances of each case, LandsD at its sole and absolute discretion may, upon receipt of such valid request and subject to payment of the administrative fee(s) (including fee payable to the Legal Advisory and Conveyancing Office, if required) by the applicant, commence the streamlined processing of the land exchange application on a without prejudice and non-committal basis while PlanD is taking forward the relevant OZP amendment.	Noted.
	(xi) The applicant is reminded that once the accepted or partially accepted proposal is reflected in the OZP and approved under S.9 of the TPO, a formal application for land exchange by applicant to LandsD is still required. Every application submitted to LandsD will be considered on its own merits by LandsD at its absolute discretion acting in its capacity as a landlord and there is no guarantee that the land exchange application will eventually be approved by LandsD. If the application for land exchange is approved by LandsD, it will be subject to such terms and conditions as may be imposed by LandsD at its absolute discretion, including payment of premium and administrative fee(s).	Noted.
11.	**Leisure and Cultural Services Department, Administration Division, Planning Section dated 7 December 2023**	

	Please observe comments from LCSD as below. <u>General</u> • The proposed application site is adjacent to the roadside amenity area maintained by LCSD attached below. Should the proposed development affect the existing trees and soft landscape in the roadside amenity area concerned, the applicant shall seek LCSD's prior comment and consent at the early investigation and planning stages and act in accordance with LandsD's LAO Practice Notes no. 6/2023 and DEVB TC(W) No. 4/2020 - Tree Preservation.  **<u>Appendix B - Landscape Master Plan and Tree Preservation Proposals</u>** • Referring to Section 3.3.3, it is noticed that the applicant proposes to provide compensatory trees within the roadside amenity planting areas. Please be informed that LCSD will not accept the compensatory trees for those proposed felled trees not initially maintained by LCSD. The applicant shall arrange compensate the trees within the development site boundary. • Referring to Section 4.2.1, it is noticed that the proposed open space is located within the development site boundary. Since no issues related to LCSD, we have no specific comment.	Noted. Noted. Please be clarified that under the Compensatory Tree Planting Plan attached under **Appendix B Landscape Master Plan and Tree Preservation Proposals** of the submitted planning application, no compensatory trees are proposed within roadside amenity planting areas. All compensatory plantings are within the Application Site boundary. Noted.
12.	**Planning Department, Urban Design and Landscape, Chief Town Planner dated 6 December 2023**	

	Landscape Landscape Observations and Comments	
	• Based on the aerial photo of 2022, the site is situated in an area of miscellaneous rural fringe landscapes landscape character comprising of small houses, buildings, clusters of tree groups, vegetated areas, woodland within the "GB" zone to the north, and temporary structures mainly within "Open Storage" ("OS") surrounding the site.	Noted.
	• According to the Landscape Master Plan and Tree Preservation Proposal (LMP & TPP), total 130 nos. of common trees are identified within the Application Site and no registered Old and Valuable Tree (OVT), stonewall trees, rare and protected species of tree or vegetation, and tree of particular interest are identified. All 130 existing trees including 4 nos. of undesirable species are proposed to be felled. 126 nos. of new trees mostly with native species are proposed within the site and landscape treatments, such as podium gardens, sky gardens, green wall, open spaces including sun lawn, rose garden and multi-functional deck, and ornamental tree and shrub plantings along the proposed development are proposed. Local open space of not less than 6,174m2 would be provided for the target population of 6,174 anticipated population. Minimum 20% greenery area with at least 10% coverage at Primary Zone will be provided in accordance with the requirement of PNAP APP-152.	Noted.
	• According to Para. 3.4.3, it is anticipated that the application site is positioned as high-density residential development with residential and mixed use development at its vicinity. However, the land use of the Ta Kwu Ling Potential Development Area (TKLPDA) is still under review. The proposed rezoning for high density mixed use development will bring significant change to the existing rural landscape character of "AGR" zone.	Noted.
	Detailed Comments/Advisory Comments	

	• The applicant is advised to revise the design/ layout to preserve existing trees (particularly for trees at the periphery) as far as practicable. The opportunity for tree planting to meet 1:1 in terms of aggregated DBH should be explored when there is available planting space and sufficient growing space.	The existing trees at the periphery of the Application Site is mostly of poor health and structural form. It is considered not cost-effective to preserve and maintain those trees. Hence, it is recommended to fell. In addition, considering the limited planting area of current design layout, compensatory tree planting to meet 1:1 in terms of quantity will be adopted.
	• The applicant is advised to provide landscape elevation and section to illustrate the spatial quality of the proposed landscape treatment and the interface with the surroundings.	Please refer to Figure 1.8a to Figure 1.8b for **Appendix B** for the replacement pages of the Updated Landscape Master Plan and Tree Preservation Proposals.
	• Typos are observed in Para. 4.4.2 and Para. 4.5.1, i.e. "xxx ingress/egress points" and "compensatory planning" respectively. Please rectify.	Please be clarified that there is a total of 4 proposed access points under the Indicative Scheme. The relevant information has been supplemented in **para. 4.4.2**. Please refer to **Appendix A** for the replacement pages of the Updated Supporting Planning Statement. Texts are updated accordingly.
	• The applicant should be advised that approval of the application does not imply approval of tree works such as pruning, transplanting and felling. The applicant is reminded to seek approval for any proposed tree works from relevant departments prior to commencement of the works.	Noted.
	Urban Design, Visual Impact and Air Ventilation	
	<u>Observation and Comments</u>	

	The Site is situated in a rural locality predominantly comprising temporary structures/ open storages interspersed with some vegetated land. In a wider context to its further southwest are Cat Hill and Tsung Shan, and there are low-rise GIC facilities and village settlements including the Ta Kwu Ling Rural Centre Government Offices, Ping Che and Ping Che New Village to its further north and the Baptist Convention of H.K. Baptist Assembly to its further east (with BHs ranging from 13.1mPD to 34.6mPD). The proposed high-rise mixed use development (with maximum BH of 175mPD) is not fully in keeping with the existing surrounding rural and low-rise character.	It is noteworthy that under the NTN Study published by the Government in 2017, Ping Che area has been earmarked to form part of the NTN New Town, modern new town for the next generation. The Application Site, located at the centre of the NTN New Town, is positioned for a high-density development with PR of 6.5 (under Scenario II – high-residential development scenario) at that time. While in the vicinity of the Application Site, it was planned for residential development with a PR of 7.5 and 5, as well as mixed use development with domestic PR of 6.5 and non-domestic PR of 1.5. To supplement, the Building Height ("BH") of the Application Site and its immediate surrounding were planned to be 195mPD, and 200mPD, 210mPD and 235mPD. *(Source:* *https://www.pland.gov.hk/pland_en/p_study/comp_s/ntn_study/ntn_fr.pdf*) Since then, the Government has shown stronger commitment for developing Ping Che area. The promulgation of the Northern Metropolis Development Strategy (NMDS) in 2021 reaffirmed the planning intention of NTN New Town to accommodate a population of 200,000 by fully unleashing its development potential with more efficient use of abandoned agricultural land and brownfield sites. There is a planned Ping Che Station, which is in close proximity to the Application Site, under the proposed Northern Link Eastward Extension. In the more recent Northern Metropolis Action Agenda announced in Chief Executive's Policy Address 2023, the NTN New Town, with Ping Che locating at its core, is positioned as "Boundary Commerce and Industry Zone" with intention to develop into a business district and a base for emerging industries to complement the I&T industry in San Tin Technopole and collaborate with the development of the Luohu District in Shenzhen. With clear direction and agenda as set by the Government, the Application Site and its vicinity are intended to become the centre of the future NTN New Town. Therefore, the Proposed Mixed Use Development at the Application Site, is considered fully compatible with and will serve as a first-mover

			in response to the changing planning circumstances of the surrounding Ping Che area.
		2. To substantiate the application, the consultant may consider providing further information/justifications for the proposed BHs and exploring further design measures with respect to the low-rise and rural setting (e.g. by lowering the BHs, allowing greater variation in BHs, optimizing the proposed domestic site coverages and BHs etc.).	As revealed in various Government's studies and initiatives for the NTN New Town, the area where the Application Site situates is anticipated to transform from low-dense development occupied by brownfield uses to a high-dense residential and commercial neighbourhood for a modern new town. As revealed in the final report of the NTN Study published in 2017, the proposed BH of the Application Site and its immediate surrounding were planned to be 195mPD, and 200mPD, 210mPD and 235mPD. Therefore, the BH of the Indicative Scheme, i.e. 169.7 to 175mPD is considered not incompatible with the planned context of the NTN New Town, while at the same time a modest BH to accommodate the much-needed residential flats (about 2,205 flats), commercial components to support boundary business activities, as well as numerous facilities that serves the public, including an improved access road, a PTT, a 60-place day care centre for the elderly and a 100-place child care centre. Please also be confirmed that the proposed domestic site coverage has already been optimized, while a modest floor-to-floor height for residential floor (i.e. 3.15m) has already been adopted. Car parking provision is also proposed at basement levels to further minimize the overall BH. Nonetheless, genuine efforts have been made to enhance the design of the Indicative Scheme. Building gaps between towers and building setback from the periphery of the Application Site. An interesting skyline will be promoted by a rhythmic building height profile. Various landscape measures are also proposed to enhance the overall design merit of the Indicative Scheme, including landscaping on podium and on ground level to create a sense of arrival and add visual appeal to the site. The building façade would feature vibrant green elements to enhance the aesthetic appeal and create a pleasing visual element to the Application Site.

	3. As gathered from the submitted information, various design measures including building separations, permeable design of the ground level of PTT, landscape treatment along the boundary, etc. are proposed to mitigate the visual and/or air ventilation impacts.	Noted.
	4. According to the Northern Metropolis Development Strategy published on 6.10.2021, a station of the Northern Link Eastward Extension is proposed near the Site in Ping Che. The Site falls within the study area of the ongoing 'Remaining Phase Development of the New Territories North (NTN) – Planning and Engineering Study for NTN New Town and Man Kam To – Investigation' (the RPD of NTN Study). The planning (and hence urban design context) of the Site and its surrounding area is subject to the recommendations of the RPD of NTN Study.	Noted.

	5. As indicated in Sections 1 and 5 of the visual impact assessment (VIA) and Sections 4.2 and 5 of the air ventilation assessment – expert evaluation (AVA-EE) submitted, the assessments are formulated on the basis of comparison between a Baseline Scheme and the Proposed Scheme. **In the VIA**, the Baseline Scheme (i.e. a residential/commercial development with a maximum GFA of 124,748.092 sq.m. and a maximum BH of 45 storeys) does not comply with the OZP restrictions nor subject to any planning approval. Besides, the "planned Ping Che/Ta Kwu Ling NDA" predicted as the planned condition for inclusion in the assessment is not clear. **In the AVA-EE**, the Baseline Scheme (i.e. a residential/commercial development with a PR of 7 and a maximum BH of 175mPD) does not comply with the OZP restrictions nor subject to any planning approval and it is not certain if this Baseline Scheme is same as the one adopted in the VIA. Moreover, there is no planned condition in the surrounding area of the Site.	As revealed in various Government's studies and initiatives for the NTN New Town, the area where the Application Site situates is anticipated to transform from low-dense developments occupied by brownfield uses to a high-dense residential and commercial neighbourhood for a modern new town. As revealed in the final report of the NTN Study published in 2017, the proposed BH of the Application Site and its immediate surrounding were planned to be 195mPD, and 200mPD, 210mPD and 235mPD. With this understanding, to facilitate a realistic assessment of visual impact and air ventilation in the coming future, BH information available in the NTN Study is adopted in both Baseline Scheme and Proposed Scheme under the VIA and AVE-EE under this submission. The Baseline Scheme is prepared based on typical architectural layouts generally fulfilling the Building Ordinance. While the Proposed Scheme is prepared with further enhancement features that the Applicant is willing to commit under the Proposed Amendment. These include but not limited to building separations, enhanced building orientation to align with wind direction, terraced podium design, reduced ground coverage of clubhouse, and permeable design at sky garden etc.
	Supporting Planning Statement (SPS)	
	6. Para. 4.4.2 – Please clarify the number of ingress/egress points.	The relevant information has been supplemented in para. 4.4.2 of the SPS. Please refer to **Appendix A** for the replacement pages of the Updated Supporting Planning Statement.

	7. Section 4.4 and Appendix A – Please indicate all the dimensions of the proposed visual/air ventilation mitigation measures such as the building separations, sky gardens, etc. in the relevant text and figures.	Noted. Mitigation measures have been summarised in the **paras. 4.4.10**, **4.4.12** and **4.4.13**. Please refer to **Appendix A** for the replacement pages of the Updated Supporting Planning Statement. In addition, mitigation measure including lighter colour tone façade and building separations have been illustrated in the figures. Please refer to Figure 3 to Figure 7 of **Appendix C** for the replacement pages of Updated Visual Impact Assessment for more details.

	8. Section 6.8 – The applicant may wish to summarise all the proposed visual/air ventilation mitigation measures and refer to the relevant figure for complete information.	Noted. The summary of proposed visual and air ventilation mitigation measures is as follow: Visual Mitigation Measures • *Building separation of the building bulk.* The building bulk of the towers is sensitively designed with appropriate building separation to allow visual permeability, while complying with the building separation requirements as stipulated in PNAP APP-152 SBDG. • *Articulated façades and landscaping features.* Articulated façades and landscaping features are proposed to enhance visual interest, to reduce collective visual mass, and to harmonize with surroundings. Wind Enhancement Features/Air Ventilation Mitigation Measures: • *Permeable design at ground floor*. There will be a 7.5m tall Public Transport Terminus ("PTT") with 3 sides opening to facilitate the east and southeast wind systems towards the downwind regions. • *Chamfered design at building corner*. Chamfered building corners would be adopted for the commercial building black and the podium, which allow smoother wind flow around the building structure. The chamfered building corners allows the building group (including commercial and residential buildings) to attract incoming east and southeast wind into the air path. • *Building orientation align with wind direction.* The tower blocks under the Indicative Scheme will have their N-E axis aligned with the prevailing wind direction from east and northeast. • *Building separation.* The building gap is increased compared to the gap under baseline scheme, increasing from range of 3m to 15m in baseline scheme to range of 17m to 32m in Indicative Scheme. The gap distance facilitates more east and southeast wind flow between the buildings towards the downwind area.

		• *Terraced podium design.* Stepping terrace approach is adopted under Indicative Scheme at the podium design of blocks T1 and T2 to minimize building mass. It also allows incoming mid and high-level wind flow along the stepping terraces and reach the downstream regions. • *Podium height level.* The Indicative Scheme has lower podium structure of 24.15mPD compared with 27.75mPD under baseline scheme to allow better flow of incoming east wind over the podium structure and reach the downwind areas. • *Reduced ground coverage of clubhouse.* The Indicative Scheme has reduced area of clubhouse building. The small ground coverage is having lesser restriction to wind flow and allows more wind flow at ground level. It is also located at the downwind area of T5, allowing gap distance between clubhouse and T3 to enable wind flow from east and northeast direction. • *Permeable design at sky garden*. There would be sky gardens in residential buildings to provide vast openings at façade of the building and allow more wind flow to travel through the building at the façade that facing east and southeast direction. The relevant texts have been updated in para. 4.4.10, 4.4.12 and 4.4.13. Please refer to the **Appendix A** for the replacement pages for the Updated Supporting Planning Statement.
	9. Para. 9.8.7 in Figure 5.3b (Proposed Explanatory Statement of the "OU(MU)" Zone) – According to para. 4.4.10 of the SPS, sufficient separation distance between building blocks is also one of the major design enhancement measures. Please supplement in this paragraph or provide justification for the otherwise.	Relevant information has been supplemented in **Figure 5.3b**. Please refer to **Appendix A** for the replacement pages of the Updated Supporting Planning Statement.
	Appendix C – VIA	
	10. Further to our above comments in para. 8 and the following comments, please critically review and revise the VIA as appropriate.	Noted.

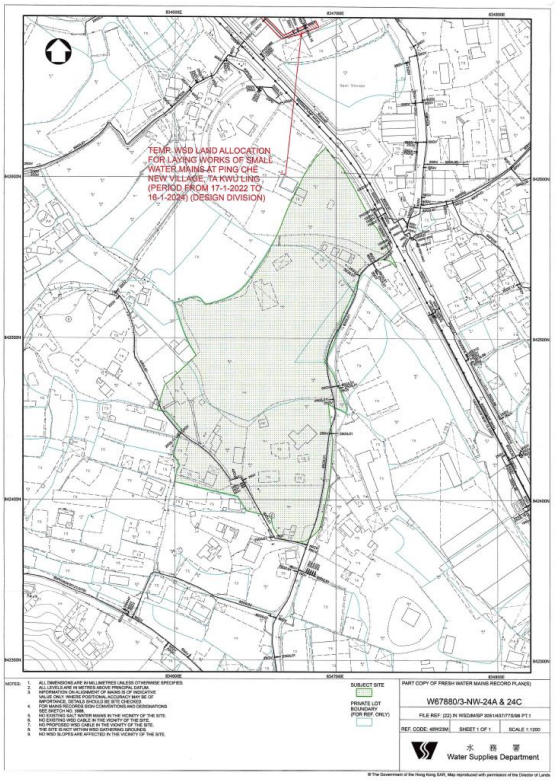
11. Figure 2 – Please review the location/annotation of each viewpoint (VP), e.g. there are no VP3 but two VP5 and the location of VP4 seems incorrect. Please review/rectify.	Noted and revised accordingly. Please refer to **Figure 2** for the update. Please refer to **Appendix C** for the replacement pages of the Updated Visual Impact Assessment.
12. Para. 4.2.7 – Given that the distance of VP5 from the Site is over 3km, please review if it would be appropriate to consider its sensitivity as high.	Noted. The sensitivity of VP5 has been reduced to Medium due to the far distance and the low usage at daily operation. Please refer to **Appendix C** for the replacement pages of the Updated Visual Impact Assessment.
13. Figures 3 to 7 (Photomontages) – Please ensure the accuracy of the submitted photomontages. For example in Figure 4, with reference to the key plan of VP2, the proposed development should be located in the middle of the view.	Noted. The viewing angle for VP2 has been adjusted to align with the photo. Please refer to **Figure 2 and Figure 4** for the update. Please refer to **Appendix C** for the replacement pages of the Updated Visual Impact Assessment. In addition, viewing angle and photomontages for other VPs have been cross-checked to ensure consistency.
14. There are no visual mitigation measures in the VIA. Please supplement.	Noted. Please refer to Para. 5.1.9 for the details. Please refer to **Appendix C** for the replacement pages of the Updated Visual Impact Assessment.
15. The consultant is reminded to revise the relevant section(s) in the SPS accordingly.	Noted. Please refer to **Appendix A** for the replacement pages of the Updated Supporting Planning Statement.
Appendix E – AVA-EE	
16. Further to my above comments in para. 8 and the following comments, please critically review and revise the AVA as appropriate.	Noted. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
17. Para. 3.1.4 – It seems that the Site falls within two grids (i.e. (X: 077; Y: 087) and (X: 078; Y: 087). Please supplement.	Revised accordingly, grid (078, 087) is added. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.

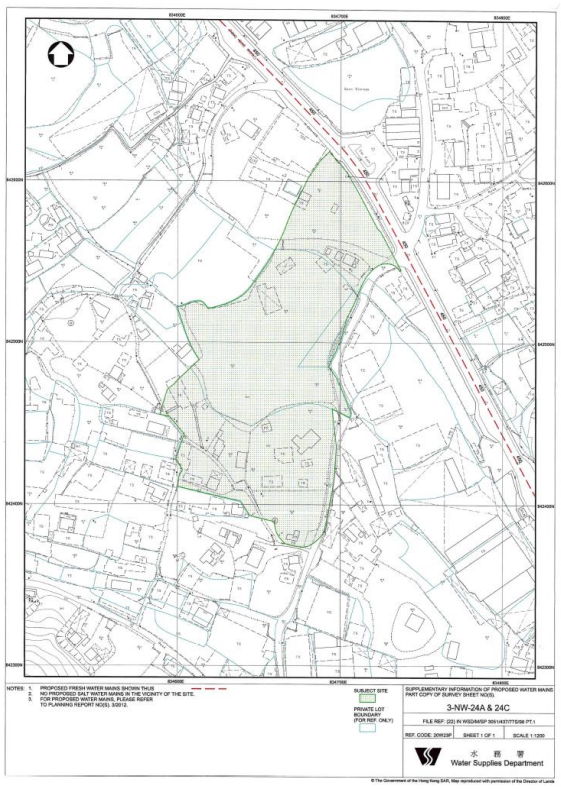
	18. Para. 3.1.8 – Please clarify if it should refer to the Ta Kwu Ling Weather Station instead of the Tai Po Weather Station. According to summary of Table 3.1, the N and SSW winds as identified as the prevailing winds from the Ta Kwu Ling Weather Station are missing. Please clarify/rectify.	Noted, revised accordingly. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
	19. Para. 4.2.6 – Please indicate the location of Ping Che New Village in relevant figure(s). It seems that the Ping Che New Village is located to the north of the Site instead of the downwind area of ESE and SE. Please review/rectify.	Revised accordingly, Ping Che New Village located at NW of site, which is downwind area of ESE and SE. The location of Ping Che New Village is indicated in Figure 4.3. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
	20. Para. 4.2.7 – It seems that the paragraph is discussing the Proposed Scheme and referring to the proposed "air path between towers" instead of the "Current Site Wind Environment". Please review/rectify.	Revised accordingly. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
	21. Para. 4.2.10 – Please indicate all the mentioned places (e.g. Pak Hok Shan, Tai Po Tin Tsuen, Ha Shan Kai Wat, Hung Leng Tsuen) on relevant figure (i.e. Fig. 4.4). Besides, please review the relevancy of some of the mentioned places, e.g. Tai Po Tin Tsuen, which is located far away from the Site.	Revised accordingly. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
	22. Para. 4.2.11 and Figure 4.4 – It seems that the hills (e.g. Stag Hill and Cheung Shan) from the northeast are located away from the Site and the Stag Hill is relatively low in height. It is doubtful that the wind from northeast will be weakened by the hills. Please clarify/review.	Revised accordingly, the downhill wind is not anticipated to be weakened. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
	23. Figure 4.3 –	Revised accordingly. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
	• SSE wind is identified as one of the summer prevailing winds but is missing in the figure. Please review/rectify.	Revised accordingly. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
	• The figure is not illustrating the current site wind environment. Please review/rectify.	Revised accordingly. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.

	24. Para. 5.2.3 – It seems that the chamfered building corners could only facilitate localized wind within the Site. Besides, some corners are not aligned with the prevailing winds. The effectiveness of the chamfered building corners is therefore doubtful. Please review/clarify.	Reviewed and revised accordingly. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
	25. Para. 5.3.1 and Figure 5.4 - The text and figure are not clear/consistent nor focus on building orientation, and hence do not support the statement of "Building Orientation Align with Wind Direction". Please review/revise.	Revised accordingly. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
	26. Para. 5.3.3 and Figure 5.5 – Please specify/annotate the particular annual and summer prevailing winds to be facilitated by the proposed building separations and indicate the degree of change in direction of the air path as applicable.	Revised accordingly. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
	27. Paras. 5.3.5 and Figure 5.6 – The text and figure are not clear/consistent. Besides, please clarify the particular annual/summer prevailing winds to be facilitated by the proposed terraced podium.	Revised accordingly. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
	28. Figure 5.8 –Please clarify if any of the prevailing winds could skim over the low-rise clubhouse (5m in BH) and reach the downwind area after reattachment.	Revised accordingly. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
	29. Sections 5 & 6 and Appendix B – Please clarify if setbacks from the Site boundary are proposed as air ventilation measures and supplement accordingly.	Noted, building setback added as air ventilation measures, please refer to Section 5.3.14. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
	30. Section 6.1 – According to Table 3-1, SE is not one of the annual prevailing winds. Please review the analysis in this regard.	Revised accordingly, SE wind is assessed in summer prevailing wind Section 6.3. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
	31. Section 6.2 & Figure 6.4 ENE Wind (Proposed Scheme) – The wind flows are drawn to be passing through the buildings (instead of building separations) and involving change of direction. Please review/rectify.	Revised accordingly, please refer to Section 6.2. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.

	32. Section 6 - There is no analysis for summer prevailing wind SSE. Please supplement.	Revised accordingly, SSE wind is assessed in summer prevailing wind Section 6.3. Please refer to **Appendix E** for the Updated Air Ventilation Assessment – Expert Evaluation.
	33. The consultant is reminded to revise the relevant section(s) in the SPS accordingly.	Noted.
	34. Comments from the Landscape Unit, if any, will be provided under separate cover.	Noted.
13.	**Social Welfare Department, dated 4 December 2023** 1. In view of the considerable bids of centre-based CCS in the district, the proposed 60-p DE is not recommended. Please also be advised that a typo was found on page 8 of the "Planning Statement" on which the 60-place DE should be 長者日間護理中心 instead of 安老院舍.	Noted. As per further discussion with SWD, please be confirmed that the proposed DE will be privately-owned and to be operated by the owner of the Proposed Development. The typo has been fixed in page. Vi. Please refer to **Appendix A** for the replacement pages of the Updated Supporting Planning Statement.
	2. There is sufficient planned CCCs in the subject area to meet the service demand. Nonetheless, to enable market diversity with different child care options, we have no objection in principle to the applicant's proposed setting up of a 100-places CCC on the condition that there will be no financial implication, both capital and recurrent, to the Government.	Noted. Please be confirmed that the proposed CCC will be privately-owned and to be operated by the owner of the Proposed Development.
14.	**Water Supplies Department, dated 29 November 2023** Appendix I WSIA 1. Table 2.1 - Please clarify the anticipated completion year.	The updated WSIA is being updated and it will be further supplemented shortly.
	2. Table 3.1 - Please adopt the unit daily demand for service trade of 0.04/m3/h/d to your domestic type development. As the service trade covers stores, restaurant, clubhouse etc. associated with the residential development, please remove "elderly care", "child care", "Clubhouse", "retail", "office", "elderly day care center" and "child care center" in Table 3.1.	The updated WSIA is being updated and it will be further supplemented shortly.

3. Table 3.1 - For hotel/ service apartment development, please adopt fresh water unit demand of lm3/room/day and flushing water demand of 0.36m3/room/day.	The updated WSIA is being updated and it will be further supplemented shortly.
4. Figure 5.1 - It is not clear and could not show your proposed water main alignment to the connection of existing water main. Please review.	The updated WSIA is being updated and it will be further supplemented shortly.
Existing water mains inside the proposed site as shown in the MRP may be affected. The applicant is required to either divert or protect the water mains found on site.	Please note that the said water mains within the Application Site will need to be diverted.
If diversion is required, existing water mains inside the proposed site areas are needed to be diverted outside the site boundary of the proposed site to lie in Government land. A strip of land of minimum 1.5m in width should be provided for the diversion of existing water mams. 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.	Please note that the said water mains within the Application Site will need to be diverted. As a result, there will be minor adjustments to the layout of internal road, basement car park and location of the clubhouse at the southern part of the Indicative Scheme. Please refer to **Appendix B** for the Updated Landscape Master Plan and Tree Preservation Proposals and **Appendix D** for the Updated Indicative Architectural Drawings for consideration. There will be no change to the Application Site boundary and key development parameters of the Indicative Scheme.
If diversion is not required, the following conditions shall apply:	
(a) Existing water mains are affected as indicated on the site plan and no. development which requires resiting of water mains will be allowed.	Noted.
(b) Details of site formation works shall be submitted to the Director of Water Supplies for approval prior to commencement of works.	Noted.
(c) No structures shall be built or materials stored within 1.5 metres from the centre line(s) of water main(s) shown on the plan. Free access shall be made available at all times for staff of the Director of Water Supplies or their contractor to carry out construction, inspection, operation, maintenance and repair works.	Noted.

	(d) No trees or shrubs with penetrating roots may be planted within the Water Works Reserve or in the vicinity of the water main(s) shown on the plan. No change of existing site condition may be undertaken within the aforesaid area without the prior agreement of the Director of Water Supplies. 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.	Noted.
	(e) No planting or obstruction of any kind except turfing shall be permitted within the space of 1.5 metres around the cover of any valve or within a distance of 1 metre from any hydrant outlet.	Noted.
	(f) Tree planting may be prohibited in the event that the Director of Water Supplies considers that there is any likelihood of damage being caused to water mains.	Noted.
		



TKL 5_Original submission_WSD_2E

(Last Updated: 12 December 2023)

Your ref Y/NE-TKL/5
Our ref 295450/00/WSTY/MYNL/CYSL/CKGF/05202

By Hand

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19 December 2023

Dear Sir/Madam,

Application for Amendment of Plan
Under Section 12A of the Town Planning Ordinance (Cap.131),
to Rezone the Application Site from "Open Storage", "Agriculture" Zones and an area shown as 'Road' to "Other Specified Uses" annotated "Mixed Use" Zone,
for Proposed Mixed Use Development at Lots 796 and 1008 RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories
(Planning Application No. Y/NE-TKL/5)

Submission of Further Information

We refer to the comments received from Water Supplies Department (WSD) on 29 November 2023 on the captioned Planning Application.

We are pleased to submit herewith a Response-to-Comments Table to WSD's comments **(Attachment 1)** together with the Revised Water Supply Impact Assessment **(Annex A)** for your consideration.

The softcopy of the Further Information will be uploaded to the hyperlink provided by the Town Planning Board.

We sincerely seek favourable consideration from the Town Planning Board to approve the captioned S12A Planning Application.

Should you have any queries, please contact the undersigned or our Ms. Natalie LEUNG at 2268 3612 or our Mr. Gordon FOO at 2268 3709.

Yours faithfully,

Theresa YEUNG
Director

Encl.
- **Attachment 1** – Response-to-Comments Table
- **Annex A** – Revised Water Supply Impact Assessment

c.c.
- DPO/STN, PlanD (Attn: Mr. Tim FUNG) (By email: ttyfung@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Amy CHONG) (By email: aytchong@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Markie AU) (By email: mwlau@pland.gov.hk)
- Client

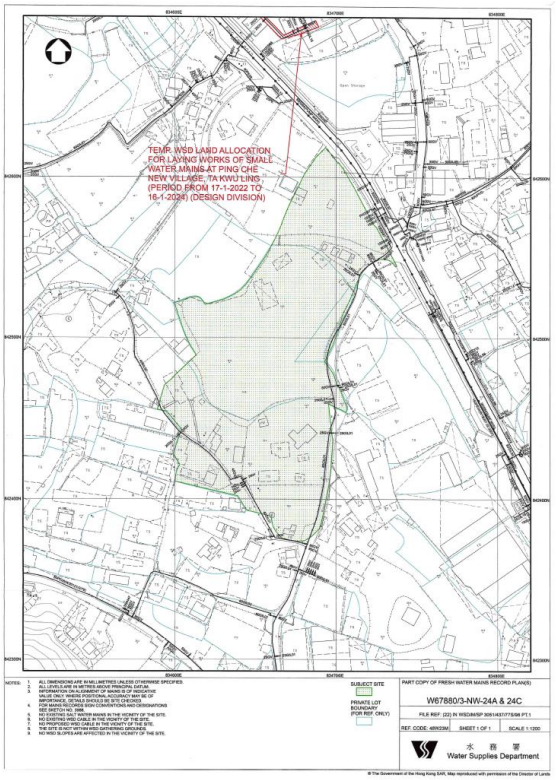
Comments from Related Departments — Page No.

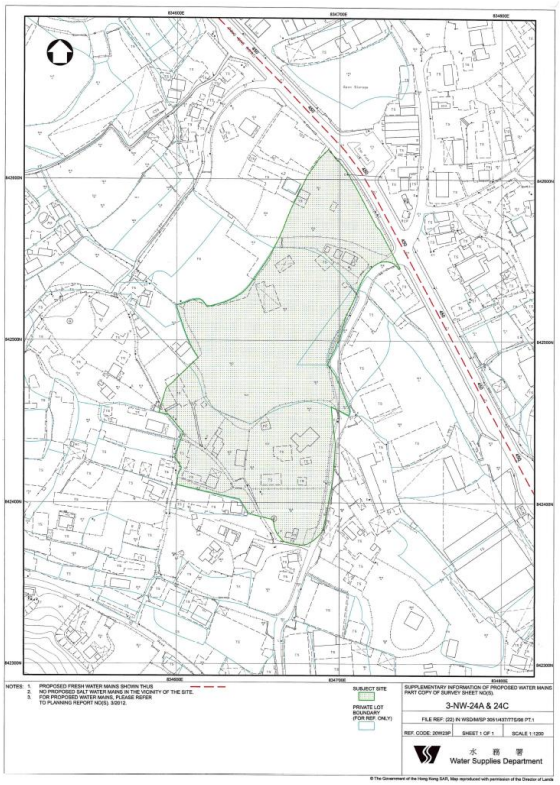
1. Water Supplies Department, dated 29 November 2023 2

	Water Supplies Department, dated 29 November 2023 Appendix I WSIA	
	1. Table 2.1 - Please clarify the anticipated completion year.	Table 2.1 has been revised in **Annex A** (Revised Water Supply Impact Assessment) accordingly.
	2. Table 3.1 - Please adopt the unit daily demand for service trade of 0.04/m3/h/d to your domestic type development. As the service trade covers stores, restaurant, clubhouse etc. associated with the residential development, please remove "elderly care", "child care", "Clubhouse", "retail", "office", "elderly day care center" and "child care center" in Table 3.1.	Noted. Please refer to the updated water demand estimation (Appendix B) and table 3.1 of **Annex A**.
	3. Table 3.1 - For hotel/ service apartment development, please adopt fresh water unit demand of lm3/room/day and flushing water demand of 0.36m3/room/day.	
	4. Figure 5.1 - It is not clear and could not show your proposed water main alignment to the connection of existing water main. Please review.	The existing water main is proposed to be diverted and would run along the southern periphery of the Application Site. The alignment of the diverted water main would fulfil the requirements by WSD. Please refer to Section 5.1.6, Section 5.1.7 and Figure 5.2 of **Annex A**.
	5. Existing water mains inside the proposed site as shown in the MRP may be affected. The applicant is required to either divert or protect the water mains found on site.	Please note that the said water mains within the Application Site will need to be diverted.

	6. If diversion is required, existing water mains inside the proposed site areas are needed to be diverted outside the site boundary of the proposed site to lie in Government land. 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.	As stated in the response to comments 4 and 5, the existing water main would be diverted. As a result, there will be minor adjustments to the layout of internal road, basement car park and location of the clubhouse at the southern part of the Indicative Scheme. Accordingly, an updated set of Landscape Mater Plan and Tree Preservation Proposal and Indicative Architectural Drawings were submitted as part of the Further Information (FI) submitted to the Town Planning Board on 14 December 2023. To further elaborate on the submitted materials, the diverted water mains complied with WSD's suggestion. The diverted water mains lies on a 1.5m wide Government Land within the Application Site. Therefore, there will be no change to the Application Site boundary and key development parameters. Please refer to the updated set of Indicative Architectural Drawings (FI submitted on 14 December 2023) for the proposed alignment of water mains diversion at the southern part of the Indicative Scheme. The Applicant is committed to undertake the said diversion works at detailed design stage. Upon completion of works, access to the diverted water main would be made available to WSD or relevant Government Bureaux/Departments for operation and maintenance purposes. Detailed arrangement could be agreed during lease modification or land exchange at later stage.
	7. If diversion is not required, the following conditions shall apply:	
	(a) Existing water mains are affected as indicated on the site plan and no. development which requires resiting of water mains will be allowed.	Noted.
	(b) Details of site formation works shall be submitted to the Director of Water Supplies for approval prior to commencement of works.	Noted.

	(c) No structures shall be built or materials stored within 1.5 metres from the centre line(s) of water main(s) shown on the plan. Free access shall be made available at all times for staff of the Director of Water Supplies or their contractor to carry out construction, inspection, operation, maintenance and repair works.	Noted.
	(d) No trees or shrubs with penetrating roots may be planted within the Water Works Reserve or in the vicinity of the water main(s) shown on the plan. No change of existing site condition may be undertaken within the aforesaid area without the prior agreement of the Director of Water Supplies. 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.	Noted.
	(e) No planting or obstruction of any kind except turfing shall be permitted within the space of 1.5 metres around the cover of any valve or within a distance of 1 metre from any hydrant outlet.	Noted.
	(f) Tree planting may be prohibited in the event that the Director of Water Supplies considers that there is any likelihood of damage being caused to water mains.	Noted.





TKL 5_Original submission_WSD_2E

Attachment C

Further Information (2) –
Responses to Comments Tables

Your ref Y/NE-TKL/5
Our ref 295450/00/WSTY/MYNL/CYSL/CKGF/05203

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27 December 2023

Dear Sir/Madam,

Application for Amendment of Plan
Under Section 12A of the Town Planning Ordinance (Cap.131),
to Rezone the Application Site from "Open Storage", "Agriculture" Zones and an area shown as 'Road' to "Other Specified Uses" annotated "Mixed Use" Zone,
for Proposed Mixed Use Development at Lots 796 and 1008 RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories
(Planning Application No. Y/NE-TKL/5)

Submission of Further Information

We refer to the comments received from various Government departments from 4 December 2023 to 15 December 2023 on the captioned Planning Application.

We are pleased to submit herewith a Responses-to-Comments Table **(Attachment 1)** together with the relevant supporting documents **(Annexes A – D)** for your consideration.

The softcopy of the Further Information will be uploaded to the hyperlink provided by the Town Planning Board.

We sincerely seek favourable consideration from the Town Planning Board to approve the captioned S12A Planning Application.

Should you have any queries, please contact the undersigned or our Ms. Natalie LEUNG at 2268 3612 or our Mr. Gordon FOO at 2268 3709.

Yours faithfully,

Theresa YEUNG
Director

Encl.
- **Attachment 1** – Response-to-Comments Table
- **Annex A** – Revised Drainage Impact Assessment
- **Annex B** – Revised Sewerage Impact Assessment
- **Annex C** – Replacement Pages of Updated Supporting Planning Statement
- **Annex D** – Revised Environmental Assessment

c.c.
- DPO/STN, PlanD (Attn: Mr. Tim FUNG) (By email: ttyfung@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Amy CHONG) (By email: aytchong@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Markie AU) (By email: mwlau@pland.gov.hk)
- Client

Comments from Related Departments — Page No.

1. Buildings Department, New Buildings Division 1, New Territories West Section, dated 15 December 2023 2
2. Drainage Services Department, Operations & Maintenance Branch, Mainland North Division, North Section, dated 6 December 2023 3
3. Environmental Protection Department, dated 4 December 2023 5

1.	**Buildings Department, New Buildings Division 1, New Territories West Section, dated 15 December 2023** I have the following comments on the application under the Buildings Ordinance (BO):	
	(a) The development intensity shall not exceed the permissible as stipulated under the First Schedule of Building (Planning) Regulation (B(P)R). If the site does not abut on a specified street having a width of not less than 4.5m, the development intensity shall be determined under Regulation 19(3) of the B(P)R during plan submission stage;	Noted.
	(b) The site shall be provided with means of obtaining access thereto from a street under Regulation 5 of the B(P)R and emergency vehicular access shall be provided for all the buildings to be erected on the site in accordance with the requirements under Regulation 41D of the B(P)R. Noting that road upgrading works are proposed to widen the existing access road, the said works should be completed before application of Occupation Permit if the said road serves any purposes under the BO (e.g. emergency vehicular access and/or site classification);	Noted.
	(c) All existing/future streets/roads within the development lot(s) should be excluded from site area of the proposed development for plot ratio and site coverage calculation under the B(P)R;	Noted.
	(d) Areas of the proposed social welfare facilities and public transport terminus are to be included in gross floor area (GFA) and site coverage calculation under the BO. Comments will be provided on application for exemption of GFA and site coverage to these facilities upon receiving detail design and justification in plan submission stage;	Noted. Area of the proposed social welfare facilities and public transport terminus are to be included in GFA and site coverage calculation under the BO during building plan submission stage.

	(e) Any parking spaces to be disregarded from GFA calculation under the Regulation 23(3)(b) of the B(P)R shall be subject to the requirements laid down in Appendix C of Practice Notes for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAP) APP-2;	Noted.
	(f) Residential Recreational Facilities may be excluded from GFA calculation subject to requirements under PNAP APP-104;	Noted.
	(g) The proposed hotel use on 25/F - 34/F of Tower 1 should satisfy all the pre-requisites under PNAP APP-40 before hotel concession under Regulation 23A of the B(P)R may be granted;	Noted.
	(h) Sustainable building design requirements and pre-requisites under PNAP APP-151 and APP-152 shall be complied with if GFA concession for green and amenity features and non-mandatory/ non-essential plant rooms and services is to be exempted/disregarded;	Noted.
	(i) If the proposed use under application is subject to issue of a license, the applicant should be reminded that any existing structures on the application site intended to be used for such purposes are required to comply with the building safety and other relevant requirements as may be imposed by the licensing authority;	Noted.
	(j) 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) Regulation in respect of disposal of foul water and surface water respectively;	Noted.
	(k) Detailed comments will be given in the building plan submission stage.	Noted.
2.	**Drainage Services Department, Operations & Maintenance Branch, Mainland North Division, North Section, dated 6 December 2023** **Drainage Impact Assessment**	

	• Please confirm if the latest design standard pursuant to Stormwater Drainage Manual Corrigendum No. 1/2022 was adopted and complied, especially regarding the adjustment due to climate change.	The latest design standard pursuant to Stormwater Drainage Manual Corrigendum No. 1/2022 was adopted. Please refer to Section 3.2.3 of **Annex A** (Revised Drainage Impact Assessment).
	• Please advise the change in drainage impact before and after the development.	Noted. The flow path before and after proposed development is shown in Figure 3.1 and Figure 3.2, and the drainage impact of the proposed development in Section 4.3 of **Annex A**.
	• Please advise if site formation works is proposed to raise the level of the site. Please also elaborate on the potential drainage impacts to the surrounding areas, especially adjacent village houses and Ping Che Road. The applicant is reminded that all existing flow paths as well as the run-off falling onto and passing through the site should be intercepted and disposed of via proper discharge points. The applicant shall also ensure that no works, including any site formation works, shall be carried out as may adversely interfere with the free flow condition of the existing drains, channels and watercourses on or in the vicinity of the subject site any time during or after the works.	The site formation works raise the level to 16.0 mPD. Based on the stormwater runoff flow path, the Application Site is expected to intercept the existing flow from Catchment immediately upstream (catchment A). U-Channel along eastern boundary of the Application Site will be proposed to collect existing flow from Catchment A. The drainage impact of the proposed development is assessed in Section 4.1 to Section 4.2 of **Annex A**.
	• Please supplement an assessment to demonstrate adequacy of the existing network subject to the drainage discharge arising from the proposed development.	The drainage impact of the proposed development is assessed, please refer to Section 4.1 and Section 4.2 of **Annex A**. It is noted that planned drainage facilities are expected in New Territories North development, while no relevant implementation information from Civil Engineering and Development Department can be obtained during the course of study. Further study will be conducted once additional information can be obtained from CEDD. Various mitigation measures will be explored and studies for implementation if necessary, including at grade greenery / green roof, pervious material, rainwater harvesting and retention pond, and application of floodable area and drainage facility co-use. Please refer to Section 4.4 of **Annex A**.
	• Para. 5.1.3: Only sewerage impact was mentioned. Please also provide a comment regarding the drainage impact.	Noted and revised accordingly in Section 5.1.5 of **Annex A.**

	• Figure 3.1: proposed drainage facilities within the development site is missing, please supplement and clarify.	The preliminary drainage layout is shown in Figure 3.2 of **Annex A**, the detailed drainage plan will be submitted in later detailed design stage.
	Sewerage Impact Assessment	
	• The SIA report needs to meet the satisfaction of EPD, the planning authority of sewerage infrastructure.	Noted.
	• Section 4.7.1 - Please indicate that the project proponent will be responsible for the construction and maintenance of the proposed STP.	Noted and revised accordingly. Please refer to Section 4.7.1 of the **Annex B** (Revised Sewerage Impact Assessment).
	• Section 5.1.2 - Please provide a preliminary layout plan of the proposed STP for reference and report completeness.	The preliminary layout plan for the STP with equalization tank and the proposed discharge drainage to terminal manhole is provided in Figure 4.1. The exact treatment process and drainage plan are subjected to detailed design stage later, following the "Guidelines for the Design of Small Sewage Treatment Plants" issued by EPD. Please refer to **Annex B** for more details.
	• The proposed effluent discharge standard should be included in the report for completeness.	The effluent discharge standards are referenced from Technical Memorandum for Effluents Discharged Into Drainage and Sewerage Systems, Inland and Coastal Waters. Please refer to Section 3.1.1, Section 3.1.2 and Table 3-1 of the **Annex B**.
3.	**Environmental Protection Department, dated 4 December 2023** **Planning Statement** 1. Section 4.4.2 Please provide the number of ingress/egress points of the proposed carriageway	Information has been supplemented in para. 4.4.2 of the **Annex C** (Replacement Pages of Updated Supporting Planning Statement).
	Appendix F – Environmental Assessment Report <u>Waste Management Perspective</u> 2. General	

	(a) Given that there is no assessment of the waste management implications of the Project, we could not offer our technical advice on the impacts related to waste management. The Consultant is advised to identify and evaluate the corresponding implications accordingly.	Section for Waste Management is supplemented in Section 9. Please refer to **Annex D** (Revised Environmental Assessment).
	(b) According to the section drawings enclosed in Appendix 3.1, a three-storey basement structure (10.5 meters below ground level) and a one-storey basement structure (6 meters below ground level) are proposed, which is anticipated to generate significant C&D materials. Please supplement the anticipated excavation extent (i.e., area and depths) of the Project in the quantity estimation in the subsequent submission (with an additional chapter for waste management implications). The Consultant shall also elaborate on the construction method and clarify whether alternative design, general layout, construction methods, and programmes have been explored to minimize the generation of public fill/inert C&D materials.	The anticipated excavation extent of the Project and the quantities of C&D material generated are supplemented in Section 9.3 of **Annex D.** Please note that the construction method is yet to be determined in current planning application, but detailed construction method would be available in detailed design stage. Adoption of alternative design, construction method and appropriate programme will be studied then to minimise environmental impacts. Works will be carefully scheduled and sufficient time will be allowed to minimize the generation of public fill/inert C&D materials in short time as well.
	<u>Land Contamination Assessment Perspective</u> 3. Chapter 7	

	The Consultant is advised to elaborate further and describe the requirements and assessment methodology for land contamination issues (i.e., right after the introduction of the relevant guidelines in Section 7.1). It is required to confirm with documentary justifications to substantiate whether there is any potential land contamination issue arising from the past and present land use activities on the proposed development site through desktop review and site survey (e.g., site's land use history, aerial photos, site visit photos, spillage records, potential contamination sources, etc.). Subject to the assessment outcome, the Contamination Assessment Plan (CAP) and, subsequently, the Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) may be required in later stages to identify the potential land contamination issues in the application site. The land contamination assessment and remediation works shall be completed according to EPD guidelines before the commencement of any construction works for the development.	Requirements and assessment methodology for land contamination issues are supplemented in Section 8.2 of **Annex D**. Site appraisal including desktop review and site survey has been conducted. Machinery maintenance and chemical stains are identified on site. "Hotspots" are identified accordingly. The potential of land contamination cannot be ruled out. Further Site Investigation is considered necessary. The Contamination Assessment Plan (CAP) and, subsequently, the Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) may be required in later stages to identify the potential land contamination issues in the application site. The land contamination assessment and remediation works shall be completed according to EPD guidelines before the commencement of any construction works for the development.
	4. Table 7-1	
	(a) Given that the Consultant has not reviewed the aerial photos throughout the concerned period, please review whether it is appropriate to describe those enclosed in Appendix 7.1 in "Years" only.	Additional aerials photos throughout the concerned period with evaluation are supplemented. Please refer to the revised Table 8-1 and Appendix 8.1 of **Annex D.**
	(b) The Consultant shall individually elaborate on the on-site or off-site land use to evaluate the off-site contamination potential from historical land uses.	Noted. Supplemented in Section 8.4.2 to 8.4.7 of **Annex D**.
	(c) In addition to the major portion of the site, the Consultant shall elaborate on the changes at the western, eastern and southern parts of the application site, of which changes in land uses and scale of operation were observed.	Noted. Supplemented in Section 8.4.2 to 8.4.7 of **Annex D**.
	(d) According to Figure 6.3, the Site has encroached or is immediately adjacent to several industrial sources (e.g., S07, S08 and S10), please review and elaborate as appropriate.	Noted. Supplemented in Section 8.4.2 to 8.4.7 of **Annex D**.

5. Appendix 7.1	
(a) The resolution of aerial photos in Year 1954, Year 1976, Year 1981 are poor, please review and substitute records in better quality for further review and vetting.	Aerial photos for the said years are substituted by the ones with better resolutions. Please refer to Table 8-1 and Appendix 8.1 for the updated years of aerial photos included for land use analysis in **Annex D**.
(b) Please review whether the site was occupied by open storage areas in Year 1986.	Based on aerial photo, the site was a vacant land in Year 1986. Appendix 8.1 is updated accordingly in **Annex D**.
(c) Please supplement legends for the (i) red solid line and (ii) cyan hatch for clarity.	The cyan hatch is removed and the Site Boundary is shown in red solid line. Please refer to Appendix 8.1 of **Annex D**.
(d) Slight displacements of the location of the site boundary were observed in most of the aerial photos, the Consultant is advised to carefully review and align the overlay in each of the aerial photos.	Revised accordingly. Please refer to Appendix 8.1 of **Annex D**.
(e) Indicative markup on the land use within the application site and its immediate adjacent shall be provided to facilitate vetting and further review.	Indicative markup on the land use within the application site and its immediate adjacent is provided. Please refer to Appendix 8.1 of **Annex D**.
6. Appendix 7.2	
(a) According to the email correspondence dated 30 June 2023, the updated site boundary within the additional project site was provided to the relevant EPD and LandsD section for further information. Please supplement the updated locational plan to avoid confusion.	Latest responses from government departments are updated in Appendix 8.3 of **Annex D**.
(b) Since the response from PlanD is yet available, we will reserve our comment on the conclusion of the land contamination chapter.	Noted. Please be noted that PlanD's response is pending.
(c) According to Table 7.2, an interim reply from FSD is discussed, please append the relevant correspondence for clarity.	Latest responses from government departments are updated in report. Please refer to Appendix 8.3 of **Annex D**.
(d) Please clarify whether further information from FSD and PlanD are required within the updated site boundary of the additional project site.	Updated information from FSD have been obtained based on the updated site boundary of the additional project site. Please refer to Appendix 8.3 of **Annex D**. Response from PlanD is still pending and it will be supplemented once available.
7. Appendix 7.3	

(a) According to Section 3.2, the proposed site area is about 17,822m2. Please review any updates on the total site area (i.e., appropriately 100,000 m2) is required.	Revised as 17,822m^2 in Appendix 8.4 of **Annex D**.
(b) Please attach the site plan for further vetting.	Attached in Appendix 8.4 of **Annex D**.
(c) Building structures were identified in Photos 6, 11 and 13, etc., please review and update the % of buildings as appropriate.	Revised to 7% in Appendix 8.4 of **Annex D**.
(d) It is stated that containers for temporary storage were observed near the front entrance, please elaborate on the nature of the materials and their locations.	The containers for temporary storage near the front entrance is used as site office and storage of building material, steel, and spare parts of equipment. site office. Please refer to Section 8.6.3 of **Annex D**.
(e) According to the response from the existing owner, the land was vacant and paved with concrete in April 2023, please clarify if there were changes in land use in the past year before their occupation. The Consultant is advised to provide the air drone photo for further review of the site condition.	The air drone photo is supplemented in Figure 8.1 of **Annex D**.
(f) Please clarify whether maintenance or land contaminating activities are anticipated from the routine operation.	Yes. Minor maintenance works for machinery are anticipated from the routine operation. as confirmed by current user, they are conducted occasionally and if necessary within the maintenance area in the middle portion of the application site.
(g) Please specify the chemical storage location for clarity.	Yes, chemical storage including lubricant oil, diesel, waste oil. battery acid, are identified at the maintenance area in the middle portion of the application site as stated in Section 8.6.5 of **Annex D**.
(h) It has been noticed that sand and soil are received from the daily operation, please clarify and elaborate on the daily activities within the application site and review whether the sites are only used for storing materials.	Storage of Building materials (sand, soil and concrete block) and machinery are expected in daily operation. Minor maintenance works for machinery are expected and to be carried out occasionally within site.

(i) Given that waste oil is anticipated from the application site, please clarify whether there is a registry of CWP within the application site.	Registry of CWP within the application site is supplemented in Section 8.5.2 and Appendix 8.2 of **Annex D**.
8. Appendix 7.4	
(a) In addition to the site photographic records within the application site, the Consultant is advised to supplement records for the off-site properties for the evaluation of off-site land contamination potential.	Off-site properties are supplemented in evaluated in Section 8.4.4 to 8.4.7 of **Annex D**.
(b) The Consultant is advised to incorporate the base map into the locational key plan to facilitate further vetting.	The base map is incorporated into the locational key plan. Please refer to Appendix 8.4 of **Annex D**.
(c) The Consultant is advised to incorporate a brief description for each of the site photos (i.e., paving condition, existence of stains, land use, activities, potential contamination sources), in particular those with land contamination potential and contamination hotspots.	Site photos of potential contamination hotspots are identified and indicated. Please refer to Section 8.6 to 8.7 for the description of the site photos and Appendix 8.4 of **Annex D**.
9. Section 7.4.2	
(a) Please elaborate on the CWP registration within the application site. The Consultant is advised to compile a summary table with information including but not limited to (i) identity of the CWP, (ii) nature of business, (iii) chemical type, (iv) address, and (v) activeness/validity. For clarity, please also specify the date of inspection of the registry of chemical waste producers.	Elaboration of CWP registration record within the application site is supplemented in Appendix 8.2 and Section 8.5.2 of **Annex D**.
(b) Please revise the last sentence as follows:	
"Based on the information available, no record of any reported chemical spillage or leakage incident in the past 5 years, there is a record of was a chemical waste producer producers registration at site location, the information will be further identify identified in EPD Territory Control Office."	Revised accordingly. Please refer to Section 8.5.2 of **Annex D**.
10. Section 7.4.3	

Please supplement the information to substantiate that dangerous goods and chemicals were not involved in the No. 1 Fire Alarm. The Consultant is advised to graphically locate the chemical waste producer within the site and compare it against the location fire incident for clarity.	Supplemented in Section 8.5.3 and Section 8.7.2 of **Annex D**.
11. Section 7.4.5	
Potential land contamination areas (i.e., construction material and machinery storage area; chemical and chemical wastes storage areas) and contamination hotspots (i.e., stained surfaces) were identified during the site walkover. Please graphically indicate their location and extent to devise the sampling and testing methodology and facilitate the detailed land contamination assessment, and SI works in the subsequent submission.	Supplemented in Figure 8.1 and Section 8.7.8 of **Annex D**.
12. Sections 7.6.2 and 7.6.3	
(a) Please review and update the findings as per the comments above.	Revised in Section 8.7 of **Annex D** and a section of "hotspots" is added.
(b) Given that the current land user has only occupied the site since April 2023, please review and evaluate whether the land use, activities, scale and location of operation within the application site remain unchanged throughout the 1980s to 2020s. If not, the Consultant shall clarify whether only the machinery storage area or the entire area shall be considered potentially contaminated, which requires detailed land contamination assessment in the subsequent stages.	Supplemented in Section 8.7 of **Annex D**.
(c) Please note that the stained surfaces shall be identified as contamination hotspots but not the only evidence to determine whether detailed SI works is required. The Consultant is advised to carefully examine the justification for clarity.	Stained surfaces are identified as "Hotspots" and they are identified in the machinery maintenance area at the middle portion of the application Site. Please refer to Section 8.7 of **Annex D**.
13. Section 7.6.4	
In addition to submitting RAP (if contamination is detected), the Consultant shall elaborate on the requirements of CAP and CAR and potentially the RR.	CAP, CAR and RAP will be submitted for EPD approval before commencement of the construction of project. Please refer to Section 8.7.8 of **Annex D**.

	Water Quality Perspective	
	14. Please provide "Water Quality Chapter" in Environmental Assessment to evaluate the water quality impact of the proposed development.	Supplemented in Section 7 of **Annex D**.
	Appendix H – Sewerage Impact Assessment Report	
	15. Section 3.1.1	
	Please note that ProPECC PN 5/93 has been superseded by ProPECC PN 1/23. Please amend.	Revised. Please refer Section 3.1.3 of **Annex B**.
	16. Section 3.1.2	
	Please add "Water Pollution Control Ordinance (Cap. 358)".	Revised. Please refer Section 3.1.1 of **Annex B**.
	17. Section 3.1.2	
	Second last bullet point: Please amend "WPCO-TM" to "TM-DSS".	Revised. Please refer Section 3.1.4 of **Annex B**.
	18. Please explain the treatment level of the proposed sewage treatment plant and provide design and relevant details of the sewage treatment plant with figure illustration.	The design of STP will follow Guidelines for the Design of Small Sewage Treatment Plants issued by EPD, which is to be designed in later detailed design stage.
	19. Please provide details of emergency bypass for emergency discharge of effluent and illustrate with figure.	The provision and management of emergency discharge is provided. It is to be designed in later detailed design stage.

Attachment D

Further Information (3) –
Responses to Comments Tables

Your ref Y/NE-TKL/5
Our ref 295450/00/WSTY/MYNL/CYSL/CKGF/05241

By Hand

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29 February 2024

Dear Sir/Madam,

Application for Amendment of Plan
Under Section 12A of the Town Planning Ordinance (Cap.131),
to Rezone the Application Site from "Open Storage", "Agriculture" Zones and an area shown as 'Road' to "Other Specified Uses" annotated "Mixed Use" Zone,
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(Planning Application No. Y/NE-TKL/5)

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We sincerely seek favourable consideration from the Town Planning Board to approve the captioned S12A Planning Application.

Should you have any queries, please contact the undersigned or our Ms. Natalie LEUNG at 2268 3612 or our Mr. Gordon FOO at 2268 3709.

Yours faithfully,

Theresa YEUNG
Director

Encl.
- **Attachment 1** – Responses-to-Comments Table
- **Annex A** – Replacement Pages of Revised Drainage Impact Assessment
- **Annex B** – Replacement Pages of Revised Environmental Assessment
- **Annex C** – Replacement Pages of Revised Sewerage Impact Assessment
- **Annex D** – Replacement Pages of Revised Water Supply Impact Assessment

c.c.
- DPO/STN, PlanD (Attn: Mr. Tim FUNG) (By email: ttyfung@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Sheren LEE) (By email: sswlee@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Amy CHONG) (By email: aytchong@pland.gov.hk)
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Comments from Related Departments — Page No.

1. Drainage Services Department Operations & Maintenance Branch Mainland North Division North Section, dated 30 January 2024 2
2. Environmental Protection Department, dated 16 January 2024 3
3. Water Supplies Department, New Works Branch, Construction Division, System Planning Section, dated 4 January 2024 16

1.	**Drainage Services Department Operations & Maintenance Branch Mainland North Division North Section, dated 30 January 2024**	
	<u>Comments on the revised DIA</u>	
	1. Para. 3.2.2 and Para.4.3.3: Please review the drainage features proposed for connection, discrepancies are observed in the two paragraphs. Please note that there is no public sewerage system in the vicinity of the application site.	Noted. Information has been revised in Section 4.3.3 of **Annex A** for Replacement Pages of Revised Drainage Impact Assessment.
	2. Para.4.1.3 and Figure 3.1: Please clarify the existing flow path to the south of the development site with consideration of geographical characteristics and assess if overland flow would be impacted out of the proposed development. Please also provide the flow path after the development.	Noted. Information has been revised in Sections 4.1.3, 4.3.5, 4.3.7, Tables 4-1 and 4-2, Figures 3.1 and 3.2, and Appendix D of **Annex A**.
	3. Para. 4.3.10: Although updated pipework design under the NDA may not be available, please provide a minimal yet feasible pipework network that would be able to serve the relevant drainage loading to facilitate the further assessment as per Para. 4.3.10, with a standard below which additional mitigation measures or upgrading works would have to be proposed and implemented.	Noted. Information has been revised in Sections 4.3.10 and 4.3.12, Table 4-3, and Appendix B of **Annex A**. Please also refer to Sections 2.3.1 and 2.4.2 for more information on the existing drainage condition and planned drainage facilities in the vicinity.
	4. Section 4.4 and Figure 3.2: Please elaborate on the stormwater collection system within the application site to the proposed discharge point.	Please refer to the proposal of stormwater collection system elaborated in Section 4.4.4 of **Annex A**. Subject to the detailed design in the later stage, a Stormwater Harvesting System is proposed to collect and treat the stormwater entering storage tank, and potentially reuse towards fulfilling the needs in residences, service trades, hotel and service apartments. The feasibility would be ascertained in later stage of the proposed development.
	5. Para. 5.1.5, Table 4-2 and Appendix C: Almost all system at the downstream of the proposed development is estimated to be overloaded. With such findings, it shall be difficult to conclude that the proposed drainage impact is acceptable from the overall drainage system planning point of view.	As no updated pipework design under the NDA is available during the study, similar to comment #3, minimal yet feasible pipework network is presented. Please refer to the information supplemented in Section 4.3.10 of **Annex A**. Please also refer to Appendix B of **Annex A** for the hydraulic calculation.

	6. Appendix A: Considering normal catchment response, 59.53 min inlet time for the proposed scenario is not generally reasonable. Please verify, especially with the elevation difference adopted for the inlet and outlet inverts.	Noted. Information has been revised in Appendix B of **Annex A**. The inlet time is assumed to be 5 minutes.
	7. Appendix A: In particular, it is counter-intuitive to find that the total runoff being significantly reduced while more paved area would be developed at the same time. Please review the calculation, especially the time of concentration as mentioned above.	Noted. Please refer to the revised calculation in Appendix B and C of **Annex A**.
	<u>Comments on the revised SIA</u> We have no further comment on the revised SIA.	Noted.
2.	**Environmental Protection Department, dated 16 January 2024** **Environmental Assessment Report** <u>Air Quality Perspective</u> 1 . Section 5.2 Please also discuss the following legislations, technical circulars and guidelines: • Air Pollution Control (Construction Dust) Regulation • Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation • Air Pollution Control (Fuel Restriction) Regulations (i.e. using liquid fuel with a sulphur content of less than 0.005% by weight) • Recommended Pollution Control Clauses for Construction Contracts 2 . Section 5.2.2 Please also discuss the buffer distance requirements for other emission sources, e.g. chimneys, dusty uses. 3 . Section 5.3	Noted. The following legislations, technical circulars and guidelines have been supplemented in Sections 5.2.3 – 5.2.6 of **Annex B** for the Replacement Pages of Revised Environment Assessment. The buffer distance requirements for other emission source have been supplemented in Table 5-2 of **Annex B**.

	Please discuss the existing background air quality by quoting AQMS data.	Discussion on existing background air quality by quoting AQMS data have been supplemented in Sections 5.3.1 – 5.3.3, and Table 5-3 of **Annex B**.
	4 . Section 5.3.2	
	Please quote the year of the commencement of operation phase in order to support why the data of year 2025 is discussed in this paragraph.	Year of commencement of operation phase has been supplemented in Section 5.3.5 of **Annex B**.
	5 . Table 5-3	
	Please highlight the values which exceed AQOs.	Values which exceed AQOs are highlighted in Table 5-4 of **Annex B**.
	6 . Section 5.4	
	Please provide more information for assessing the potential construction air quality impact arising from the proposed development, including but not limited to: the size of the demolition, site formation or/and excavation area, amount of excavated materials to be handled, number of dump trucks and mechanical equipment to be used per time over the work site. Please confirm whether there are any concurrent projects in the surrounding area and if positive, their cumulative air quality impact shall be addressed.	Noted. Assessment of the potential construction air quality impact arising from the proposed development have been supplemented in Sections 5.5.1 – 5.5.7 of **Annex B**.
	7 . Section 5.4.1	
	Please provide a table to show the names, the uses, assessment heights and distances to the proposed developments of the identified ASRs.	Details of identified ASRs have been supplemented in Table 5-5 of **Annex B**. Please also refer to the supplemented discussion in Sections 5.4.1 – 5.4.5 of **Annex B**.
	8 . Section 5.5	
	Please identify the fresh air intake and openable windows of the proposed development as ASRs and show them in Figure 5.2 in order to compare with the buffer distance requirements in HKPSG.	Fresh air intake and openable windows of the proposed development as ASRs have been supplemented in Figures 5.2a – c of **Annex B**. Please also refer to the updated discussion in Section 5.6.4 of **Annex B**.
	9 . Section 5.5.4	
	Please provide the confirmation from Transport Department on the road type for the proposed road.	Noted. Transport Department's confirmation on road type would be supplemented once received. Please refer to the updated discussion in Section 5.6.3 of **Annex B**.
	10 . Section 5.5.5	

Please correct the grammatical mistake "... will not encroach~~ed~~".	Noted. Section 5.6.4 of **Annex B** has been revised.
11 . Table 5-4 Note [1] is missing. Please check.	Noted. Information has been revised in Table 5-4 of **Annex B**.
12 . Section 5.5.6 and Figure 5.2 Please confirm that "No air sensitive uses, including openable windows, fresh air intake of mechanical ventilation and recreational uses in the open area, would be located within the buffer zone." and add this remark on Figure 5.2.	Noted. Information has been supplemented in Section 5.6.5 and Figure 5.2 of **Annex B**.
13 . Section 5.5.7 Please provide the date and time of the site surveys. Please be reminded that it is the responsibility of the Project Proponent and their consultant to confirm the validity of the emission data used in the AQIA. Any errors found in their emission data used may render the AQIA results invalid. Please confirm there is no chimney emission from the proposed development.	Noted. The date and time of the site surveys are supplemented in Section 5.6.8 of **Annex B**. Due to the project nature of the proposed development (i.e. residential, commercial, hotel, elderly day care centre), no chimney emission from the proposed development.
14 . Section 5.6.2 There is no sewage treatment plant in Appendix 3.1. Please check and consider to show the STP in Figure 5.2.	Noted. Please be clarified that Figure 5.2 of **Annex B** is used for showing the building structure above ground level Please refer to Appendix 3.1 of **Annex B** for the proposed STP located in underground B1/F.
15 . We note that there will be basement carpark in the proposed development. Please note that the proposed carpark shall satisfy the requirements, including design, maintenance and operation of the ventilation systems, stipulated in the ProPECC PN 2/96 - Control of Air Pollution in Car Park. Please indicate the location of the exhaust outlet of the ventilation system to demonstrate the exhaust air outlet will be located as far as possible from nearby air sensitive uses to avoid causing an air pollutant nuisance.	Noted. Please refer to the information supplemented in Sections 5.6.6 and 5.6.7, Table 5-7 of **Annex B**, and Figure 5.2 of **Annex B** has been revised to indicate the potential location of exhaust air outlet.
<u>Waste Management and Land Contamination Perspective</u> 16 . Response-to-Comment (3) - Section 8.2	

	The previous comment has not been duly addressed. In addition to the objective of the preliminary land contamination assessment, the Consultant is advised to elaborate further and describe the requirements and assessment methodology for land contamination issues. Please specify that the past and present land use activities on the proposed development site will be assessed through desktop review and site survey (e.g., site's land use history, aerial photos, site visit photos, spillage records, potential contamination sources, paving condition, nature of materials, finding and photographic records of previous studies, etc.).	Noted. Information has been supplemented in Sections 8.2.1 and 8.2.3 of **Annex B**.
	17 . Section 8.4.1	
	(a) Inconsistency in the site description for the historical land use in Year 1949 has been spotted between Section 8.4.1 (i.e., fully covered by vegetation) and Table 8-1 (i.e., covered by farmland and vegetation). Please review and update as appropriate.	Noted. Information has been revised in Section 8.4.1 and Table 8-1 of **Annex B**.
	(b) The site was fully or partially occupied as farm land between Year 1949 and Year 1973 instead of Year 1956 to Year 1963. Please carefully review and rectify the description in 2nd and 3rd sentences as appropriate.	Noted. Information has been revised in Section 8.4.1 and Table 8-1 of **Annex B**.
	18 . Response-to-Comment (4) - Section 8.4.2	
	According to the historical aerial photographs and site description in Table 8-1, the occupation of the open storage area began in Year 1990 but not Year 1986, please properly update as appropriate.	Noted. Information has been revised in Section 8.4.2 of **Annex B**.
	19 . Response-to-Comment (4) – Table 8-1	
	(a) For consistency, please remove "Year" in the first column (i.e., Years 1956, 1961, 1964 and 1973).	Noted. Information has been revised in Table 8-1 of **Annex B**.
	(b) The previous comment has not been duly addressed. The Consultant is advised to incorporate an additional column to outline the off-site land use immediately adjacent to the Project Site.	Noted. Information has been revised in Table 8-1 of **Annex B**.
	20 . Response-to-Comment (5) – Appendix 8-1	

	(a) The previous comment has not been fully addressed. The Consultant is advised to incorporate indicative mark-up on Appendix 8-1 to show the locations of potential off-site contamination sources immediately adjacent to the Project Site for further vetting.	Noted. Off-site land uses indicated in form of grey boxes have been supplemented in Appendix 8.1 of **Annex B**. Only storage areas are identified as the potential off-site contamination sources.
	(b) The slight displacements of the location of the site boundary remain in some of the aerial photos, for instance, those in Year 1996 and Year 2022. The Consultant is advised to review and align the overlay in each aerial photo carefully.	Noted. Aerial photos of 2022, 2017, 2020, 2009, 2013, 2005, 1998, 1996, 1994, and 1992 have been revised in Appendix 8.1 of **Annex B**.
	21 . Section 8.4.6	
	The Consultant shall clarify the meaning of "the open storage area at the east of the site is enclosed".	Noted. Information has been supplemented in Section 8.4.6 of **Annex B**.
	22 . Response-to-Comment (4) - Section 8.4.7	
	It is too early to substantiate that no polluting and hazardous industrial uses are anticipated. Please clarify whether there is a potential contaminating operation at the concerned off-site properties and the nature of the material stored. The Consultant shall conduct a site survey to visit the site condition at the boundary of the Application Site to verify whether no land contamination issue is anticipated.	Noted. Information has been supplemented in Sections 8.4.4 – 8.4.8 of **Annex B**.
	23 . Response-to-Comment (6) - Table 8-2	
	(a) The Consultant is advised to supplement the email reply from LandsD dated 8 June 2023 for clarity.	Noted. Information has been supplemented in Table 8-3 of **Annex B**.
	(b) Please clarify whether a new request has been made to the PlanD for the information related to the additional site area. If affirmative, please supplement the email correspondence for clarity.	Noted. Please be noted that a new request has been made and reply from PlanD is pending. Information has been supplemented in Table 8-3 of **Annex B**.
	(c) Since the response from PlanD is yet available, we will reserve our comment on the conclusion of the land contamination chapter.	Noted. Please be noted that a new request has been made and reply from PlanD is pending. Information has been supplemented in Table 8-3 of **Annex B**.
	24 . Response-to-Comment (9) and (10) - Section 8.5.2	

(a) Please clarify the meaning of WPN.	Please be noted that it is revised as chemical waste producer. Information has been supplemented in Section 8.5.2 and Appendix 8.2 of **Annex B**.
(b) The Consultant is advised to graphically indicate the location of the registered CWP for further review and vetting.	Location of the registered CWP has been supplemented in Appendix 8.2 of **Annex B**.
25 . Section 8.5.3	
The Consultant is advised to graphically indicate the locations of the two fire incidents recorded by the FSD for further review and vetting.	Locations of the two fire incidents have been supplemented in Appendix 8.3 of **Annex B**. Please also refer to the updated discussion Section 8.5.3 of **Annex B**.
26 . Response-to-Comment (7) - Appendix 8-4	
(a) According to the site walkover checklist, chemical waste is regularly generated from 保嘉/ 杰記and is currently collected by a licensed chemical waste collector. Please verify whether the information tallies with the registry of CWP provided by the EPD as enclosed in Appendix 8-2. Please carefully review and seek clarification with the relevant section of EPD, on the registry of chemical waste producers.	Updated record of the registry of CWP is obtained. 保嘉/ 杰記 is registered as CWP. Please refer to Section 8.7.2 and Appendix 8-2 of **Annex B** for the updated information.
(b) According to the second table of the site walkover checklist, stained surfaces were found around the site boundary area and machinery maintenance area. Please graphically locate the stained surfaces around the site boundary area and supplement site photographic records.	A location plan showing the stained surface has been supplemented in Figure 8.5a of Appendix 8.5 in **Annex B**.
(c) Please clarify whether the chemical storage areas are paved or unpaved.	Noted. Please be clarified that no storage of chemicals is identified at construction material and machinery storage area. Information has been updated in Sections 8.6.2 and 8.6.4 of **Annex B**. Storage of chemical was identified at machinery maintenance area only. The maintenance areas have been supplemented in Figures 8.1a and 8.1b of **Annex B**. Appendix 8.4 of **Annex B** has been updated to supplement the paved condition (please refer to item 1 and 8 of 2nd table titled "Observations").

27 . Section 8.6.4	
Since some chemical and oil drums were identified within the machinery storage area, please evaluate the potential of land contamination at these locations, considering the nature of the chemical and the conditions of the storage area.	Noted. Information has been revised in Appendix 8.4 (Waste oil, oil drums and acetylene cylinders are only found in machinery maintenance area) and Section 8.6.3 – 8.6.7 of **Annex B**.
28 . Section 8.6	
The Consultant shall elaborate on the site condition, including but not limited to the paving material and conditions and the storage condition of the chemical and dangerous goods in the three identified areas, particularly the machinery storage and maintenance areas.	Noted. Information has been supplemented in Sections 8.4.4 – 8.4.7 of **Annex B** to elaborate the site condition of the machinery maintenance area, where storage of chemical identified.
29 . Response-to-Comment (8) - Figure 8-1	
Please clarify whether other drone photos cover the area of the Entrance, Temporary Office, Village House or even the entire Application Site.	Please be clarified that the drone photos cover the main working area of site, including the area of the entrance, temporary office. Indication of different areas has been supplemented in the Figure 8-1 of **Annex B**. Drone photo does not cover the south portion of the site, which are dominant by vegetation with scattered village houses.
30 . Response-to-Comment (8) - Appendix 8-5	
(a) In addition to the locations of stained areas, the Consultant shall identify and indicate the potential chemical storage area (e.g., those in blue), for instance, those in Photos 21, 22, 23, 24, etc.	Noted. Information has been supplemented in Photos 21, 22, 23 and 24 of Appendix 8.5a. Please refer to **Annex B** for indication of the Potential chemical storage areas (oil containers, drums).
(b) Please review whether the photographic records at the southern portion of the Application Site are sufficient for the evaluation of land contamination potential in this Study.	Noted. Information has been supplemented in Section 8.6.7, and Photos 67 – 70 of Appendix 8.5 in **Annex B**.
31 . Section 8.7.1	
Please clarify whether Section 8.3 to 8.5 shall be referred to instead of Section 7.3 to 7.5.	Noted. Information has been revised in Section 8.7.1 of **Annex B**. Please also refer to the updated discussion in Section 8.7.3 and 8.7.4 of **Annex B**.
32 . Response-to-Comment (11) - Section 8.7.6	

	(a) Improper storage of chemicals, maintenance workshop, and stained surfaces have been identified during the site walkover. The Consultant shall supplement their exact location on Figure 8-1.	Noted. Information has been supplemented in Section 8.7.7 and Figure 8.5a of Appendix 8.5 in **Annex B** to indicate the stained surface, storage of chemical and maintenance area.
	(b) Please clarify why "Appendix 8.5" is in red font colour.	Noted. Information has been revised in Section 8.7.7 of **Annex B**.
	(c) Please clarify the meaning of "concentration of land contamination issues…"	Noted. Information has been revised in Section 8.7.7 of **Annex B**.
	(d) Please specify the allowable limit the Consultant refers to.	Noted. Information has been supplemented in Section 8.7.7 of **Annex B**.
	33 . Response-to-Comment (12) - Section 8.7.7	
	(a) In addition to the stained surface, please clarify improper storage of chemicals on the unpaved ground shall be considered a potential contamination hotspot in this Study.	Noted. Information has been supplemented in Section 8.7.7 of **Annex B**.
	(b) Please clarify whether potential land contamination sources were identified in the Entrance, Temporary Office and Village House area.	Noted. Information has been revised in Section 8.6.3 and 8.7.8 of **Annex B**.
	(c) According to Section 8.6.4, some chemical containers and oil drums were identified within the machinery storage area, please evaluate the land contamination potential at these locations.	Noted. Information has been supplemented in Section 8.6.4 of **Annex B**.
	34 . Response-to-Comment (13) - Section 8.8.2	
	The Consultant shall briefly mention the requirement for submitting the Contamination Assessment Report.	Noted. Information has been supplemented in Section 8.7.9 – 8.7.10 and 8.8.2 of **Annex A**.
	35 . Section 9.1.4	
	(a) Other Environmental Regulations / Guidelines shall be numbered as Section 9.1.5.	Other Environmental Regulations / Guidelines have been supplemented in Section 9.1.5 of **Annex B**.

	(b) Please remove the duplicated regulations and guidelines already covered in Section 9.1.1 to Section 9.1.4. For instance, (i) Waste Disposal Ordinance (Cap. 354) & Public Health and Municipal Services Ordinance (Cap. 132); (ii) Waste Disposal (Chemical Waste) (General) Regulation (Cap.354C); (iii) Waste Disposal (Charges for Disposal of Construction Waste) Regulation.	Noted. Information has been updated in Section 9.1.5 of **Annex B**.
	(c) As the revised version of Monitoring Solid Waste in Hong Kong – Waste Statistics 2022 was issued in December 2023, please quote the most updated reference as appropriate.	Noted. Information has been added in Section 9.5.2 of **Annex B** .
	36 . Section 9.3.1	
	(a) Please clarify whether site clearance is required during the construction phase of the Project.	Please be clarified that site clearance is required during the construction phase. Please refer to the updated information in Section 9.3.1 of **Annex B**.
	(b) Please revise "public fills reception facilities" as "public fill reception facilities".	Noted. Information has been revised in Sections 9.1.4 and 9.3.1 of **Annex B**.
	(c) Given that the part of the Project Site is covered by vegetation, a certain amount of non-inert C&D materials, such as timber and woody materials, are anticipated during site clearance. The Consultant is advised to review whether such materials will be sent to the Yard Waste Recycling Centre in Y-Park for recycling prior to disposal at the designated landfill site.	Noted. Information has been supplemented in Section 9.3.1 of **Annex B**.
	37 . Section 9.3.5	
	Please revise "public fill" as "public fill reception facilities".	Noted. Information has been revised in Section 9.3.5 of **Annex B**.
	38 . Section 9.3.6	
	(a) In addition to the optimization of the construction programme, please clarify whether alternative design, general layout and construction methods have been explored to minimize the generation of public fill/inert C&D materials.	Use of BIM and MiC will be considered to reduce generation of C&D material subject to detailed design. Please refer to Section 9.3.6 of **Annex B** for the supplemented information.

	(b) According to the Project Administrative Handbook for Civil Engineering Works and CEDD TC No. 11/2019, the project office is required to draw up a Construction and Demolition Material Management Plan (C&DMMP) at the feasibility study or preliminary design stage of each project, which generates more than 50,000 m3 of C&D materials. For a project with more than 300,000 m3 of surplus inert C&D materials, a C&DMMP should be prepared and submitted to the Public Fill Committee (PFC) for in-principle approval prior to the commencement of the detailed design. Please clearly state the requirements for the submission and approval of C&DMMP.	Noted. Information has been supplemented in Section 9.3.7 of **Annex B**.
	39 . Section 9.3	
	(a) In addition to the C&D materials, the Consultant is advised to elaborate on the quantity estimation for each type of waste anticipated.	Information has been supplemented in Table 9-1 of **Annex B** for the for the estimated quantities. Elaboration on the quantity estimation is given in Section 9.3.
	(b) The Consultant shall elaborate on the disposal outlet for general refuse.	General refuse are proposed to be disposed at North East New Territories (NENT) Landfill at Ta Kwu Ling. Please refer to the information supplemented in Section 9.5.2 of **Annex B**.
	(c) According to Section 9.2.1, the evaluation of potential impacts from the handling (including stockpiling, labelling, packaging and storage), collection, transportation and reuse/disposal of waste with respect to potential hazards, air and odour emissions, noise, wastewater discharges and public transport will be incorporated in this Study. In view of the significant amount of C&D materials anticipated, the Consultant is advised to supplement a preliminary estimation of the maximum number of dump trucks per day.	Evaluation of potential impacts from the handling (including stockpiling, labelling, packaging and storage), collection, transportation and reuse/disposal of waste with respect to potential hazards, air and odour emissions, noise, wastewater discharges and public transport has been incorporated in this Study. Please refer to the supplemented information in Sections 9.3.7 – 9.3.15 of **Annex B**. A preliminary estimation of the maximum number of dump trucks per day has been supplemented in Section 9.3.7 of **Annex B**.
	40 . Section 9.4.1	
	The Consultant is advised to deliver as many inert C&D materials to the public fill reception facilities (instead of the sorting facilities) as possible.	Noted. Information has been supplemented in Section 9.4.1 of **Annex B**.
	41 . Section 9.4.5	

(a) Please note that the destination of inert C&D materials is subject to the designation by the Public Fill Committee according to DEVB TC(W) No. 6/2010.	Noted. Information has been supplemented in Section 9.4.5 of **Annex B**.
(b) Please revise the first sentence as follows:	
"C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at Public Fill Reception Facilities ~~areas~~ or reclamation site."	Noted. Information has been revised in Section 9.4.5 of **Annex B**.
42 . Section 9.4.6	
Please revise "licensed collector" to "licensed chemical waste collector" for clarity.	Noted. Information has been revised in Section 9.4.6 of **Annex B**. Please note that "licensed chemical waste collector" is adopted throughout the report.
43 . Section 9.4.8	
Food waste is the main source of generating unpleasant odour and causing environmental hygiene concerns. Please consider classifying food waste as recyclables and separate the food waste from other waste to facilitate the recycling of food waste on-site or off-site.	Noted. Information has been supplemented in Section 9.4.9 of **Annex B**.
44 . Section 9.5.1	
As the revised version of Monitoring Solid Waste in Hong Kong –Waste Statistics 2022 was issued in December 2023, please adopt the latest disposal rate for quantity estimation.	Noted. Information has been revised in Section 9.5.1 of **Annex B**.
45 . Section 9.5.2	
At present, most of Hong Kong's food waste is disposed of at landfills together with other municipal solid waste (MSW). In 2022, some 11,128 tonnes of MSW were disposed of at landfills daily. About 3,302 tonnes (30%) of these were food waste, constituting the largest MSW category. The Project Proponent shall also review and explore the possibility of collecting food waste alongside other recyclables in the proposed development.	Noted. Information has been supplemented in Sections 9.4.9 and 9.5.2 of **Annex B**. The Project Proponent shall also review and explore the possibility of collecting food waste at detailed design stage.
46 . Section 9.5	
Please clarify whether chemical wastes are anticipated for the O&M of the proposed development.	Noted. Information has been supplemented in Section 9.5.1 of **Annex B**.
<u>Water Quality Perspective</u>	

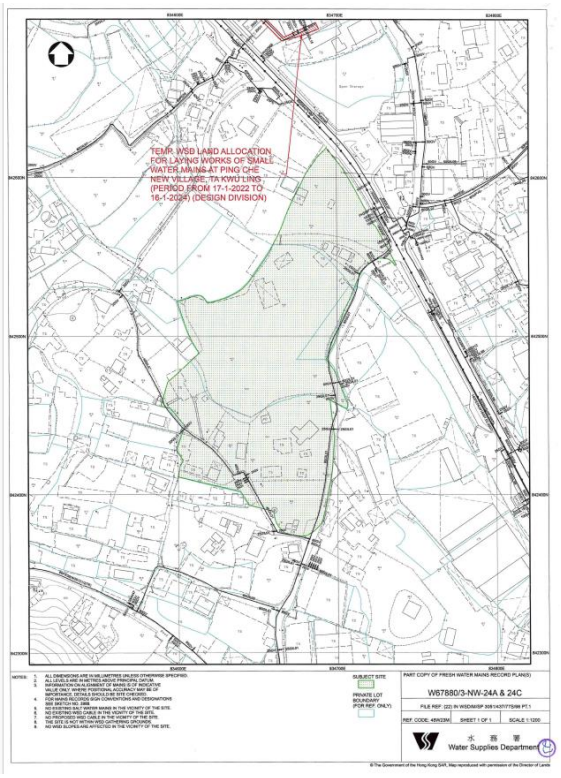
47 . Section 7.2.1 Please add ProPECC PN1/23 "Drainage Plans subject to Comment by the Environmental Protection Department".	Noted. Information has been supplemented in Section 7.2.1 of **Annex B**.
48 . Section 7.2.4 ProPECC PN1/94 has been superseded by ProPECC PN2/23. Please update relevant content.	Noted. Information has been revised in Section 7.2.4 of **Annex B**.
49 . Section 7.4 & Table 7-2 Please identify ponds and watercourse at south of the project site.	Noted Information has been supplemented in Sections 7.4.1 and 7.7.1, Figure 7.1 and Table 7-2 of **Annex B**.
50 . Section 7.5.1 Please include "accidental spillage of chemicals" as one of the sources of water quality impact during construction phase. Please incorporate corresponding mitigation measure(s).	Noted. Information has been supplemented in Sections 7.5.1 and 7.5.4 of **Annex B**.
51 . Section 7.5.5 2nd sentence Please amend to "Sufficient portable toilets shall be provided by licensed contractors...".	Noted. Information has been revised in Section 7.5.6 of **Annex B**.
52 . Section 7.6 Please add title "Mitigation Measures" to clearly show the mitigation measures during operation phase.	Noted. Information has been supplemented in Section 7.6.6 of **Annex B**.
53 . Section 7.6 & Section 7.7.4 (a) Please confirm if there is nearby public sewer. If yes, please connect to public sewer for handling and disposal of sewage generated from the proposed development instead of adopting STP.	Noted. There is a series of rising main public sewers found along Ping Che Road. There is no other public sewer and manhole nearby the proposed development. Hence, STP is adopted.
(b) If STP is to be adopted, please elaborate and provide details of the proposed STP to illustrate the proper handling and disposal of sewage generated from the proposed development, e.g. treatment level of the STP, disposal pathway and emergency bypass.	The elaboration of the treatment level of the STP has been supplemented in Section 7.6.2 – 7.6.6 and Table 7-3 of **Annex B**. The detailed calculation of the capacity of STP and hydraulic calculation is shown in Section 4 of **Annex C** for Replacement Pages of Revised Sewerage Impact Assessment Report. The disposal pathway and emergency bypass are also shown in **Annex C**.

Sewerage Impact Assessment Report	
54 . Please provide the intake year of the proposed development for record.	Noted. Information has been revised in Section 2.2.4 of **Annex C**.
55 . Section 4.1.1 and Table 4-1 Please use the UFF of 0.19 m3/person/day for users from Residents of the Elderly Day Care Centre. Please revise and update Table 4-2.	Noted. Information has been revised in Table 4-1 and 4-2, and Appendix B of **Annex C**.
56 . Section 4.2.1 and Table 4-3 The "Unit Flow" should be "Unit Flow Factor". Please revise.	Noted. Information has been revised in Table 4-2 of **Annex C**.
57 . Table 4-3 Please use "Peaking factor/peak flow factor" instead of "ADWF factor" and the unit of the peak flow should be (l/s). Please update.	Noted. Information has been revised in Table 4-2 of **Annex C**.
58 . In the drawing, it is noted that a swimming pool is included in the proposed development. Please include the sewage flow from backwashing in the report.	Noted. Backwash of swimming pool has been included in calculation. Please refer to Tables 4-2, 4-4 and 4-7, Sections 4.3.1, 5.1.1 and 5.1.2, and Appendix B of **Annex C** for more information.
59 . Section 3.1.4 (a) 3rd bullet point: Please amend "WPCO-TM" to "TM-DSS". [*not yet addressed in previous round of comment*]	Noted. Information has been supplemented in Section 3.1.4 of **Annex C**.
(b) Please delete second last bullet point.	Noted. Please refer to the updated Section 3.1.4 of **Annex C**.
60 . Please confirm if there is nearby public sewer, if yes please connect to public sewer for disposal of sewage generated from the proposed development instead of adopting sewage treatment plant (STP).	Noted. There is a series of rising main public sewers found along Ping Che Road. There is no other public sewer and manhole nearby the proposed development. Hence, STP is adopted.
61 . If STP is to be adopted, please explain the treatment level of the proposed STP and provide design and relevant details of the STP with figure illustration. [*not yet addressed in previous round of comment*]	The proposed development falls within the Deep Bay Water Control Zone (WCZ). The proposed STP will be designed to meet the acceptable treatment level of the Deep Bay WCZ. Please refer to information supplemented in Sections 4.4.3, 4.4.4, 4.4.5, Table 4-3 and Appendix C of **Annex C**.

	62. If STP is to be adopted, please provide details of emergency bypass for emergency discharge of effluent and illustrate with figure. [*not yet addressed in previous round of comment*]	Holding tank for emergency storage/retention will be included with adequate capacity to minimize need of emergency discharge. 1 standby pump will be provided. The standby pump will be ensured to switch on, and the temporary weirs/vacuum truck will be used to contain the overflow sewage during emergency. Please refer to Section 4.4.7 of **Annex C** for detailed discussion.
3.	**Water Supplies Department, New Works Branch, Construction Division, System Planning Section, dated 4 January 2024** <u>Major Comments on the Application/Main Reasons of Objection:</u> Appendix I WSIA	
	1. Table 2.1 - Please clarify the anticipated completion year of 2023.	Please be clarified that the completion year is 2032, which was also clarified in FI submission dated 19 December 2023. Please refer to Table 2-1 of **Annex D** for the Replacement Pages of Revised Water Supply Impact Assessment Report.
	2. Table 3.1 - Please add the daily demand for service trade of 0.04/m3/h/d to your I domestic type development. As the service trade covers stores, restaurant, clubhouse etc. associated with the residential development, please remove "Clubhouse", "retail", "office", "elderly day care center" and "child care center" in Table 3 .1.	Table 3-1 has been revised accordingly in **Annex D**. Please be noted that the calculation has been revised as per FI submission dated 19 December 2023.
	3. Table 3.1 - For hotel/ service apartment development, please adopt fresh water unit demand of 1m3/room/day and flushing water demand of 0.36m3/room/day.	Noted. Table 3-1 has been revised accordingly in **Annex D**. Please be noted that the calculation has been revised as per FI submission dated 19 December 2023.
	4. Table 3.1 and Appendix C - For domestic type development, please use flushing water demand of 0.104m3/h/d. Please review.	Noted. Table 3-1 and 4-1, and calculation in Appendix C has been revised accordingly in **Annex D**. Please also refer to the updated discussion in Sections 5.1.1, 5.1.3 and 6.1.2 of **Annex D**.

5. Figure 5.1 - It is not clear and could not show your proposed water main alignment to the connection of existing water main. Please review.	Noted. Figure 5.1 has been revised accordingly in **Annex D**.
6. Appendix C of WSIA - Pipe material of clayware is not correct. Please review.	Noted. The pipe material has revised. Material of main pump is Steel and branch off pipe is Lined Galvanised Iron. Please refer to Appendix C of **Annex D** for the revised information.
<u>Other Detailed Comments (if applicable):</u>	
Existing water mains inside the proposed site as shown in the MRP may be affected. The applicant is required to either divert or protect the water mains found on site.	The said water mains within the Application Site will need to be diverted. For details, please refer to the FI submitted on 19 December 2023.
If diversion is required, existing water mains inside the proposed site areas are needed to be diverted outside the site boundary of the proposed site to lie in Government land. 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.	As per FI submission dated 19 December 2023, the existing water main would be diverted. As a result, there will be minor adjustments to the layout of internal road, basement car park and location of the clubhouse at the southern part of the Indicative Scheme. Accordingly, an updated set of Landscape Mater Plan and Tree Preservation Proposal and Indicative Architectural Drawings were submitted as part of the Further Information (FI) submitted to the Town Planning Board on 14 December 2023. To further elaborate on the submitted materials, the diverted water mains complied with WSD's suggestion. The diverted water mains lies on a 1.5m wide Government Land within the Application Site. Therefore, there will be no change to the Application Site boundary and key development parameters. Please refer to the updated set of Indicative Architectural Drawings (FI submitted on 14 December 2023) for the proposed alignment of water mains diversion at the southern part of the Indicative Scheme. The Applicant is committed to undertake the said diversion works at detailed design stage. Upon completion of works, access to the diverted water main would be made available to WSD or relevant Government Bureaux/Departments for operation and maintenance purposes. Detailed arrangement could be agreed during lease modification or land exchange at later stage.

	If diversion is not required, the following conditions shall apply:	
	(a) Existing water mains are affected as indicated on the site plan and no development which requires resitting of water mains will be allowed.	Noted.
	(b) Details of site formation works shall be submitted to the Director of Water Supplies for approval prior to commencement of works.	Noted.
	(c) No structures shall be built or materials stored within 1.5 metres from the centre line(s) of water main(s) shown on the plan. Free access shall be made available at all times for staff of the Director of Water Supplies or their contractor to carry out construction, inspection, operation, maintenance and repair works.	Noted.
	(d) No trees or shrubs with penetrating roots may be planted within the Water Works Reserve or in the vicinity of the water main(s) shown on the plan. No change of existing site condition may be undertaken within the aforesaid area without the prior agreement of the Director of Water Supplies. 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.	Noted.
	(e) No planting or obstruction of any kind except turfing shall be permitted within the space of 1.5 metres around the cover of any valve or within a distance of 1 metre from any hydrant outlet.	Noted.
	(f) Tree planting may be prohibited in the event that the Director of Water Supplies considers that there is any likelihood of damage being caused to water mains.	Noted.

(Last Updated: 26 February 2024)

Attachment E

Further Information (4) –
Responses to Comments Tables

Your ref Y/NE-TKL/5
Our ref 295450/00/WSTY/MYNL/CYSL/CKGF/05260

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By Hand

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

16 April 2024

Dear Sir/Madam,

Application for Amendment of Plan
Under Section 12A of the Town Planning Ordinance (Cap.131),
to Rezone the Application Site from "Open Storage", "Agriculture" Zones and an area shown as 'Road' to "Other Specified Uses" annotated "Mixed Use" Zone,
for Proposed Mixed Use Development at Lots 796 and 1008 RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories
(Planning Application No. Y/NE-TKL/5)

Submission of Further Information

We refer to the comments received from various Government departments from 4 January 2024 to 10 April 2024 on the captioned Planning Application.

We are pleased to submit herewith a Responses-to-Comments Table **(Attachment 1)** together with the relevant supporting documents **(Annexes A – I)** for your consideration.

The softcopy of the Further Information will be uploaded to the hyperlink provided by the Town Planning Board.

We sincerely seek favourable consideration from the Town Planning Board to approve the captioned S12A Planning Application.

Should you have any queries, please contact the undersigned or our Ms. Natalie LEUNG at 2268 3612 or our Mr. Gordon FOO at 2268 3709.

Yours faithfully,

Theresa YEUNG
Director

Encl.
- **Attachment 1** – Responses-to-Comments Table
- **Annex A** – Revised Sewerage Impact Assessment
- **Annex B** – Revised Drainage Impact Assessment
- **Annex C** – Revised Environmental Assessment
- **Annex D** – Replacement Pages of Revised Supporting Planning Statement
- **Annex E** – Supplementary Drawing for Visual and Air Ventilation Mitigation Measures
- **Annex F** – Revised Visual Impact Assessment
- **Annex G** – Revised Air Ventilation Assessment – Expert Evaluation
- **Annex H** – Revised Traffic Impact Assessment
- **Annex I** – Revised Water Supply Impact Assessment

c.c.
- DPO/STN, PlanD (Attn: Mr. Tim FUNG) (By email: ttyfung@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Sheren LEE) (By email: sswlee@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Katie LEUNG) (By email: kyyleung@pland.gov.hk)
- Client

Comments from Related Departments — Page No.

1. Agriculture Fisheries and Conservation Department, dated 4 January 2024 2
2. Drainage Services Department, Operations & Maintenance Branch, Mainland North Division, North Section, dated 2 April 2024 2
3. Drainage Services Department, Operations & Maintenance Branch, Mainland North Division, North Section, dated 10 April 2024 2
4. Environmental Protection Department, dated 9 April 2024 3
5. Lands Department, District Lands Office, North, dated 23 February 2024 11
6. Leisure and Cultural Services Department, North District Leisure Services Office, dated 16 January 2024 12
7. Leisure and Cultural Services Department, New Territories North Tree Team, dated 16 January 2024 12
8. Planning Department, Urban Design and Landscape Section, Landscape Unit dated 5 January 2024 12
9. Planning Department, Urban Design and Landscape Section, Urban Design Unit, dated 16 January 2024 . 14
10. Social Welfare Department, dated 10 January 2024 18
11. Transport Department, NT Regional Office, Traffic Engineering (NTE) Division, North Section, dated 3 January 2024 19
12. Transport Department, NT Regional Office, Transport Operations (NT) Division, Sai Kung & North Section, dated 3 January 2024 20
13. Water Supplies Department, New Works Branch, Construction Division, System Planning Section, dated 2 April 2024 20

1.	**Agriculture Fisheries and Conservation Department, dated 4 January 2024**	
	• We have no comment on the FI provided by the applicant and our earlier comments are still valid.	Noted.
2.	**Drainage Services Department, Operations & Maintenance Branch, Mainland North Division, North Section, dated 2 April 2024**	
	Comments on the revised SIA Section 5 - Please indicate that the project proponent will be responsible for the implementation, operation and maintenance of the proposed STP.	 Noted, please refer to Section 5.1.3 of **Annex A** – Revised Sewerage Impact Assessment for details.
3.	**Drainage Services Department, Operations & Maintenance Branch, Mainland North Division, North Section, dated 10 April 2024**	
	• Please be advised that the 5th edition of Stormwater Drainage Manual has been updated pursuant to its Corrigendum No. 1/2022, 1/2024 and 2/2024. Please review the relevant calculations pursuant to the latest drainage guideline.	Noted. The calculation has been revised. Please refer to Sections 4.2 to 4.3, Appendix B, C and D of **Annex B** – Revised Drainage Impact Assessment.
	• Figure 3.1: Please also show the expected flow path of the area on the other side of Ping Che Road. For instance, contribution from the side branch of SMH10023241 was not mentioned in the calculation. Should the relevant pipeworks be also serving the relevant area, please also include them in the hydraulic analysis.	Noted. The area on the other site of Ping Che Road has been included in the hydraulic calculation. Please refer to Section 4.1.4, Appendix B, C and D of **Annex B** for details.
	• In terms of climate change adjustment, please also include design allowance pursuant to Section 6.8(e) of the Corrigendum No. 1/2022 of the Stormwater Drainage Manual.	Noted. The climate change adjustment has been included in the calculation – the 16.0% of rainfall increase due to climate change is adopted as worst-case scenario. Please refer to Appendix B of **Annex B** for details.
	• It is noted that the upgrading of the existing drainage networks is requisite and essential to cater for the proposed development, please advise the undertaking party and timeline of the upgrading works to substantiate on the feasibility.	Noted. As stated in Section 2.4, the Application Site falls within the NTN Development, which included a drainage works. Please also refer to Section 4.3.11 of **Annex B** for details. Further assessment will be conducted to determine if upgrading works is required.
	• The provision of stormwater harvesting system and storage tank is mentioned in the	Noted. As stated in Sections 4.4.4 and 4.4.8 of **Annex B**, the stormwater harvesting system

	DIA, please elaborate on the location, sizing of the storage tank and the potential impacts to the public drainage system.	will be further study in later stage to explore the feasibility.
4.	**Environmental Protection Department, dated 9 April 2024**	
	Environmental Assessment Report <u>Noise Perspective</u> 1. Section 6.3.5 Please document TD's agreement on the traffic forecast data in the report once available. In case TD has no comment on the methodology for traffic forecast only, the consultant should provide written confirmation from the respective competent party (e.g. traffic consultant) that TD's endorsed methodology has been strictly adopted in preparing the traffic forecast data, and hence the validity of traffic data can be confirmed. 2. Section 6.3.18 The information about the BAW will be stated in the Sales Brochure and Deed of Mutual Covenant to let the future occupants be well aware of its intended purpose. Please supplement. 3. Table 6 Based on the photo provided by consultant, there are clearly mobile crane is found together with the lorry. Please review and update. 4. Section 6.4.13 Please supplement the full details, including the date, time, personnel, equipment, calibration record, weather, field operations and site location plan, shall be included for completeness and easy future reference. <u>Waste Management and Land Contamination Perspective</u> 5. Response-to-Comment (16) - Section 8.4.2 Please clarify whether a Contamination Assessment Plan (CAP) has been separately submitted to EPD for approval. If affirmative, please append the relevant submission for	 Noted. TD's endorsement on traffic forecast data will be supplemented once available. Noted. Information has been supplemented in Sections 6.3.17, 6.3.18 and 6.3.19 of **Annex C** – Revised Environmental Assessment Noted. Table 6-7 and Appendix 6.7 of **Annex C** have been revised to account for the fixed plant noise identified. Noted. Background noise measurement and details have been supplemented in Appendix 6.7 of **Annex C**. Noted. Information has been supplemented in Section 8.2.4 suggesting that CAP will be prepared for EPD approval before site investigation before commencement of project

	further vetting. If not, please update the wording to avoid confusion.	development. Please refer to **Annex C** for details.
	6. Response-to-Comment (19) – Table 8-1	
	Discrepancies have been spotted in the occupation period between Table 8-1 (i.e., occupied as an open storage area since 1990) and Appendix 8-4 (i.e., occupied as an open storage area since 1982). The Consultant is advised to carefully review the content and ensure the information is consistent throughout the submission.	Noted. Appendix 8.4 of **Annex C** has been revised. The land has been occupied since 1982, and was used as open storage from 1990.
	7. Response-to-Comment (19) – Table 8-2	
	(a) The Consultant shall incorporate the distance between the off-site contamination sources and the Project boundary and further elaborate on the site condition and any physical separation (e.g., concrete paving or roads) from the Site.	Noted. Figure 8.1a has been revised and Table 8-1 has been to show the distance between the off-site sources and the Project Boundary. Please refer to **Annex C** for details.
	(b) Inconsistencies in the description for OLC-2 have been spotted between Table 8-1 and Table 8-2. Please clarify whether it shall be referred to the east or northeast of the Project Site.	Noted. Table 8-1 of **Annex C** has been revised. Please be noted that "East" was revised as "Northeast".
	(c) Please clarify whether the open storage area at the west of the Project Site has been occupied since 2000 (i.e., Table 8-1 and Para. 8.4.7) or 2009 (Table 8- 2).	Please be clarified that the comment is referring to OLC 3. Table 8-1 of **Annex C** has been revised. The southeast of the site has been occupied since 2000.
	8. Response-to-Comment (20) – Appendix 8-1	
	The previous comment has not been duly addressed. There are still slight displacements with the location of the site boundary on some of the aerial photos. Please carefully review and align the boundary on each aerial photo as appropriate.	Noted. The sites boundaries have been revised in the aerial photos. Please refer to Appendix 8-1 of **Annex C** for details.
	9. Response-to-Comment (22) – Section 8.4.5 to 8.4.7	
	Since the three identified potential off-site contamination sources have already occupied the current locations for quite a period of time, please clarify whether site interviews were conducted during the site walkover to better understand their business and operation nature	Site interviews were conducted during the site walkover to better understand their business and operation nature and evaluate land contamination potential from off-site sources. Please refer to Sections 8.4.5 to 8.4.7 of **Annex C** for details.

and evaluate land contamination potential from off-site sources.	
10. Response-to-Comment (23) – Table 8-3 and Appendix 8-3	
(a) According to Appendix 8-3, correspondence with the Planning Department dated 25 May 2023 has been attached to this submission. Nevertheless, there is no such record tabulated in Table 8-3. Please review and incorporate the relevant information to avoid confusion.	Noted. Table 8-3 of **Annex C** has been updated.
(b) The Consultant is advised to supplement the latest enquiry letter to PlanD for clarity.	Noted. Enquiry letter to PlanD has been supplemented in Appendix 8-3 of **Annex C**.
(c) It is understood that a new request has been made to PlanD, and their response is currently underway. We will reserve our comment on the conclusion of the land contamination chapter.	Noted. Enquiry letter to PlanD and corresponding responses have been supplemented in Appendix 8-3. Information has also been updated in Section 8.7.2 and Table 8-3. Please refer to **Annex C** for details.
11. Response-to-Comment (27) – Section 8.6.4	
According to the locational plan on Appendix 8.5, stained surfaces were identified at the edge of the machinery storage area (i.e., Photo 43 and 46), please review and update the description to avoid confusion.	Noted. Section 8.6.4 of **Annex C** has been revised as "No stains or distressed vegetation observed on the ground in the storage area. Stains were observed along the corridor between the construction material and machinery storage area (Photo 43,46), where the respective ground is paved in good condition. Stains were also spotted at the edge of building material storage area (Photo 39) where the ground is unpaved."
12. Response-to-Comment (27) – Section 8.6.5	
According to the locational plan in Appendix 8.5, the area for machinery maintenance / chemical oil drums storage areas is physically separated into two parts. Please review and update the wording for clarity.	Noted. Sections 8.6.5 and 8.6.6 of **Annex C** have been updated.
13. Response-to-Comment (27) – Section 8.7.2	
Please clarify the meaning of the "relevant illegal land contamination case", as mentioned in the second sentence.	Noted. Section 8.7.2 of **Annex C** has been revised.
14. Response-to-Comment (33) – Section 8.7.8	

Per Figure 8.5a of Appendix 8-5, stained surfaces were identified at the edges of building material storage area (i.e., Photos 39) and machinery storage areas (i.e., Photos 43 and 46). Please review the conclusion on the locations of hotspots outlined in Section 8.7.8 and update as appropriate.	Noted. Section 8.6.4 of **Annex C** has been updated.
15. Response-to-Comment (33) – Section 8.7.9	
In addition to the entire machinery maintenance area, please clarify whether the identified hotspots shall be included in the site investigation works in the subsequent stages.	Noted. Sections 8.7.7 and 8.8.8 of **Annex C** have been revised.
16. Section 8.8.2	
In the second sentence, please clarify whether stained surfaces were identified within the machinery storage or maintenance areas.	Noted. Section 8.8.2 of **Annex C** has been updated.
17. Response-to-Comment (35) – Section 9.1.5	
(a) The previous comment has not been duly addressed. Since Cap.354C and Cap.354N are already covered in Section 9.1.3 and Section 9.1.4, please remove the duplicates to avoid confusion.	Noted. Section 9.1.5 of **Annex C** has been revised.
(b) The previous comment has not been duly addressed. As the revised version of Monitoring Solid Waste in Hong Kong – Waste Statistics 2022 was issued in December 2023, please quote the most updated reference as appropriate.	Noted. Section 9.1.5 of **Annex C** has been revised.
18. Response-to-Comment (36) – Section 9.3.1	
(a) The 4th sentence is confusing. Please review whether non-inert C&D materials are suitable as filling materials on-site or for other beneficial off-site uses at PFRFs.	Noted. Section 9.3.2 of **Annex C** has been revised.
(b) Please be advised that timber and woody materials are only part of the non-inert C&D materials to be generated during the construction works. The Consultant shall review whether further segregation and recycling shall be adopted prior to landfill disposal.	Noted. Section 9.3.2 of **Annex C** has been revised.

(c) In addition to estimating the daily truck trip for the disposal of non-inert C&D materials, please also provide a preliminary estimation of the transportation arrangement for inert C&D materials.	Noted. Section 9.3.1 of **Annex C** has been revised.
19. Response-to-Comment (39) – Section 9.3.11 The amount of chemical waste to be generated shall be quantified in the Waste Management Plan (WMP) as part of the Environmental Management Plan (EMP) to be prepared by the Contractor.	Noted. Section 9.3.12 of **Annex C** has been revised.
20. Response-to-Comment (39) – Section 9.3.13 Please consider referring to the generation rate (i.e., 0.65 kg/person/day) adopted in approved Environmental Impact Assessment Reports instead of 0.59kg/person/day from "Monitoring of Solid Waste in Hong Kong—Waste Statistics for 2022". The Consultant shall update the estimation and the relevant figures in Section 9.	Noted. Section 9.3.14 of **Annex C** has been revised.
21. Section 9.3.15 The sentence is incomplete, please carefully review and update it as appropriate.	Noted. Section 9.3.16 of **Annex C** has been revised.
22. Table 9-1 (a) Please further elaborate on the estimation of the quantity of non-inert C&D materials based on the GFA of the sites.	Noted. Table 9-1 of **Annex C** has been revised for further elaboration. The calculation on the quantity of non-inert C&D materials made reference to the Waste Index in Section 3.2 of A Guide for Managing and Minimizing Building and Demolition Waste published by the Hong Kong Polytechnic University in May 2001.
(b) Please adopt the generation rate (i.e., 0.65 kg/person/day) adopted in approved Environmental Impact Assessment Reports instead of 0.59kg/person/day from "Monitoring of Solid Waste in Hong Kong – Waste Statistics for 2022".	Noted. The quantity of general refuse has been revised in Table 9-1 of **Annex C**.
23. Response-to-Comment (44) and (46) – Section 9.5.1	

	The description of chemical wastes is confusing, please carefully review the first sentence and update it as appropriate.	Noted. Section 9.5.1 of **Annex C** has been revised.
	24. Response-to-Comment (45) – Section 9.5.2	
	In addition to the disposal outlet of segregated food waste, please elaborate on the collection arrangement for food waste generated during the operational phase.	Noted. Section 9.5.2 of **Annex C** has been revised.
	<u>Water Quality Perspective</u>	
	25. Response-to-Comment Item 53(a)	
	There is nearby public sewer, please clarify the reason of not connecting to public sewer for handling and disposal of sewage generated from the proposed development. *[not yet addressed in last round of comment]*	Please be clarified that the nearby public sewer along Ping Che Road is rising main – discharging to rising main is not proposed.
	26. Section 7.6.3 to 7.6.5	
	(a) Paragraphs regarding STP should be considered as mitigation measure during operation phase. Please amend as appropriate.	Noted. Sections 7.6.3 to 7.6.5 of **Annex C** have been placed under the section titled "Mitigation Measures during Operation Phase".
	(b) Please illustrate disposal pathway, emergency/contingency measures (e.g. emergency bypass) of proposed STP in appropriate paragraph(s). *[not yet addressed in last round of comment]*	Noted. The detail design of the proposed STP is not yet available at this stage. The requested information will be supplemented in the revised SIA report for approval at the detail design stage. Nevertheless, emergency/ contingency measures of the proposed STP have been supplemented in Section 7.6.7 – 7.6.8 of **Annex C**.
	27. Section 7.6.4 and Table 7-3	
	Please amend typo "Deep bay" to "Deep Bay".	Noted. Section 7.6.5 and Table 7.3 of **Annex C** have been updated.
	28. Section 7.6.6	
	Please include ProPECC PN1/23 as one of the mitigation measures during operation phase.	Noted. Section 7.6.9 of **Annex C** has been updated.
	29. Figure 7.1	
	Please indicate the ID of water sensitive receiver (WSR) to show the WSRs clearly.	Noted. Figure 7.1 of **Annex C** has been updated.

Sewerage Impact Assessment Report	
30. Section 4.2 and Table 4-2	
(a) Please check the calculation for "Total ADWF" - 2083.0 m^3/day. Given the addition of 6m^3/day sewage generation from swimming pool, please clarify should the calculation be 2074.6m^3/day + 6m^3/day = 2080.6m^3/day.	The unit flow factor and average sewage discharge for generation from residential – Day Care Centre for the Elderly are updated to 0.19 m^3/person/day and 11.3 m^3/ day in Table 4-2. As such, the total ADWF is to be 2077 m^3/day + 6 m^3/day. Please refer to section 4.2 and table 4-2 of **Annex A** for details.
(b) Please check the calculation for "Contributing Population".	Noted. The contributing population has been revised to ADWF/ 0.27 (excluding swimming pool backwash), i.e. 2,077/0.27 = 7,693. Please refer to Table 4-2 and Appendix B of **Annex A** for details.
31. Section 4.4.5 and Table 4-4	
(a) Please check the calculation of Average ADWF for "Sewage (Residents)" and "Sewage (Staff)" and Total ADWF. Please amend relevant data / info / appendix accordingly.	Noted. The "Sewage (Staff)" has revised as 394.6 m^3/day (backwash from swimming pool excluded). Relevant table, main text and appendix are revised accordingly. Please refer to Section 4.4.4 and Table 4-4 of **Annex A** for details.
(b) Please clarify the contribution of sewage generated from swimming pool.	The contribution of sewage generated from swimming pool is the backwash which is 6m^3/day. A column has been added in Table 4-4 of **Annex A**.
32. Section 4.4.7	
Please amend typo "As is good practice for STP..." to "As for good practice for STP...".	Noted. Section 4.4.6 of **Annex A** has been revised.
33. Section 4.5.2 and Table 4-6	
Population for residents and staff (i.e. 6114+839=6953) does not align with that in Table 4-2 (i.e. 7693) and in Appendix C (i.e. 6334+839=7173). Please review and amend as appropriate.	Noted. Population for residents has been revised as 6334 in Table 4-6 to tally with Appendix C. Please refer to **Annex A** for details.
34. Section 4.6 and Table 4-7	
(a) Please check the calculation for "Sewage Flow Rate". Please amend relevant data / info / appendix accordingly.	Noted. The calculation of "Sewerage Flow Rate" is to be 2083.96 m^3/day, which are consistent with calculation of Appendix C. Please refer to Table 4-7 and Appendix C of **Annex A** for details.

(b) Please review the whole report and amend based on the changes made.	Noted. The comments are addressed and reflected accordingly in **Annex A**.
35. Table 4-1	
The category of the Residents of the Elderly Day Care Centre should be domestic: institutional and special class. Please update.	Noted. Information has been updated in Table 4-1 of **Annex A**.
36. Table 4-2	
(a) The UFF of residential from the Elderly Day Care Centre should be 0.19 m3/person/day. Please revise and update the calculation.	Noted. Information has been updated in Table 4-2 and Appendix B of **Annex A**.
(b) Please provide the details calculation and reference of the peak flow from the swimming pool backflow.	The design of swimming pool would be available in detailed design stage. Meanwhile, please refer to the assumptions with reference for detail calculation for swimming pool backflow is given in Appendix B of **Annex A**.
(c) Please verify the peaking factor and peak flow for the proposed development according to the GESF and update the calculation accordingly.	Noted. The peaking factor has been revised as 3 according to Section 3.3 of EPD's Guidelines for the Design of Small Sewerage Treatment Plant. Please refer to Table 4-2 and Appendix B of **Annex A**.
37. Section 4.4.2 and Appendix C	
It is noted that equalization tank should be used in the STP. Please state the size of the equalization tank to ensure it fulfils the Guidelines for the Design of Small Sewage Treatment Plants.	Noted. The minimum size of equalisation tank of 519.75m^3 has been stated in Section 4.4.4 and Appendix C of **Annex A**.
38. Section 4.4.4	
The meaning of this paragraph is similar to Section 4.4.2, please check and delete if applicable.	Noted. Section 4.4.2 has deleted accordingly.
39. Section 4.4.5	
The design peak flow of the on-site STP should be 6249 m3/day not 2083 m3/day. Please update.	Noted. The design peak flow of the on-site STP has been revised as 6237 m^3/day. Please refer to Section 4.4.4 of **Annex A**.
40. Table 4-4	
Please use "Peaking factor/peak flow factor" instead of "ADWF factor". Please update.	Noted. Information has been updated in Table 4-4 of **Annex A**.
41. Table 4-6	

	The population of the residents is inconsistent with the data in Appendix C. Please verify and update.	Noted. The population of the residents has revised as 6334. Please refer to Table 4-6 of **Annex A** for details.
5.	**Lands Department, District Lands Office, North, dated 23 February 2024**	
	It is noted that the Applicant's R-to-C submitted on 19.12.2023 are solely related to comments given by WSD and thus not related to this office. And our comments to the Applicant's R-to-C submitted on 14.12.2023 are provided below: -	
	• As no amendment is proposed in response to our previous memo, our comments stated in my memo dated 8.12.2023 remain valid.	Noted.
	• The R-to-C confirmed that "the Child Care Centre and Day Care Centre for the Elderly will be privately-owned and to be operated by the owner of the Proposed Development". As advised you in para. 4(iv) of my previous memo, unless the facilities are required by Government and monitored by the relevant B/Ds, the requirements for G/IC facilities (and the PTT) would not be imposed in the lease conditions.	Noted.
	• As the R-to-C deferred the management and maintenance responsibilities of the access road to later stage, your attention is particularly drawn to para. 4(v) of my previous memo. However, the Applicant has not advised, in particular, comments of TD and HyD in respect of the nearby village access arrangement. Without in-principle agreement from B/Ds, the proposed access road may not be able to realise and re-zoning becomes premature.	Noted. The submission was circulated to TD and HyD and comments to the access road have not been received. The Applicant would address such comments when available.
	• The Applicant responded in item (vii) on page 12 that the "residual" part of Lot 796 in D.D. 77 (which would be "isolated" from the major part of the private development by the proposed access road) would remain under private land ownership and could serve as a works area / amenity area for future access road. Unless TD and HyD agree to the arrangement, this R-to-C did not address to the issue raised in para. 4(vii) of my previous memo.	Noted. The submission was circulated to TD and HyD and relevant comments have not been received. The Applicant would address such comments when available.

	• For the "Replacement Pages of Updated Supporting Planning Statement", the amendments are related to design details of the access road and visual mitigation measures which are outside the purview of this office. For the statement under para. 4.5.1, i.e. "Compensatory planting will also be cultivated at appropriate locations", the appropriate locations should refer to the private lots of the proposed composite development.	Noted.
6.	**Leisure and Cultural Services Department, North District Leisure Services Office, dated 16 January 2024**	
	• Since the project consultant has addressed our previous comments, we have no specific comment at this stage	Noted.
7.	**Leisure and Cultural Services Department, New Territories North Tree Team, dated 16 January 2024**	
	• LCSD reserves the right to provide further comments until the coming Tree Preservation and Removal Proposal is provided • LCSD would not take up the future maintenance of vegetation until all concerns are fully addressed	Noted. Noted.
8.	**Planning Department, Urban Design and Landscape Section, Landscape Unit dated 5 January 2024**	
	• The applicant is advised to revise/adjust the current design layout to maximize the planting areas for more tree plantings within the Site.	The current design layout has been maximised to fulfil the quantity requirement for 1:1 tree compensation. The area of greenery coverage has also been maximized with in consideration of the building layout, ground level and podium level. For example, sufficient tree planting has been incorporated along the site boundary to create a lush and verdant environment. Greenery has also been incorporated into various outdoor amenity areas, such as pavilion, sports ground, landscape terrace, water play area, courtyard, and tree walk located on ground and podium levels. To further enhance the quality of the landscape proposal, ornamental tree and shrubs planting have been proposed to provide shade and create an attractive visual appeal to the site, while softening the built form and maximising

		the greenery. Selective planting of species have been proposed to serve a number of landscape features, such as screening undesirable views, providing pedestrian with shades, and augmenting the aesthetics.
	• This office maintains previous view of "the proposed rezoning for high density mixed use development will bring significant change to the existing rural landscape character of "AGR" zone" from the landscape planning perspective.	As explained in FI submission dated 14 December 2023, the proposed amendment is considered compatible with the changing planning circumstances and is compatible with the existing surrounding environment. Although the Application Site is partly within "AGR" and "OS" zones, the site is largely paved and currently used as open storage. Minor portion of vegetation is observed in area zoned "AGR" but intermixed with temporary structures. Also, the Application Site is surrounded by other brownfield operations. Apart from the existing condition, the proposed amendment also complements the changing planning circumstances. As promulgated in multiple Government studies and policy documents, including the NTN Study in 2017, Northern Metropolis Development Strategy (NMDS) in 2021 and Northern Metropolis Action Agenda as announced in Chief Executive's Policy Adress 2023, the positioning and planning intention of the NTN New Town are emphasized to be developed into a base for emerging industries to complement I&T industry in San Tin Technopole and collaborate with the development of Luohu District in Shenzhen. Ping Che area, with its strategic location at the centre of the NTN New Town, is anticipated to be the main driver for supporting the anticipated growth of NTN New Town. With clear direction and agenda set by the Government, the Application Site and its vicinity are intended and suitable to become the centre of the future NTN New Town featuring a variety of land uses and maximum development intensity. The proposed mixed use development at the Application Site, embedded with multiple landscape enhancement measures in the Indicative Scheme, such as landscaping on podium and on ground level and vibrant green elements at the building façade, is considered fully compatible with and will serve as a first-mover in response to the changing planning

		circumstances of the surrounding Ping Che area while contribute to the enhancement of the overall built environmental quality.
9.	**Planning Department, Urban Design and Landscape Section, Urban Design Unit, dated 16 January 2024**	
	Having reviewed the FI1, please note that our previous comments in paras. 1 to 4 via email dated 5.12.2023 are still valid. Some of our previous specific comments dated 5.12.2023 are not fully addressed (which are recapped below) and there are some further comments/observations on the updated SPS, VIA and AVA.	
	1. As for the VIA and AVA submissions, it is advised that the applicant should compare the existing provisions (OZP compliant scheme) with the full proposal to provide a picture of how the complete proposed development would impact the existing surrounding environment, while the 'planned Ping Che/Ta Kwu Ling NDA', which is not incorporated into the OZP, could be taken as additional information.	Noted. Please refer to the responses in the following.
	Appendix A – Replacement Pages of Updated SPS	
	2 . For the sake of clarity, please provide a figure indicating all visual and air ventilation mitigation measures (e.g. building separations, setbacks etc.) with dimensions.	Noted. Please refer to the information revised in Para. 4.4.10 to 4.4.13 of **Annex D** – Replacement Pages of Revised Supporting Planning Statement. Please also refer to **Annex E** for a supplementary drawing showing the visual and air ventilation mitigation measures as appropriate.
	3 . Paras. 4.4.11 and 4.4.12 - According to Sections 5.2 and 5.3 of the AVA, building setback should be added to these two paragraphs.	Noted. Information have been revised in Para. 4.4.10 to 4.4.13 and 6.8.2 of **Annex D**.
	4 . Para. 9.8.8 in Figure 5.3b – According to paras. 4.4.10 to 4.4.12, building separation is a design measure to mitigate both visual and air ventilation impacts.	Noted. Please refer to the discussion regarding building separation as a both visual and wind enhancement feature in Para. 4.4.10 to 4.4.13 and 6.8.2 of **Annex D**.
	Appendix C – Replacement Pages of Updated VIA	
	5 . The applicant should compare the existing provisions (OZP Compliant Scheme) to provide a picture of how the proposed	Noted. The assessment has been revised with to compare the OZP Compliant Scheme with OZP Compliant Scheme with Indicative

development would impact the existing surrounding environment. Please critically review and revise the VIA (including photomontages and analysis, etc.) accordingly to include a proper OZP Compliant Scheme (as the Baseline Scheme) for comparison with the Proposed Scheme on the impact on the existing surrounding environment (and other planned/committed developments, if any, to be confirmed with DPO). In this connection, we could only provide general comments on the VIA at this juncture and shall provide further comments (especially to the evaluation) upon receipt of the revised VIA.	Scheme to demonstrate the visual impact of the Indicative Scheme to the existing OZP compliant condition. In order to portray a more realistic and accurate scenario in the future, the assessments have also included the evaluation with consideration of Ta Kwu Ling Potential Development Area (TKLPDA) of the NTN Development. Please refer to revised photomontages (Figures 3 – 7), Para. 1.1.4, 1.1.5, Sections 3.2, 4.2, 5 and 6 of **Annex F** – Revised Visual Impact Assessment for the revised assessment methodology and the corresponding assessment.
6 . There are observations of the photomontages:	
(a) Figure 3 (VP1) – It seems that the proposed development should be located eastward (i.e. closer to the middle of the view) and appear to be smaller in scale, in which the roof of T1, T3 and T5 would be visible from this VP.	Noted. Figure 3 (VP1) has been revised in **Annex F**.
(b) Figure 4 (VP2) – It seems that the proposed development should appear to be smaller in scale, in which the upper portion of T5/T6, T3/T4 and T2 would be visible from this VP.	Noted. Figure 4 (VP2) has been revised in **Annex F**.
(c) Figure 5 (VP3) – It seems that the proposed development should be located northeastward (in which T1 is located at the middle of the view).	Noted. Figure 5 (VP3) has been revised in **Annex F**.
(d) Figure 7 (VP5) – It seems that the proposed development should be located northwestward.	Noted. Figure 7 (VP5) has been revised in **Annex F**.
7 . The consultant is reminded to revise the relevant section(s) in the SPS accordingly.	Noted. Please refer to the revised discussion in Para. 4.4.10 and 6.8.2 of **Annex D**.
Appendix E – Replacement pages of AVA-EE	
8 . The applicant should compare the existing provisions (OZP Compliant Scheme) to provide a picture of how the proposed development would impact the existing surrounding environment. Please critically review and revise the AVA (including figures and analysis, etc.) accordingly to include a proper OZP Compliant Scheme	Noted. The assessment has been revised with to compare the OZP Compliant Scheme with OZP Compliant Scheme with Indicative Scheme to demonstrate the air ventilation impact of the Indicative Scheme to the existing OZP compliant condition. In order to portray a more realistic and accurate scenario in the future, the assessments have also included the

	(as the Baseline Scheme) for comparison with the Proposed Scheme on the impact on the existing surrounding environment (and planned/committed developments, if any, to be confirmed with DPO). In this connection, we could only provide general comments on the AVA at this juncture and shall provide further comments (especially to the evaluation) upon receipt of the revised AVA.	evaluation with consideration of TKLPDA of the NTN Development. Please refer to Sections 4.1, 4.2, 5.1, 5.2, Figures 4-5, 4-6, 5-1 and 5-2 – 5.5 of **Annex G** – Revised Air Ventilation Assessment – Expert Evaluation (AVA-EE) for the revised assessment methodology and the corresponding assessment.
9 .	Table 3-1 – According to para. 3.1.8, the wind data from the HKO Ta Kwu Ling Weather Station is also adopted in this AVA-EE. However, its annual N wind and summer SSW wind are not included in the summary of Table 3-1 nor the analysis in this AVA-EE, which instead covers the annual and summer winds of the RAMS wind data.	Noted. The dominant wind flow has been revised. The NNE, ENE, E, ESE, SE, SSE and S wind have been evaluated. Please refer to Section 3 and Tables 3-1 and 3-2 of **Annex G**. Section 4.2 of **Annex G** has also been revised accordingly with the updated wind data.
10 .	Para. 4.2.6 and Figure 4-3 – The Ping Che New Village is located to the north of the Site instead of the downwind area of ESE and SE.	Noted. Para. 4.2.7 has been revised in **Annex G**.
11 .	Para. 4.2.7 – It is anticipated that Ping Che Road would facilitate the SE/SSE winds instead of E/ESE winds.	Noted. Para. 4.2.8 has been revised in **Annex G**.
12 .	Figure 4-3 – The ENE is one of annual (i.e. not summer) prevailing winds while the SSE is one of the summer (i.e. not annual) prevailing winds.	Noted. Figure 4-4 has been revised in **Annex G.**
13 .	Para. 5.3.2 and Figure 5-5 – Please indicate the degree of change in direction of the air path.	Noted. The wind path of NNE wind will experience a change in direction when passing through the Public Transport Terminus (PTT) from NNE to N direction. The wind flow will then merge with the NNE wind again after the diversion. There will be no change in direction in other wind flow. Please refer to the updated wind path as shown in Figure 5.2b of **Annex G**.
14 .	Para 5.3.4 and Figure 5-6 – Please review and indicate the widths of the building separations (measuring from that perpendicular to the prevailing wind directions). According to the Sustainable Building Design Guidelines, the minimum width of the air corridor along its path between buildings shall not be less than 15m.	Noted. Please refer to the building separation shown in Figure 6-5 and corresponding discussion in Para. 6.1.5 and 6.1.6 of **Annex G**. The building separations ranged from 18m to 30m.

	15. Paras. 5.3.6, 5.3.7 and Figure 5-7 – The text and figure are not consistent. Besides, the consultant claims that the proposed terraced podium would facilitate the SE and ESE winds, but it seems that these winds would be blocked by Tower 2. Figure 5-7 is also misleading as the 3 steps of terrace are ascending in NNE/SSW direction and the wind from the SSW direction would be blocked by T3/T4.	Noted. The corresponding sections and figures have been removed in the revised AVA-EE. Please refer to **Annex G** for the revised assessment.
	16. Figure 5.9 – Please clarify if any of the prevailing winds could skim over the low-rise clubhouse (5m in BH) and reach the downwind area after reattachment.	Noted. The evaluations of wind flow have discussed in Sections 5.3 – 5.6 and Figures 5-3 – 5-6 of **Annex G**. The NNE, ESE, SE, SSE and S wind will skim over the clubhouse.
	17. Para. 5.3.14 and Figure 5-11 – Please indicate the widths of the setbacks measured from the site boundary to building structure. Please review if the setbacks from the southern/southeastern/southwestern and northern boundary could facilitate E, ESE, ENE, SE and SSE winds.	Noted. The building setback from northeast, northern and southern sides of the Application Site have been supplemented and evaluated in Para. 6.1.10 and 6.1.11 of **Annex G**. It could facilitate the E, ESE, ENE, SE and SSE wind.
	18. Section 6.1 and Figure 6-2 Annual Prevailing Winds – E and ESE Wind (Proposed Scheme) – The ESE wind flows in Figure 6-2 are not consistent with those in Figure 6-6. Please rectify.	Noted. Please refer to the evaluations of E wind supplemented in Section 5.4 and ESE wind supplemented in Section 5.5 of **Annex G**.
	19. Section 6.2 & Figure 6-4 Annual Prevailing Wind - ENE Wind (Proposed Scheme) – It is noted that wind flows are drawn to be passing through the buildings separations of which the widths may be less than 15m and involve change of direction. Please specify the widths of the relevant setbacks/building separation (measuring from that perpendicular to the prevailing wind directions) and indicate the degree of change in direction of the air path. According to the Sustainable Building Design Guidelines, the minimum width of the air corridor along its path between buildings shall not be less than 15m.	Noted. Evaluations of ENE wind has been supplemented in Section 5.4; the widths of the relevant building separation have been supplemented Figure 6-5 and corresponding discussion in Para. 6.1.5 and 6.1.6; and discussions on relevant building setbacks have been supplemented in Para. 6.1.10 and 6.1.11 of **Annex G**.
	20. Section 6.3 and Figure 6-6 (Summer Prevailing Wind – E, ESE, SE and SSE) – For the sake of clarity, the consultant should discuss E/ESE winds and SE/SSE winds separately. As E/ESE winds are also annual prevailing winds, the consultant may	Noted. Evaluation of E wind has been supplemented in Section 5.4; ESE/SE wind has been evaluated in Section 5.5; and SSE wind has been evaluated in Section 5.6 of **Annex G**.

	consider to refer to both annual and summer prevailing winds in Section 6.1.	
	21 . The consultant is reminded to revise the relevant section(s) in the SPS accordingly.	Noted. Please refer to the revised discussion in Para. 4.4.11 – 4.4.13 and 6.8.2 of **Annex G**.
	22 . Comments from the Landscape Unit, if any, will be provided under separate cover.	Noted.
10.	**Social Welfare Department, dated 10 January 2024**	
	According to the Further Information (FI)1 : -	
	• The proposed CCC will be privately owned and to be operated by the owner of the Proposed Development.	Noted.
	• The proposed DE will be privately owned and to be operated by the owner of the Proposed Development	Noted.
	• From licensing perspective, please take note that all child care centres, irrespective of its funding sources, must be registered in compliance with the requirements under the Child Care Services Ordinance (Chapter 243), the Child Care Services Regulations (Chapter 243A) and the latest version of the Operation Manual for Pre-primary Institutions. Moreover, the prospective operator should ensure that there is no objection from the Town Planning Board and the premises proposed for use should also be in compliance with the fire safety, structural safety, as well as all other relevant statutory requirements on a child care centre.	Noted.
	• Child care centres (including residential child care centres and special child care centres) are registered and monitored by Child Care Centres Advisory Inspectorate of the SWD. On the other hand, child care centres providing kindergarten education to children aged 3-6 in the same premises are registered and monitored by the Joint Office for Kindergartens and Child Care Centres of the Education Bureau (EDB). Regarding application procedures for registration of kindergarten-cum-child care centres,	Noted.

	detailed information can be found at EDB Website via the following hyperlink: https://www.edb.gov.hk/en/edu-system/preprimary-kindergarten/application-for-registration-of-child-care-centre-in-kindergarten/index.html	
	• Apart from above, we have no further comment from welfare point of view	Noted.
11.	**Transport Department, NT Regional Office, Traffic Engineering (NTE) Division, North Section, dated 3 January 2024**	
	• Given that the scale of this proposed development is large, the assessment area presented in the TIA is considered not sufficient. The applicant shall justify the area of influence (AOI) conducted in the study or revised AOI appropriately.	Noted. The AOI has been reviewed and updated accordingly. Please refer to Chapter 3 and Figure 3.1 of the **Annex H** – Revised Traffic Impact Assessment for details.
	• The applicant should further advise and substantiate the traffic generation from and attraction to the site and the traffic impact to the nearby road links and junctions, also the reasons on mean trip rates from TPDM were adopted;	Please note that the traffic generation from and attraction to the site and the traffic impact to the nearby road links and junctions have been reviewed and updated. In view of the remoteness of the area, upper limit trip rates from TPDM are adopted. Please refer to Chapter 4 and 6 of **Annex H** for details.
	• The applicant shall illustrate on layout plans and justify the adequacy of the parking spaces and loading/unloading spaces so provided by relating to the number of vehicles visiting the subject site;	Noted. Please note that internal transport facilities will be provided to meet the high-end requirement of HKPSG. Please refer to Appendix C of **Annex H** for the car park layout plan.
	• The applicant should advise the width of the vehicular access leading to the site;	Please be advised that the width of the vehicular accesses would be 7.5m. Please refer to Appendix C of the **Annex H** for the car park layout plan.
	• The applicant shall demonstrate the satisfactory maneuvering of the 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;	Noted. Swept path analysis is conducted to demonstrate sufficient spaces are provided for the maneuvering of vehicles entering and exiting the subject site, maneuvering within the subject site and into/out of the parking and loading/unloading spaces.

		Please refer to Section 5.3 and Appendix C of **Annex H** for the details of swept paths analysis.
	• Especially on J4, are there any traffic improvement measures proposed by the applicant?	Please note that there are improvement measures at J4 and details have been discussed in Section 4.6 of **Annex H**.
12.	**Transport Department, NT Regional Office, Transport Operations (NT) Division, Sai Kung & North Section, dated 3 January 2024**	
	The applicant needs to submit the Traffic and Transport Impact Assessment for their application for the proposed development with significant upsurge of public transport services demand, especially the over 2,200 flats residential development and the commercial tower with retail, office, hotel and G/IC facilities. They are required to take into account of the public transport service demand in the nearby developments including new Ping Che Transitional Housing with population intake of about 1000 in Q1 2024 in their transport impact assessment.	Taking into consideration the future planning at Ping Che area and the relatively large area of the Application Site, a public transport terminus (PTT) is proposed at the northern part of the Application Site along Ping Che Road. The PTT will comprise of a double width bus bay and a GMB bay. The ingress point is located at the upgraded access road and the egress point is located at Ping Che Road to provide better circulations within the PTT. Please refer to the PPT layout in **Annex H** for details. The proposed development under this planning application will be completed in 2032. Upon reaching this completion year, the operational status of the Ping Che Transitional Housing, with its estimated date of completion in Q2 2024 and an operation period of 5 years, remains a matter of uncertainty to the proposed development.
13.	**Water Supplies Department, New Works Branch, Construction Division, System Planning Section, dated 2 April 2024**	
	Comments on the revised WSIA Annex D - WSIA (a) Table 3.1 The fresh water unit demand of 0.104m3/h/d is not correct. Please refer to WSD's DI 1309 and use an appropriate fresh water unit demand. i.e. for R2 Residential development, the ceiling value of the fresh water unit demand is 0.3m3/h/d. Please also add the daily demand for service	Noted. Table 3.1 has been revised. The fresh water unit demand of domestic plus service trade has been revised to 0.34m3/h/d. The water demand calculation and hydraulic calculation in Section 4, Section 5, Section 6, Appendix B and Appendix C have also revised.

	trade of 0.04m3/h/d to your domestic type development.	Please refer to **Annex I** – Revised Water Supply Impact Assessment for details.
	(b) Table 3.1 and Appendix C For domestic type development, please use flushing water demand of 0.104m3/h/d instead of 0.07m3/h/d.	Noted. Table 3.1 has been revised. The flushing water demand of domestic has been revised to 0.104m3/h/d. The water demand calculation and hydraulic calculation in Section 4, Section 5, Section 6, Appendix B and Appendix C have also revised. Please refer to **Annex I** for details.
	(c) Figure 5.1 and Appendix C The existing DN900 at Ping Che Road is a raw water main which is not suitable of use. Please consider connecting to the existing DN300 fresh water main at Ping Che Road.	Noted, Section 2.3.2, Section 5.1.1 to 5.1.3, Figure 5.1 and Appendix C of **Annex I** have been revised. The proposed water supply are connected to DN300 fresh water main.
	(d) Figure 5.1 Only one supply main connecting to your site for both fresh water use and for flushing is not acceptable. Please provide fresh water main and flushing water main connecting to the proposed site.	Noted, Section 5.1.2, 5.1.3 and Figure 5.1 of **Annex I** have been revised. A DN200 fresh water supply and a DN100 flush water supply is proposed, branch of from the existing DN300 fresh water main.

(Last Update: 13 April 2024)

Attachment F

Further Information (5) –
Responses to Comments Tables

Your ref Y/NE-TKL/5
Our ref 295450/00/WSTY/MYNL/CYSL/CKGF/05333

By Hand

The Secretary
Town Planning Board
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14 June 2024

Dear Sir/Madam,

Application for Amendment of Plan
Under Sectio n 12A of the Town Planning Ordinance (Cap.131),
to Rezone the Application Site from "Open Storage", "Agriculture" Zones and an area shown as 'Road' to "Other Specified Uses" annotated "Mixed Use" Zone, for Proposed Mixed Use Development at Lots 796 and 1008 RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories
(Planning Application No. Y/NE-TKL/5)

Submission of Further Information

We refer to the comments received from Water Supplies Department (WSD) on 16 May 2024 on the captioned Planning Application.

We are pleased to submit herewith a Response-to-Comments Table to WSD's comments **(Attachment 1)** together with the Revised Water Supply Impact Assessment **(Annex A)** for your consideration.

The softcopy of the Further Information will be uploaded to the hyperlink provided by the Town Planning Board.

We sincerely seek favourable consideration from the Town Planning Board to approve the captioned S12A Planning Application.

Should you have any queries, please contact the undersigned or our Ms. Natalie LEUNG at 2268 3612 or our Mr. Gordon FOO at 2268 3709.

Yours faithfully,

Theresa YEUNG
Director

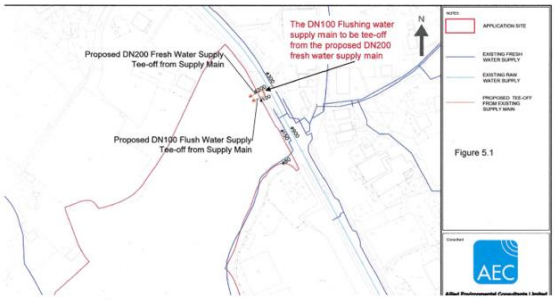
Encl.
- **Attachment 1** – Responses-to-Comments Table
- **Annex A** – Replacement Pages of Revised Water Supply Impact Assessment

c.c.
- DPO/STN, PlanD (Attn: Ms. Ivy WONG) (By email: icwwong@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Sheren LEE) (By email: sswlee@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Katie LEUNG) (By email: kyyleung@pland.gov.hk)
- Client

Comments from Related Departments — Page No.

1. Water Supplies Department, dated 16 May 2024 2

1.	**Water Supplies Department, dated 16 May 2024**	
	Major comments Annex I- revised WSIA	
	1. Para. 2.3.2, line 4- Please replace 300mm pump main" by "300mm distribution main".	Noted and revised accordingly. Please refer to Section 2.3.2 of **Annex A –** Revised Water Supply Impact Assessment.
	2. Figure 5.1 - Please find our comments as attached. The DN100 flushing water supply 2. main to be tee-off from the proposed DN200 fresh water main instead of the DN300 existing fresh water main.	Noted and revised accordingly. Please refer to Section 5.1.3 and Figure 5.1 of **Annex A**. The original proposed DN200 fresh water main has been revised to proposed DN300 fresh water main, which the DN100 flushing water main is proposed to be tee-off from the proposed DN300 fresh water main.
	Other Detailed Comments (if applicable) Existing water mains inside the proposed site as shown in the MRP may be affected. The applicant is required to either divert or protect the water mains found on site.	Noted. The option of diversion of existing water main inside the Application Site is proposed. The existing water mains will be diverted and running along the southern site boundary outside the within Application Site to lie in Government land. The diverted water main will fulfill the requirement by Water Supplies Department. Please refer to Sections 5.1.6 and 5.1.7 and Figure 5.2 of **Annex A**.
	lf diversion is required, existing water mains inside the proposed site areas are needed to be diverted outside the site boundary of the proposed site to lie in Government land. 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. If diversion is not required, the following conditions shall apply:	
	(a) Existing water mains are affected as indicated on the site plan and no development which requires resiting of water mains will be allowed	Noted.

	(b) Details of site formation works shall be submitted to the Director of Water Supplies for approval prior to commencement of works.	Noted.
	(c) No structures shall be built or materials stored within 1.5 metres from the centre line(s) of water main(s) shown on the plan. Free access shall be made available at all times for staff of the Director of Water Supplies or their contractor to carry out construction, inspection, operation, maintenance and repair works	Noted.
	(d) No trees or shrubs with penetrating roots may be planted within the Water Works Reserve or in the vicinity of the water main(s) shown on the plan. No change of existing site condition may be undertaken within the aforesaid area without the prior agreement of the Director of Water Supplies. 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.	Noted.
	(e) No planting or obstruction of any kind except turfing shall be permitted within the space of 1.5 metres around the cover of any valve or within a distance of 1 metre from any hydrant outlet.	Noted.
	(f) Tree planting may be prohibited in the event that the Director of Water Supplies considers that there is any likelihood of damage being caused to water mains.	Noted.
		

(Last Updated: 13 June 2024)

Attachment G

Further Information (6) –
Responses to Comments Tables

Your ref Y/NE-TKL/5
Our ref 295450/00/WSTY/MYNL/CYSL/CKGF/05340

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By Hand

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

8 July 2024

Dear Sir/Madam,

Application for Amendment of Plan
Under Section 12A of the Town Planning Ordinance (Cap.131),
to Rezone the Application Site from "Open Storage", "Agriculture" Zones and an area shown as 'Road' to "Other Specified Uses" annotated "Mixed Use" Zone,
for Proposed Mixed Use Development at Lots 796 and 1008 RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories
(Planning Application No. Y/NE-TKL/5)

Submission of Further Information

We refer to the comments received from Environmental Protection Department and Drainage Services Department on 20 May 2024 and 22 May 2024 respectively on the captioned Planning Application.

We are pleased to submit herewith a Response-to-Comments Table **(Attachment 1)** together with the relevant supporting documents **(Annexes A – C)** for your consideration.

The softcopy of the Further Information will be uploaded to the hyperlink provided by the Town Planning Board.

We sincerely seek favourable consideration from the Town Planning Board to approve the captioned S12A Planning Application.

Should you have any queries, please contact the undersigned or our Ms. Natalie LEUNG at 2268 3612 or our Mr. Gordon FOO at 2268 3709.

Yours faithfully,

Theresa YEUNG
Director

Encl.
- **Attachment 1** – Responses-to-Comments Table
- **Annex A** – Revised Drainage Impact Assessment
- **Annex B** – Replacement Pages of Revised Environmental Assessment
- **Annex C** – Revised Sewerage Impact Assessment

c.c.
- DPO/STN, PlanD (Attn: Ms. Ivy WONG) (By email: icwwong@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Sheren LEE) (By email: sswlee@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Katie LEUNG) (By email: kyyleung@pland.gov.hk)
- Client

Comments from Related Departments — Page No.

1. Drainage Services Department, dated 22 May 2024 2
2. Environmental Protection Department, dated 20 May 2024 2

1.	**Drainage Services Department, dated 22 May 2024**	
	<u>Revised SIA</u> 1. Please note that we have no further comment on the revised SIA <u>Revised DIA</u> 1. Please adopt the design allowance as per Stormwater Drainage Manual Corrigendum No. 1/2022 for climate change adjustment. 2. Para 4.4.1 refers. Please advise if the further drainage downstream of SMH1003252 needs to be upgraded to cater for the development. Please review and elaborate. 3. Noting that some pending upgrading in the public drains were considered, the relevant development may only be proceeded when the downstream drainage system is upgraded to no worse than the assumed drainage network adopted in the assessment.	Noted. Noted. Please be clarified that the stormwater Drainage Manual Corrigendum No. 1/2022, where 16% rainfall increase due to climate change has been adopted previously. Please refer to remark no. 7 in Appendix B of **Annex A** – Revised Drainage Impact Assessment. Noted. Please be advised that the further drainage downstream of SMH1003252 to SMH1003255 are needed to be upgraded to cater the discharge. The calculation has been revised. Please refer to Sections 4.3.5, 4.3.7, 4.3.10, 4.3.13, 5.1.3, Tables 4-2 to 4-4, Appendix C and Appendix D of **Annex A**. Noted. The feasible upgrading option of the downstream drainage system has been shown in the calculation. Please refer to Sections 4.3.5, 4.3.7, 4.3.10, 4.3.13, 5.1.3, Tables 4-2 to 4-4, Appendix C and Appendix D of **Annex A**.
2.	**Environmental Protection Department, dated 20 May 2024**	
	Environmental Assessment Report <u>Air Quality Perspective</u> 1 . Section 5.2.5 "Air Pollution Control (Fuel Restriction) Regulation" should read "Air Pollution Control (Fuel Restriction) Regulations". Please amend.	Noted. Section 5.2.5 of **Annex B** – Replacement Pages of the Revised Environment Assessment has been revised.

	2 . Table 5-3 Please show 36th highest daily FSP instead of 19th highest for this non-government project.	Noted. Table 5-3 of **Annex B** has been revised accordingly.
	3 . Section 5.3.4 Please refer to PATHv3.0 instead of PATHv2.1.	Noted. Section 5.3.4 and Table 5-4 of **Annex B** has been revised.
	4 . Section 5.3.5 If the operation year is 2032, please quote the data for year 2030.	Noted. Section 5.3.5 and Table 5-4 of **Annex B** has been revised.
	5 . Section 5.4.2 Please check if there are any ASRs on the south side of the proposed development.	Noted. ASR09 – Ha Shan Kai Wat Village House has been added in Table 5-5 and Figure 5.1 of **Annex B**.
	6 . Section 5.4.5 Please check whether the S12A rezoning application no. Y/NE-TKL/4 would be the concurrent project to this application and whether it should be identified as ASR.	Noted. Please refer to Section 5.4.4, Table 5-5 and Figure 5.1 of **Annex B** for the revised information. ASR08 – S12A rezoning application no. Y/NE-TKL/4 for the proposed residential development phase 1 has been added which will be completed tentatively by 2028. According to the latest information from the application, there is no confirmed development plan and implementation programme.
	7 . Section 5.5.9 Please consider to delete this paragraph which is duplicating with Section 5.5.7.	Noted. Section 5.5.9 of **Annex B** has been deleted.

	8 . Section 5.7 We note there is a pigsty on the south west side of the proposed development. Please check whether the proposed development could meet the buffer distance requirements for odour sources. A quantitative odour impact assessment may be required if the HKPSG requirements could not be fulfilled. Please check with the regional office of EPD for any odour complaint records.	Noted. Enquiries has been made on the pigsty. As confirmed by Environment Protection Department (EPD) dated 27 May 2024, the concerned pig farm has ceased business for many years. Section 5.7.1 of **Annex B** has been revised. For odour emissions, the results of environmental survey and site visits show that the Subject Site falls within 200m buffer of a pigsty located toward the southwest. As referred to the reply from EPD regarding the compliant record of the pigsty showed in Figure 3.1 of **Annex B**, the pigsty has ceased business. No odour impact concerning the pigsty is expected. For the reply from EPD, please also refer to Appendix 5.1 of **Annex B** for information.
	9 . Section 5.7.2 No sewage treatment plant could be found in Appendix 3.1. Please check.	Noted. Please refer to the indication of Sewage Treatment Plant as shown in Drawing Basement Level 1 Plan SK-10 of Appendix 3.1 in **Annex B**.
	<u>Noise Perspective</u> 10 . To ensure the noise mitigation measures proposed by the Applicant will be incorporated into the future development, and considering there is no mechanism to impose approval condition for S.12A rezoning applications, control should be in place under land mechanism by special conditions under the lease modification to require the developer to submit a Noise Impact Assessment and implement the design and mitigation measures recommended therein.	Noted.
	11 . Section 6.3.18 It shall read "...the provision of acoustic window/acoustic door (Baffle type) to let them be well aware of the intended purpose, appropriate use and correct setting."	Noted. Section 6.3.18 of **Annex B** has been revised.

	12. It is noted that the distance correction adopted in the Fixed Plant Noise Impact Assessment Calculation in Appendix 6.7 is incorrect. Please critically review and revise.	Noted. Appendix 6.7 in **Annex B** has been updated.
	<u>Water Quality Perspective</u>	
	13. Figure 7.1 is missing. Please supplement.	
	(a) <u>Water Management and Land Contamination Perspective</u>	Noted. Figure 7.1 has been supplemented in **Annex B**.
	14. Response-to-Comment (9) – Section 8.4.5 to Section 8.4.7	
	It is understood that a site walkover was conducted at the off-site properties immediately adjacent to the Project Site, and site interviews were carried out to better understand their business and operation nature. The Consultant is advised to supplement the relevant site walkover checklist and associated photographic records for further vetting.	Noted. Please be clarified that site walkover was conducted. However, no access to the offsite properties was granted by the operators, where no site interview with the operators could be conducted on-site. Photolog for offsite properties has been supplemented in Sections 8.4.5 to 8.4.7 and Appendices 8.1 and 8.5 have been supplemented with photographic record in **Annex B**.
	15. Response-to-Comment (11) – Section 8.6.4	
	According to Appendix 8.5, a stained surface was also identified in Photo 44 and Photo 45; please review and update the extent of stains along the vehicle access between the construction material and machinery storage areas.	Noted. Section 8.6.4 of **Annex B** has been revised.
	16. Response-to-Comment (11) – Appendix 8.5	
	(a) According to Section 8.6.4, a stained surface was also identified in Photo 43; please incorporate indicative markup on the figure for clarity.	Noted. Sections 8.6.4, 8.6.9 and 8.7.4 of **Annex B** has been revised.
	(b) In addition to the first page of Appendix 8.5, please update the header from "Appendix 8.4" to "Appendix 8.5" to avoid confusion.	Noted. Heading of Appendix 8.5 of **Annex B** has been updated.
	17. Section 8.6.5	
	Please revise "Figure 8" to "Figure 8.1a and Figure 8.1b" for clarity.	Noted. Section 8.6.5 of **Annex B** has been updated.

	18 . Response-to-Comment (13) – Section 8.7.2 The term "illegal land contamination" is confusing, the Consultant is advised to provide clarification or update the wording as appropriate.	Noted. Section 8.7.2 of **Annex B** has been updated.
	19 . Response-to-Comment (13) – Section 8.7.8 Considering the elaboration on the site walkover, the site was divided into four distinctive parts. In addition to the entrance, temporary office, and village house area, please consider incorporating the vegetated area discussed in Section 8.6.8 as an area with no land contamination potential.	Noted. Section 8.7.8 of **Annex B** has been updated. There is no potential source of contamination listed below identified in the Application Site, including Entrance, Temporary Office, Vegetated Area and Village House Area.
	20 . Response-to-Comment (15) – Section 8.7 The Consultant is advised to graphically indicate the potential contamination areas and hotspots that require detailed site investigation in the subsequent stage.	Noted. Sections 8.7.7, 8.7.10, Appendix 8.5 and Figure 8.2 of **Annex B** have been updated.
	21 . Response-to-Comment (22) – Table 9-1 (a) Please append the relevant extract of the reference material for the waste index for further vetting.	Noted. Please refer to Appendix 9.1 supplemented in **Annex B**.
	(b) Please revise "m3" and "m2" to "m^3" and "m^2" for clarity.	Noted. Table 9-1 of **Annex B** has been revised.
	22 . Response-to-Comment (23) – Section 9.5.1 In case the generation of chemical waste is anticipated during the operation phase, please specify that the property management will register with EPD as a chemical waste producer and handle and dispose of chemical waste in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Noted. Section 9.5.2 of **Annex B** has been revised.
	Sewerage Impact Assessment Report 23 . Table 4-2 The peak flow of the generated sewage should be 72.1 L/s, not 0.072 L/s. Please verify and revise.	Noted. Table 4-2 of **Annex C** – Revised Sewerage Impact Assessment has been updated.

	24 . Section 4.3.1 The Average Dry Weather Flow (ADWF) is inconsistent with the ADWF in Table 4-2. Please verify and revise.	Noted. Given the sewage generated from residents and services is 2077.0 m^3/day + addition of 6 m^3/day sewage generation from swimming pool, the total ADWF is 2083 m^3/day. ADWF has been updated in Sections 4.3.1, 5.1.1, Table 4-2 and Appendix B of **Annex C**.
	25 . Table 4-6 and Appendix C Please check the pollutant loadings of the staff and update the calculation accordingly.	Noted. The pollutant loadings made reference to the Appendix 2 of Guidelines for the Design of Small Sewage Treatment Plants by EPD (please refer to the image below for information). LOAD Type of development | Recommended BOD load (g/head/day) | Recommended SS load(g/head/day) Residential, all types | 55 | 55 School (not including canteen) | 23 | 23 Office (not including canteen) | 23 | 23 Factories (not including industrial and canteen wastes) | 23 | 23 Services | to be pro-rata to equivalent residential population Restaurants/Canteens | 300 g/m^2 kitchen area/d | 300 g/m^2 kitchen area/d The use of garbage grinders may increase the per capita contribution of BOD by about 30% and of SS by 60%, and such increases should be taken into account in the design of the STP. The BOD and SS loads of STP has been revised to 0.023 kg/head/day (office) and 0.004 kg/head/day (services staff). Please refer to Tables 4-5, 4-6, 4-7 and Appendix C of **Annex C**. Please also refer to Table 4-1 of **Annex A** for the updated calculation.
	26 . Section 5.1.1 The average sewage discharge is inconsistent with the ADWF in Table 4-2, please verify and revise.	Noted. Given the sewage generated from residents and services is 2077.0 m^3/day + addition of 6 m^3/day sewage generation from swimming pool, the total ADWF is 2083 m^3/day. ADWF has been updated in Sections 4.3.1, 5.1.1, Table 4-2 and Appendix B of **Annex C**.
	27 . Appendix B Please check the Maximum backwash volume of the Swimming Pool and update the table accordingly.	Noted. Table 4-4 and Appendix B of **Annex C** have been updated accordingly.

	28. Please contact the team of CE21/2021 Remaining phase development of NTN and check whether the public sewers are available for collecting the sewage for this development.	Noted. Please be advised that after contacting the CEDD officer of the project team of CE21/2021, no information of remaining phase development of NTN is available at the current stage. Please refer to the revised Section 2.3 of **Annex C** for details.
	29. Response-to-Comment Item 30(a) & Section 4.2 Table 4-2 Please clarify whether the "Total ADWF of the proposed development" should be 2083 m3/day or 2077 m3/day.	Noted. Given the sewage generated from residents and services is 2077.0 m^3/day + addition of 6 m^3/day sewage generation from swimming pool, the total ADWF is 2083 m^3/day. ADWF has been updated in Sections 4.3.1, 5.1.1, Table 4-2 and Appendix B of **Annex C**.
	30. Response-to-Comment Item 33 Contributing population at Table 4-2 (7693) does not align with Table 4-6 (6334+839=7173) and Appendix B (7173), please review and amend as appropriate.	Noted. Please refer to the revised population in Appendix B of **Annex C**.
	31. Response-to-Comment Item 34 Please clarify whether the sewage flow rate should be 2083 m3/day or 2077 m3/day, e.g. Section 4.3.1 (2083 m3/day), Table 4-2 (2077 m3/day), Appendix B (2077 m3/day) and Appendix C (2077 m3/day). Please amend as appropriate.	Noted. Given the sewage generated from residents and services is 2077.0 m^3/day + addition of 6 m^3/day sewage generation from swimming pool, the total ADWF is 2083 m^3/day. ADWF has been updated in Sections 4.3.1, 5.1.1, Table 4-2 and Appendix B of **Annex C**.
	32. Please critically review whole report and appendices to ensure consistency.	Noted. Please refer to **Annex C** for the revised report and appendices.

(Last Updated: 4 July 2024)

Attachment H

Further Information (7) –
Responses to Comments Tables

Your ref Y/NE-TKL/5
Our ref 295450/00/WSTY/MYNL/CYSL/CKGF/05385

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By Email and By Hand

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

30 July 2024

Dear Sir/Madam,

Application for Amendment of Plan
Under Section 12A of the Town Planning Ordinance (Cap.131),
to Rezone the Application Site from "Open Storage", "Agriculture" Zones and an area shown as 'Road' to "Other Specified Uses" annotated "Mixed Use" Zone, for Proposed Mixed Use Development at Lots 796 and 1008 RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories (Planning Application No. Y/NE-TKL/5)
Submission of Further Information

We refer to the comments received from Planning Department and Water Supplies Department on 16 May 2024 and 4 July 2024 respectively on the captioned Planning Application.

We are pleased to submit herewith a Response-to-Comments Table **(Attachment 1)** together with the relevant supporting documents **(Annexes A – E)** for your consideration.

The softcopy of the Further Information will be uploaded to the hyperlink provided by the Town Planning Board.

We sincerely seek favourable consideration from the Town Planning Board to approve the captioned S12A Planning Application.

Should you have any queries, please contact the undersigned or our Ms. Natalie LEUNG at 2268 3612 or our Ms. Sabrina LAW at 2268 3425.

Yours faithfully,

Theresa YEUNG
Director

Encl.
- **Attachment 1** – Responses-to-Comments Table
- **Annex A** – Replacement Pages of Revised Supporting Planning Statement
- **Annex B** – Revised Supplementary Drawing for Visual and Air Ventilation Mitigation Measures
- **Annex C** – Revised Visual Impact Assessment
- **Annex D** – Revised Air Ventilation Assessment – Expert Evaluation
- **Annex E** – Replacement Pages of Revised Water Supply Impact Assessment

c.c.
- DPO/STN, PlanD (Attn: Ms. Ivy WONG) (By email: icwwong@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Sheren LEE) (By email: sswlee@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Katie LEUNG) (By email: kyyleung@pland.gov.hk)
- Client

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Comments from Related Departments — Page No.

1. Planning Department, Urban Design and Landscape, dated 16 May 2024 2
2. Water Supplies Department, dated 4 July 2024 8

1.	**Planning Department, Urban Design and Landscape, dated 16 May 2024**	
	<u>Landscape Perspective</u> Having reviewed the submitted RtC, there is no change in the proposed landscape layout, number of new trees planting and compensatory ratio (i.e. 1:1 in terms of number). Please be advised that we have no further comment and we maintain our view of "the proposed rezoning for high density mixed use development will bring significant change to the existing rural landscape character of "AGR" zone" from the landscape planning perspective.	Noted.
	<u>Urban Design Perspective</u> 1. I refer to your email dated 22.4.2024 enclosing the Further Information 4 (FI4) providing a R-to-C Table, supplementary drawing for visual and air ventilation mitigation measures, replacement pages of updated Supporting Planning Statement (SPS), revised Visual Impact Assessment (VIA) and revised Air Ventilation Assessment – Expert Evaluation (AVA-EE) etc. for the captioned application. Our comments/observations from the urban design, visual impact and air ventilation perspectives are set below for your consideration and coordination please.	Noted. Please refer to the following responses and corresponding updates of reports for your consideration.
	2. Having reviewed the FI5, please note that our previous comments in paras. 2 to 7 via email dated 5.12.2023 are still valid (with para. 5 reiterated below in that the consultant may consider to substantiate the application), while paras. 37 to 38 are for your office's consideration. Some of our previous specific comments dated 8.1.2024 are not fully addressed (which are recapped below) and there are some further comments/observations on the replacement pages of updated SPS, revised VIA and AVA-EE.	Noted. Please refer to the following responses and corresponding updates of reports for your consideration.

	3. Para. 5 of our comments via email dated 5.12.2023: To substantiate the application, the consultant may consider providing further information/justifications for the proposed BHs and exploring further design measures with respect to the low-rise and rural setting (e.g. by lowering the BHs, allowing greater variation in BHs, optimizing the proposed domestic site coverages and BHs etc.).	Noted. With reference to various Government's initiatives, including the NTN Study published in 2017 and Northern Metropolis Action Agenda published in 2023, Ping Che where the Application Site situates falls within the NTN New Town, with the planning intention for a high-dense neighbourhood complementary to boundary economic activities supported by new railway connection, in order to phase out existing brownfield operations. In particular, in the final report of the NTN Study, the proposed building height (BH) of the Application Site and its immediate surrounding were planned with 195mPD, 200mPD, 210mPD and 235mPD under Development Scenario II. According to the Northern Metropolis Action Agenda, the NTN New Town and other New Development Areas such as Kwu Tung North/Fanling North and Lo Wu/Man Kam To and existing new towns in Fanling/Sheung Shui were identified to form the "Boundary Commerce and Industry Zone". In particular, the NTN New Town and Lo Wu/Man Kam To are recognised with potential to develop various border crossing points (BCPs) related economic uses and uses requiring larger land area for operation, thus develop into a BCP business districts and a base for emerging industries complement to San Tin Technopole and Luohu District, Shenzhen. In addition, the planned Northern Link Eastern Extension and Northeastern New Territories Line with a newly proposed Ping Che Station is expected to enhance accessibility and bring development opportunities around it. Therefore, the Indicative Scheme, positioned as a high-dense Transit Oriented Development with a mix of residential and commercial uses would be compatible with the planning intention of Ping Che. It is noteworthy that the Applicant has exhausted opportunities to minimize overall BH of the Indicative Scheme by maximizing site coverage up to B(P)R level, maintaining a modest floor-to-floor heights for liveability and locating all carparks at basement level. Further effort has been put in the design of the Indicative Scheme to enhance its compatibility with the context. The proposed BH of the Indicative Scheme (i.e. 169.7-175mPD) complements with the BH proposed under the 2017 NTN Study. A rhythmic

		BH profile has been put forward to create an interesting skyline and centrality as a welcoming entrance from the future Ping Che Station. For instance, the proposed commercial tower 1 will feature a lower BH of +169.7mPD as an "gateway" building facing Ping Che Road with potential connection to the future railway station. The residential tower 2 will go up to a maximum BH of +175mPD and while the BH of residential tower 3 to 6 will be slightly reduced to +171.85mPD and +171.83mPD as it approaches closer to Ha Shan Kai Wat and Sheung Shan Kai Wat. The BH variation is recommended to enhance visual interest at the Application Site with its unique context of sitting in between a major access road with potential connection to future railway station and existing mountains. Moreover, building gaps are reserved between towers and building setback from the periphery of the Application Site as visual and ventilation enhancement measures for visual quality and ventilation enhancement. Other visual measures, such as articulated facades and landscaping features are also proposed for enhancing visual interest, reducing collective visual mass and harmonizing with the surroundings, subject to detailed design. In addition, wind enhancement features, including permeable design on ground floor, chamfered design at building corners, building orientation aligning with wind direction, permeable sky garden, are also proposed to enhance the ventilation environment. In summary, the development scale and urban design of the Indicative Scheme is considered desirable and compatible with the planned context of Ping Che. Please refer to Sections 3.4 and 3.5 of **Annex A** – Replacement Pages of Revised Supporting Planning Statement for the latest information on the planning circumstances in Ping Che.
	Annex D – Replacement Pages of Updated SPS	

	4. Para. 9.8.8 in Figure 5.3c of the SPS (Proposed Explanatory Statement (ES) of the "OU(MU)" Zone) – As per our previous comments dated 8.1.2024, according to paras. 4.4.10 to 4.4.12, building separation is a design measure to mitigate both visual and air ventilation impacts. While this is confirmed by the consultant in the response under Item 4 of the R-to-C Table, there is no revised proposed ES in the current FI submission. ***Annex E - Supplementary Drawing for Visual and Air Ventilation Mitigation Measures*** 5. The widths of the proposed setbacks (No. 1 and 2) should be measured from the Site boundary.	Noted. Please refer to Para. 9.8.8 in Figure 5.3c of **Annex A** for the revised proposed Explanatory Statement. Please refer to **Annex B** – Revised Supplementary Drawing for Visual and Air Ventilation Mitigation Measures

	Annex F – Revised VIA	
	6. Figure 3 (VP1) – It seems that the proposed development should be located slightly to the right while Tower 2 and Tower 3 should appear to be located to the right of Tower 1.	Noted. Please refer to the revised Figure 3 of **Annex C** – Revised Visual Impact Assessment.
	7. The proposed high-rise development would become a notable visual element in the surrounding neighbourhood which is rural and low-rise in character. With reference to the submitted photomontages (to which our comments are made in para. 8 above), the height and mass of the proposed development would reduce the visual openness and cause obstruction to the open sky view/mountain backdrop. While all VPs have a sensitivity of "Medium", the analysis and conclusion that the visual impact of the proposed development on all VPs are "negligible" or "slightly adverse" can hardly be justified. -	Noted. Please refer to Sections 5 and 6 of **Annex C** for the revised assessments of viewpoints reflecting the visual impacts from the Indicative Scheme.
	8. In view of the comments above, please critically review the relevant figures/photomontages and analysis in Sections 5 and 6 of the VIA (including the appraisal of visual changes on the aspects of 'visual composition', 'visual obstruction', 'effect on public viewers', 'effect on visual resources' and evaluation of overall visual impact) and the relevant section(s) in the SPS accordingly.	Noted. Please refer to Sections 5 and 6 of **Annex C** for the revised assessments of viewpoints reflecting the visual impacts from the Indicative Scheme.
	Annex G – Revised AVA-EE	
	9. Para. 3.1.2 and Figure 3-2 – According to the wind availability data from Ta Kwu Ling Weather Station (1986-2023) from the Hong Kong Observatory, the most 3 prevailing annual winds are N, E and ESE, while the most 3 prevailing summer winds are E, ESE and SSW (as correctly indicated in the AVA-EE of the FI1, but not correctly indicated in the current FI4). -	Noted. Section 3.1.2 of **Annex D** – Revised Air Ventilation Assessment – Expert Evaluation has been updated.
	10. Table 3-1 – With reference to the RAMS Data, the most 3 prevailing annual winds are ENE, E and ESE wind, while the most 3 prevailing summer winds are E, SE, SSE.	Noted. Section 3.1.4 and Table 3-1 of **Annex D** have been updated.

	11. Table 3-2 – In view of the comments in paras. 11 to 12 above, the prevailing annual winds at the Site should be N, ENE, E and ESE, while the prevailing summer winds at the Site should be E, ESE, SE, SSE and SSW.	Noted. Table 3-2 and Figure 4-4 of **Annex D** have been updated.
	12. Section 5 –	
	(a) Para. 5.2.1 – Please review the annual and summer prevailing wind directions.	Noted. Sections 5.2.1 and 5.2.2 of **Annex D** have been revised.
	(b) As per our comments in para. 13 above, the consultant should provide evaluation on N and SSW winds, and omit NNE and S winds.	Noted. Sections 5 and 6 of **Annex D** have been updated.
	(c) Sections 5.4 to 5.6 - For clarity, the consultant should provide a zoom-in plan to illustrate how the prevailing wind could penetrate the Site with the proposed development, and specify the location and width of the proposed building separation/setback under each wind flow direction. As per Figure 6-5, it seems that all building separations as illustrated are aligned in ESE direction only. As commented previously, the widths of the building separations should be measured from that perpendicular to the prevailing wind directions.	Noted. Zoom in plans with specification of the width of building separation and building setback have been supplemented in Section 5. Please refer to Figures 5-1 to 5-7 of **Annex D** for information.
	(d) As per Figures 5.3A to 5.5A, it is noted that some wind flows are overlapped with the proposed building, along narrow building gaps and/or involve change in direction. According to the Sustainable Building Design Guidelines, the minimum width of the air corridor along its path between buildings shall not be less than 15m. Pleaser review and rectify.	Noted. Sections 5.3 to 5.7 of **Annex D** have been updated accordingly for the review of wind flows. Please also refer to the zoom in plans supplemented (i.e. Figures 5-1 to 5-7) of **Annex D** for information.
	13. Para. 6.1.10 and Figure 6-8 – Please indicate the widths of the setbacks (which should be measured from the Site boundary) in respective to the prevailing wind directions.	Noted. Sections 6.1.10, 6.1.11 and Figure 6-8 of **Annex D** have been updated.

	14. In view of the comments above, please critically review the relevant figures and analysis in Sections 5, 6 and 7 of the AVA-EE, Annex E (Supplementary Drawing for Visual and Air Ventilation Mitigation Measures) and the relevant section(s) in the SPS accordingly.	Noted. Please refer to Sections 4.4.11 to 4.4.13 of **Annex A** for the corresponding updates of the Supporting Planning Statement. Please also refer to Sections 5.2.1, 5.2.2, 5.3, 5.4, 5.5, 5.6, 5.7, 6.1.6, 6.1.10 of **Annex D** for the corresponding updates of the AVA-EE.
2.	**Water Supplies Department, dated 4 July 2024**	
	<u>WSIA</u> 1. Figure 5.1 – the proposed DN300 FW main is oversized. Please review 2. Please provide the hydraulic calculation	 Noted. The proposed fresh water main is revised to DN250. Please refer to Section 5.1.3, Figure 5.1 and Appendix C of **Annex E** – Replacement Pages of Revised Water Supply Impact Assessment. The hydraulic calculation is provided in Appendix C of **Annex E**.

(Last Updated: 29 July 2024)

Attachment I

Further Information (8) –
Responses to Comments Tables

Your ref Y/NE-TKL/5
Our ref 295450/00/WSTY/MYNL/CYSL/CKGF/05387

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By Email (tpbpd@pland.gov.hk) and By Hand

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

7 August 2024

Dear Sir/Madam,

Application for Amendment of Plan
Under Section 12A of the Town Planning Ordinance (Cap.131),
to Rezone the Application Site from "Open Storage", "Agriculture" Zones and an area shown as 'Road' to "Other Specified Uses" annotated "Mixed Use" Zone, for Proposed Mixed Use Development at Lots 796 and 1008 RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories
(Planning Application No. Y/NE-TKL/5)
Submission of Further Information

We refer to the comments received from various Government departments from 22 June 2024 to 16 July 2024 respectively on the captioned Planning Application.

We are pleased to submit herewith a Response-to-Comments Table **(Attachment A)** together with the relevant supporting documents **(Annexes A and B)** for your consideration.

The softcopy of the Further Information will be uploaded to the hyperlink provided by the Town Planning Board.

We sincerely seek favourable consideration from the Town Planning Board to approve the captioned S12A Planning Application.

Should you have any queries, please contact the undersigned or our Ms. Natalie LEUNG at 2268 3612 or our Ms. Sabrina LAW at 2268 3425.

Yours faithfully,

Theresa YEUNG
Director

Encl.
- **Attachment A** – Responses-to-Comments Table
- **Annex A** – Replacement Pages of Supporting Planning Statement
- **Annex B** – Revised Traffic Impact Assessment

c.c.
- DPO/STN, PlanD (Attn: Ms. Ivy WONG) (By email: icwwong@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Sheren LEE) (By email: sswlee@pland.gov.hk)
- DPO/STN, PlanD (Attn: Ms. Katie LEUNG) (By email: kyyleung@pland.gov.hk)
- Client

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131), to Rezone the Application Site from "Open Storage", "Agriculture" Zones and an area shown as 'Road' to "Other Specified Uses" annotated "Mixed Use" Zone, for Proposed Mixed Use Development at Lots 796 and 1008 RP in D.D. 77 and Adjoining Government Land in Ping Che, Ta Kwu Ling, New Territories
Response to Departmental Comment

Comments from Related Departments — Page No.

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2. Planning Department, Studies and Research Section, dated 10 July 2024 3
3. Highways Department, Railway Development Office, dated 16 July 2024 4
4. Transport Department, dated 22 June 2024 4
5. Transport Department, dated 8 July 2024 7

1.	**Development Bureau, dated 10 July 2024**	
	The application site lies within the boundary of the on-going New Territories North (NTN) New Town study. The on-going study carries out a holistic planning of the land use in the NTN New Town to create synergy and enhance development potential with the various land parcels. The irregular shape of the planning application would reduce the development potential of the adjacent sites and this piecemeal rezoning would pre-empt the on-going study, and thus the final land use recommendations. Furthermore, it is noted that the application site may affect the planning and design of the proposed Northern Link Eastern Extension and the Northeastern New Territories Line mentioned in the "Hong Kong Major Infrastructure Development Blueprint" issued in December 2023 with the possible railway alignments / stations passing through Ping Che and Ta Kwu Ling areas. Approving the current application would unduly compromise the comprehensive planning for the area. Therefore, we do not support the application.	Noted. With a consolidated ownership of private lots in the Application Site, it's the genuine intention of the Applicant to facilitate early implementation of a sizeable site of about 17,821.2m^2 located along Ping Che Road by private initiatives. The Amendment Proposal is for a comprehensive mixed-use development including residential, retail office, hotel uses with Child Care Centre, Day Care Centre for the Elderly and a Public Transport Terminus (PTT), with a development scale fully compatible with the planning intention the NTN New Town as evident in various policy papers published by the Government. Technical assessments submitted with this planning application also confirmed that the Indicative Scheme at the Application Site is feasible and will not be generating adverse impact to the surrounding in both existing and future scenario. For instance, flexibility has also been reserved for the connection to the future Ping Che Station of planned Northern Link Eastern Extension (NOLE) and the Northeastern New Territories Line (NENTL). Therefore, agreement of the Amendment Proposal, which has paid full respect to the planning intention of the NTN New Town, will not compromise the future planning of the area, but rather provide certainty for early implementation of a comprehensive and desirable scheme by mobilizing private sector resources, to offer immediate planning gains and local improvement for the Ping Che area by year 2032.

		We therefore seeks support on our Amendment Proposal which is a win-win example of partnership between public and private sector to deliver the vision of Ping Che area and to upgrade local amenities.
2.	**Planning Department, Studies and Research Section, dated 10 July 2024**	
	The application site falls 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 commenced on 29 Oct 2021. The P&E Study will guide the detailed planning and implementation of the future developments of the proposed NTN New Town. The public will be consulted on the proposals under the P&E Study in due course. Based on the Northern Metropolis (NM) Action Agenda 2023, the Northern Link Eastern Extension (NOLE) and the Northeastern New Territories Line (NENTL) would be proposed to promote the development of the eastern part of the NM with the possible railway alignments / stations passing through Ping Che and Ta Kwu Ling areas. The proposed NOLE and NENTL connecting to NTN New Town (including Lo Wu and Man Kam To) have also been announced in TLB's "Hong Kong Major Transport Infrastructure – Development Blueprint" released in Dec 2023. From the studies and research perspective, the development potential of Ping Che and Ta Kwu Ling areas including the subject site, supporting transport and other infrastructures and community facilities should be holistically reviewed under the P&E Study given Ping Che and Ta Kwu Ling areas would be the key development nodes within the proposed NTN New Town and their strategic location along possible railway corridors. Approval of the rezoning application would pose major constraints in formulating land use proposals under the P&E Study and undermine the development potential for the area. Moreover, RDO should be consulted on any possible interfacing issues of the rezoning proposal with the possible railway alignments / stations.	Noted. With a consolidated ownership of private lots on the Application Site, it's the genuine intention of the Applicant to facilitate early implementation of a sizeable site of about 17,821.2m^2 located along Ping Che Road by private initiatives. The Amendment Proposal is for a comprehensive mixed-use development including residential, retail office, hotel uses with Child Care Centre, Day Care Centre for the Elderly and a Public Transport Terminus (PTT), with a development scale fully compatible with the planning intention the NTN New Town as evident in various policy papers published by the Government. Technical assessments submitted with this planning application also confirmed that the Indicative Scheme at the Application Site is feasible and will not be generating adverse impact to the surrounding in both existing and future scenario. For instance, flexibility has also been reserved for the connection to the future Ping Che Station of the planned NOLE and the NENTL. Therefore, agreement of the Amendment Proposal, which has paid full respect to the planning intention of the NTN New Town, will not compromise the future planning of the area, but rather provide certainty for early implementation of a comprehensive and desirable scheme by mobilizing private sector resources, to offer immediate planning gains and local improvement for the Ping Che area by year 2032. We therefore seek support on our Amendment Proposal which is a win-win example of

		partnership between public and private sector to deliver the vision of Ping Che area and to upgrade local amenities. The Applicant is also willing to discuss with relevant Government departments ensure the interface issue between the Indicative Scheme and the wider NTN New Town development is properly dealt with in detailed design stage.
3.	**Highways Department, Railway Development Office, dated 16 July 2024**	
	1) The captioned site would encroach into the preliminary alignment of NOLE and is located in the vicinity of the preliminary alignment of the NENTL, both railways are now under planning as mentioned in the Hong Kong Major Transport Infrastructure Development Blueprint (The Blueprint) which was promulgated by the Government in December 2023. Please review the rezoning application by taking into account of the Blueprint and keep this office update of the development of the subject site regarding the interface issues.	Noted. We have already taken into consideration the latest railway alignments published by the Government while formulating our Amendment Proposal. For instance, flexibility has already been reserved in the layout of the Indicative Scheme for connection to the future Ping Che Station of the planned NOLE and the NENTL. Since this is an Amendment of Plan application (S12A application) to agree on the future land use and development intensity of the Application Site, there are flexibility for adjustment of the development layout as illustrated in the Indicative Scheme should a more detailed railway alignment and station location are determined. The Applicant is open to discuss with relevant Government departments ensure the interface issue between the Indicative Scheme and the planned railway is properly dealt with in detailed design stage.
	2) Please review the wording "Northern Link (NOL) Eastern Extension" mentioned in the rezoning application documents and update to "Northern Link Eastern Extension (NOLE)" and/or "Northeast New Territories Line (NENTL)" as appropriate to be in line with the Blueprint.	Please refer to Para. 3.5.3, 4.2.3, Executive Summary and Figure 3.5 of **Annex A – Replacement Pages of Supporting Planning Statement** for the revised wordings of railway lines.
4.	**Transport Department, dated 22 June 2024**	
	A) Bus Development Division	

General Comment	
• The consultant is required to indicate clearly that a comprehensive transport plan will be studied and provided, covering but not limited to, the assessment of the existing public transport, the estimated demand on public transport and the modal split of different modes of transport. The plan should be further supplemented with relevant utilization surveys, recommendation on enhancement of existing services and/or proposed new services, etc.	Noted. At present, there are only 1 bus route and 1 mini-bus route serving Ping Che area. As a result, a public transport terminus is proposed to cater for the proposed development. The public transport terminus will include 1 double width bus bay and 1 double width GMB bay. The proposed layout is shown in the attached **Figure T1**. Assessment on public transport facilities is conducted and presented Sections 4.8 to 4.10 in **Chapter 4** of **Annex B – Revised Traffic Impact Assessment.** A comprehensive transport plan will be provided during detailed design stage.
• The transport plan should meet the growing demand with concrete service details (e.g. PT mode, frequency, fleet size, origin-destination, etc) and recommendation on the availability of terminating facilities (e.g. provision of charging-enabling facilities, spaces for ancillary facilities, kiosks, toilets, etc according to Transport Planning & Design Manual (TPDM)) and reflect in the TTIA report.	Noted. The comprehensive transport plan will be provided during detailed design stage.
• For any service proposal, the consultant should consider spare capacity of relevant PT facilities at the proposed terminating points to cater the new service. If the proposed new service is to serve as railway feeder, relevant spare capacity of the relevant rail lines should be indicated.	Noted. Railway patronage assessment is conducted to demonstrate the railway service will operate satisfactorily after accommodating the demand induced by the proposed development. Please refer to Section 4.9 of **Chapter 4** of **Annex B** for details.
Specific Comment	
Table 2.1	
• Please advise the intake year and population of the proposed site.	Please note that the proposed development is anticipated to be completed by 2032. The anticipated population of the proposed development is 6,174.
Para. 5.1.1	

	• The carriageway road design should be able to accommodate the 12.8m bus manoeuvring with swept path analysis conducted.	Noted. The PTT can accommodate 12.8m bus. Please refer to the attached **Figure T2** of **Annex B** for the swept path analysis.
	Para. 5.1.3	
	• Please advise the walking distance and walking time from the residential development to the Public Transport terminus ("PTT") as reference.	The PTT is located within the proposed development and the average walking distance between the residential towers and the PTT is about 100m only.
	• Please provide us the layout of PTT.	Please refer to the attached **Figure T1** of **Annex B** for details.
	Section 5	
	• The consultant should project the estimated PT demand for the population intake and conduct PT plan under Section 5 in the TTIA report, including but not limited to assessment of the existing public transport (if appropriate), the estimated demand on public transport, peak hour factor, the modal split of different modes of transport. The plan should be further supplemented with relevant utilization surveys, recommendation on enhancement of existing services and/or proposed new services, etc. The number of bus routes should then be based on the above assessment and the sufficiency of bus terminus should be assessed in conjunction with the above assessment and TPDM.	Assessment on public transport facilities is conducted and presented in **Chapter 4** of **Annex B**. The comprehensive transport plan will be provided during detailed design stage.
	B) Rail Team of Bus & Railway Branch	
	Please provide a preliminary assessment on the demand for Ping Che Station and the impact to the connecting railway lines (i.e. EAL & TML via NOL).	Please note that NOL is excluded from the report for conservative assessment purpose. Preliminary assessment is conducted for East Rail Line. Please refer to **Chapter 4** of **Annex B** for details.
	C) Transport Operations NT Division	

	• The responses provided by the applicant on our previous comments are general one, of which the requested Traffic and Transport Impact Assessment is not found. The applicant needs to submit the Transport Impact Assessment for their application for the proposed development with significant upsurge of public transport services demand, especially the over 2,200 flats residential development and the commercial tower with retail, office, hotel and G/IC facilities. They are reminded to take into account of the public transport service demand in the nearby developments including new Ping Che Transitional Housing with population intake of about 1000 in Q1 2024 in their transport impact assessment.	Assessment on public transport facilities is conducted and presented in **Chapter 4** of **Annex B**. Please note that new public transport routes are provided within the proposed PTT to cater for the travel demand from the proposed development. The public transport service demand induced by the nearby developments including new Ping Che Transitional Housing should be catered by the existing facilities along Ping Che Road.
	• The general layout of the proposed new public transport terminus (PTT) is a schematic one of which the new bus bays and GMB bays quoted in the report are not found. The applicant needs to provide a detailed design of the PTT for the comment of TD	Please refer to the attached **Figure T1** of **Annex B** for details.
	• Please advise the construction, management and maintenance agent of the proposed transport terminus.	As a usual practice, the project proponent will be responsible for the construction cost of the PTT. The project proponent's intention is to hand-over the management and maintenance to the government. (client to note)
5.	**Transport Department, dated 8 July 2024**	
	D) Traffic Engineering *TE's Comments (3.1.2024)* • Given that the scale of this proposed development is large, the assessment area presented in the TIA is considered not sufficient. The applicant shall justify the area of influence (AOI) conducted in the study or revised AOI appropriately. *Responses (16.4.2024)* • Noted. The AOI has been reviewed and updated accordingly. Please refer to Chapter 3 and Figure 3.1 of the Annex H – Revised Traffic Impact Assessment for details. TE's Comments (5.7.2024) • The Area of Influence (AOI) due to the proposed development should have been	

	assessed, discussed, justified and figured before the discussion of Chapter 3 Existing Traffic Situation within the AOI.	Noted. A paragraph is added to discussed about the area of influence. Please refer to **Section 3.2** of the **Annex B** for details.
	• Apart from the key junctions and road links connecting the strategic/truck road for cross-district movement (i.e. via Sha Tau Kok road and via Heung Yuen Wai Highway to route 9), the key junctions and road links should have covered all junctions along the route to rail stations (i.e. Fanling and Sheung Shui), and major PTIs. The key junctions and road links should be further reviewed. *TE's Comments (3.1.2024)* • The applicant should further advise and substantiate the traffic generation from and attraction to the site and the traffic impact to the nearby road links and junctions, also the reasons on mean trip rates from TPDM were adopted. *Responses (16.4.2024)* • Please note that the traffic generation from and attraction to the site and the traffic impact to the nearby road links and junctions have been reviewed and updated. In view of the remoteness of the area, upper limit trip rates from TPDM are adopted. Please refer to Chapter 4 and 6 of Annex H for details. TE's Comments (5.7.2024) • Thanks. We may offer further comments thereafter. *TE's Comments (3.1.2024)* • The applicant shall illustrate on layout plans and justify the adequacy of the parking spaces and loading/unloading spaces so provided by relating to the number of vehicles visiting the subject site. *Responses (16.4.2024)* • Noted. Please note that internal transport facilities will be provided to meet the high-end requirement of HKPSG. Please refer to Appendix C of Annex H for the car park layout plan. TE's Comments (5.7.2024) • Thanks. We may offer further comments thereafter.	Noted. Additional assessment is conducted at the key junctions and road links along the route to MTR Fanling Station. Please refer to **Chapter 3** and **Chapter 4** of **Annex B** for details. Noted. Noted.

	TE's Comments (3.1.2024) • The applicant should advise the width of the vehicular access leading to the site. *Responses (16.4.2024)* • Please be advised that the width of the vehicular accesses would be 7.5m. Please refer to Appendix C of the Annex H for the car park layout plan. TE's Comments (5.7.2024) • Please indicate the vehicular accesses and its width on drawings. *TE's Comments (3.1.2024)* • The applicant shall demonstrate the satisfactory maneuvering of the 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; *Responses (16.4.2024)* • Noted. Swept path analysis is conducted to demonstrate sufficient spaces are provided for the maneuvering of vehicles entering and exiting the subject site, maneuvering within the subject site and into/out of the parking and loading/unloading spaces. Please refer to Section 5.3 and Appendix C of Annex H for the details of swept paths analysis. TE's Comments (5.7.2024) • Thanks. We may offer further comments thereafter. *TE's Comments (3.1.2024)* • The applicant shall demonstrate the satisfactory maneuvering of the 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; *Responses (16.4.2024)* • Noted. Swept path analysis is conducted to demonstrate sufficient spaces are provided for the maneuvering of vehicles entering and exiting the subject site, maneuvering within the subject site and into/out of the parking and loading/unloading spaces.	Noted. Please refer to Appendix C of **Annex B** for details. Noted. Noted.

	• Please refer to Section 5.3 and Appendix C of Annex H for the details of swept paths analysis. TE's Comments (5.7.2024) • Thanks. We may offer further comments thereafter. *TE's Comments (3.1.2024)* • Especially on J4, are there any traffic improvement measures proposed by the applicant. *Responses (16.4.2024)* • Please note that there are improvement measures at J4 and details have been discussed in Section 4.6 of Annex H. TE's Comments (5.7.2024) • What is the estimated DFC after the proposed improvement measures at J4? TE's Comments (5.7.2024) • The major ingress and egress routes for vehicular traffic approaching and leaving Application Site should be elaborated and detail discussed. • The planned and committed developments should be confirmed with PlanD. • The applicant should submit a traffic improvement scheme to eliminate or mitigate for the adverse impacts identified on Ping Che Road (between Sha Tau Kok Road and Hung Leng North Road) which has a design V/C ratio of 0.92.	Noted. Please note that the improvement measures have been incorporated in the future junction assessment and the results are presented in **Table 4.5 of Annex B**. The DFC after the proposed improvement measures at J4 would be 0.85 and 0.47 during AM and PM peak hour, respectively. Please refer Figure 3.1 of **Annex B** for details. PlanD was consulted and the reply is attached in **Annex T1** of **Annex B**. Based on the updated calculation, the V/C ratio at the section of Ping Che Road (between Sha Tau Kok Road and Hung Leng North Road) is estimated to be 0.93. The applicant will study the feasibility to upgrade the road to a 10.3m carriageway upon obtaining the planning approval. (client to note)

(Last Updated: 2 Aug 2024)

OTHER SPECIFIED USES

Column 1 *Uses always permitted*	*Column 2* *Uses that may be permitted with orwithout conditions on application to the Town Planning Board*

For "Mixed Use" Only

Schedule I: for non-residential building or non-residential portionof a building upon development/redevelopment/conversion

Ambulance Depot
Commercial
Bathhouse/
Massage Establishment
(in non-residential building only)
Eating Place
Educational Institution
Exhibition or Convention Hall
Government Use (not elsewhere specified)
Hotel
Information Technology and
Telecommunications
Industries
Institutional Use (not elsewhere specified)
Library
Off-course Betting Centre
Office
Place of Entertainment
Place of Recreation, Sports or Culture
Private Club
Public Clinic
Public
Convenience
Public Transport Terminus or Station
Public Utility Installation
Public Vehicle Park
(excluding container vehicle)
Recyclable Collection Centre
Religious Institution
School
Shop and Services
Social Welfare Facility (excluding
those involving residential care)
Training Centre
Utility Installation for Private Project
Wholesale Trade

Broadcasting, Television and/or Film Studio
Commercial Bathhouse/
Massage Establishment
(not elsewhere specified)
Flat
Government Refuse Collection Point
Hospital
Mass Transit Railway Vent Shaft and/or
Other Structure above Ground Level
other than Entrances
Petrol Filling Station
Residential Institution
Social Welfare Facility (not elsewhere specified)

(Please see next page)

Figure No.	*Scale*	*Figure Title*	**Proposed Schedule of Use and Remarks of the "Other Specified Uses" Annotated "Mixed Use" Zone ("OU(MU)") (Sheet 1 of 2)**
5.2a	-		
ARUP	*Date* Oct 2023	*Source*	N/A

OTHER SPECIFIED USES

Column 1 *Uses always permitted*	*Column 2* *Uses that may be permitted with orwithout conditions on application to the Town Planning Board*

For "Mixed Use" Only (Cont'd)

Schedule II: for residential building or residential portion of a building upon development/redevelopment/conversion

Flat
Government Use (Police Reporting Centre, Post Office only)
House
Residential Institution
Social Welfare Facility (residential care facility only)
Utility Installation for Private Project

Eating Place
Educational Institution
Government Refuse Collection Point
Government Use (not elsewhere specified)
Hotel
Institutional Use (not elsewhere specified)
Library
Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances
Office
Place of Entertainment
Place of Recreation, Sports or Culture
Private Club
Public Clinic
Public Transport Terminus or Station
Public Utility Installation
Public Vehicle Park (excluding container vehicle)
Religious Institution
School
Shop and Services
Social Welfare Facility (not elsewhere specified)
Training Centre

Planning Intention

This zone is intended primarily for high-density residential development and commercial development. Flexibility for the development/redevelopment/conversion of residential or other uses, or a combination of various types of compatible uses including commercial, residential, educational, cultural, recreational and entertainment uses, either vertical within a building or horizontally over a spatial area, is allowed to meet changing market needs. Physical segregation has to be provided between the non-residential and residential portions within a new/converted building to prevent non-residential uses from causing nuisance to the residents.

Figure No.	*Scale*	*Figure Title*	**Proposed Schedule of Use and Remarks of the "Other Specified Uses" Annotated "Mixed Use" Zone ("OU(MU)") (Sheet 2 of 2)**
5.2b	-		
ARUP	*Date* Oct 2023	*Source*	N/A

OTHER SPECIFIED USES (Cont'd)

For "Mixed Use" Only (Cont'd)

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a total maximum plot ratio (PR) of 7 (of which the domestic plot ratio should not exceed 5.9), or the plot ratio of the existing building, whichever is the greater.

(b) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of the maximum building in terms of metres above Principal Datum as stipulated on the Plan, or the height of the existing, whichever is the greater.

(c) In determining the maximum plot ratio for the purpose of paragraph (a) above, any floor space that is constructed or intended for use solely as Government, institution or community facilities, and public transport terminus or station may be disregarded.

(d) In determining the maximum plot ratio for the purposes of paragraph (a) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, or caretaker's quarters and recreational facilities for the use and benefits of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.

(e) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio and/or building height restrictions stated in paragraphs (a) and (b) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

(f) Upon development/redevelopment/conversion of a building to a mixed use development, the residential and non-residential portions within a building shall be physically segregated through appropriate building design. The provision of residential and non-residential uses on the same floor will not be permitted. Under exceptional circumstances, relaxation of the requirement for physical segregation and no inter-mixing on the same floor may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

Figure No.	*Scale*	*Figure Title*	**Proposed Explanatory Statement of the "Other Specified Uses" Annotated "Mixed Use" Zone ("OU(MU)") (Sheet 1 of 3)**
5.3a	-		
ARUP	*Date* Oct 2023	*Source*	N/A

9.8 "Other Specified Uses" ("OU") – Total Area 1.78 ha

9.8.1 This zone is intended for specific development(s) and/or uses, which is/are specified in the annotation of the zone.

Mixed Use

9.8.2 A site (about 1.78 ha) zoned as "OU" annotated "Mixed Use" ("OU(Mixed Use)") is located at the southwestern side of Ping Che Road is near the planned/proposed Ping Che Station. The planning intention of this zone is primarily for high-density residential development and commercial development. Development within this zone is subject to a maximum PR of 7 (of which the domestic PR should not exceed 5.9) and a maximum building height (BH) of 175mPD.

9.8.3 In order to enhance the connectivity to the surrounding area, a local access road to the east of the site is proposed to be upgraded with footpaths on both sides for public access from Ping Che Road to further south to the site.

9.8.4 A Public Transport Terminus (PTT) of about 1,246m^2 Gross Floor Area (GFA) is proposed on the ground floor of the non-domestic towers to provide public transport interchange services.

9.8.5 A Gross Floor Area (GFA) of about 1,246m^2 for a Public Transport Terminus (PTT) is proposed on the ground level of the commercial building to provide public transport interchange services to serve the need arising from future development. The GFA of the PTT is subject to detailed design. In determining the maximum PR/GFA development or redevelopment on land zoned as "OU(MU)", any floor space that is constructed or intended for use solely as public transport terminus or station will be disregarded.

9.8.6 A GFA of about 787.6m^2 for a 60-place Day Care Centre for the Elderly and a GFA about 1,166m^2 for a 100-place Child Care Centre are to accommodate the need arising from the future residents and ageing population in Ping Che Area. The GFAs of the Day Care Centre for the Elderly and Child Care Centre are subject to detailed design. In order to facilitate provision of Government, institution or community facilities, in determining the maximum PR/GFA of the development/redevelopment on land zoned "OU(MU)", any floor space that is constructed or intended for use solely as Government, institution or community facilities will be disregarded.

9.8.7 In order to enhance the air ventilation of the local environment, development/redevelopment within this zone should consider adopting suitable design and wind enhancement features, for example permeable design of the PTT, chamfered corner design of podium structure, orientation of building blocks align with wind flow direction, terraced podium design, opening design of sky garden etc. A mix of building heights for developments within "OU(MU)" can also be considered for visual interest and enhance visual permeability.

Figure No.	*Scale*	*Figure Title*	**Proposed Explanatory Statement of the "Other Specified Uses" Annotated "Mixed Use" Zone ("OU(MU)") (Sheet 2 of 3)**
5.3b	-		
ARUP	*Date* Oct 2023	*Source*	N/A

9.8.8 Rhythmic building height profile with maximum BH not more than 175mPD shall be adopted to encourage creation of an interesting skyline at this prominent location at the future centre of the NTN New Town. Sufficient separation distance between building blocks shall be reserved to enhance the visual permeability.

9.8.9 Development or redevelopment within the above zones are subject to a maximum BH restriction as stipulated on the Plan, or the height of the existing building, whichever is the greater.

9.8.10 Minor relaxation of the PR and/or BH restrictions for the "OU" zone may be considered by the Board on application under section 16 of the Ordinance. Each application for minor relaxation of PR / BH restrictions will be considered on its own merits.

Figure No.	*Scale*	*Figure Title*	**Proposed Explanatory Statement of the "Other Specified Uses" Annotated "Mixed Use" Zone ("OU(MU)") (Sheet 3 of 3)**
5.3c	-		
ARUP	*Date* Oct 2023	*Source*	N/A

Detailed Departmental Comments

1. Land Administration

Comments of the District Lands Officer/North, Lands Department (DLO/N of LandsD):

(a) in the event the application under s.12A of the Town Planning Ordinance (TPO) is accepted or partially accepted by the Town Planning Board (the Board) with a set of clear development parameters (including but not limited to the proposed user, GFA and car parking provisions, as appropriate) defined/ firmed up and further submission to the Board (including application(s) for permission under s.16 of the TPO after the corresponding amendment to the Outline Zoning Plan (OZP) has been made is not required, the applicant may submit request for streamlined processing of land exchange application. Depending on the circumstances of each case, LandsD at its sole and absolute discretion may, upon receipt of such valid request and subject to payment of the administrative fee(s) (including fee payable to the Legal Advisory and Conveyancing Office, if required) by the applicant, commence the streamlined processing of the land exchange application on a without prejudice and non-committal basis while Planning Department is taking forward the relevant OZP amendment; and

(b) the applicant is reminded that once the accepted or partially accepted proposal is reflected in the OZP and approved under s.9 of the TPO, a formal application for land exchange by applicant to LandsD is still required. Every application submitted to LandsD will be considered on its own merits by LandsD at its absolute discretion acting in its capacity as a landlord and there is no guarantee that the land exchange application will eventually be approved by LandsD. If the application for land exchange is approved by LandsD, it will be subject to such terms and conditions as may be imposed by LandsD at its absolute discretion, including payment of premium and administrative fee(s).

2. Traffic

Comments of the Commissioner for Transport:

she has the following comments on the Traffic Impact Assessment (TIA) which are yet to be addressed:

Transport Operations

(a) the applicant should provide a detailed public transport service and facility assessment (including statistical analysis) in the TIA to justify the proposals on:

- provision of one bus route and one Green Mini Bus (GMB) route; and
- provision of a double width bus bay and a GMB bay inside the proposed public transport terminus (PTT);

(b) Figure T1 – The proposed vehicular ingress of the PTT seems to be located opposite the vehicular ingress of the village road connecting with Ping Che Road southbound, which may have traffic and safety implication on Ping Che Road and vehicle users;

(c) Figure T1 – The applicant should illustrate:

- the dimensions of passenger queuing space for bus and GMB bays;

- the number of 12.8m buses and 7m GMBs which can be stacked at the proposed bus and GMB layby, taking into account of the necessity of provision of clearance distance in between the vehicles;

- the pedestrian walkway for the application site (the Site) to access to/from the proposed PTT ; and

- the crossing for the passengers to access to the GMB bay;

(d) Figure T2 – The applicant should provide the swept path analysis for 19-seater GMBs. The proposed 21m GMB layby seems have not taken into account of the necessity of provision of clearance distance in between GMBs stipulated in Transport Planning and Design Manual (TPDM);

(e) the Transport Department (TD) does not agree with the applicant's proposal on handover the PTT to the Government for management and maintenance. As stated in Section 2.2.1 Table 2.1 of the TIA report, the Site involves private residential development (2,200 flats with anticipated population of 6,174), retail, office and hotel commercial facilities. The applicant should held responsible for design, construction, management and maintenance of their proposed private residential and commercial development including the PTT at their own costs;

(f) Section 4.10 - The transport facilities in the vicinity of Fanling Station are fully utilised by existing and potential services arising from Fanling North New Development Area (NDA) and residential development projects in North District. TD has reservation to the proposed "minibus route" between the Site and Fanling Station. The applicant is strongly advised to consider alternative destination of the proposed "minibus route". Should the project proponent wishes to introduce new franchised bus/ GMB service to / from Fanling Station, they should propose modification works / improvement measures at their own cost to accommodate any additional service for his consideration;

(g) Section 4.10.1 - The applicant has only provided a rough description on their proposed bus service as "the bus route is anticipated to travel to/from other districts". The applicant should provide the details of the proposed bus route, including the service catchment, destination, bus stops, vehicle allocation, headway and service hours for comment;

(h) Section 4.10.1 - The applicant should provide a drawing illustrating the journey distance and journey time between the proposed development and the existing bus and GMB stops on Ping Che Road;

(i) Section 4.10.2 - As stated in Section 3.4.1 and Table 3.2, there are two public transport routes operating on Ping Che Road including Kowloon Motor Bus 79K (Ta Kwu Ling (Tsung Yuen Ha) – Sheung Shui) and GMB 52K (Fanling – Ping Che). Both of them operate via Fanling Station for providing feeder services to the passengers. The applicant should review the appropriateness of the assumption on "passengers targeted for road-based public transport would use the proposed bus route and for those target for railway services would use the proposed minibus route";

(j) Section 4.10.3 - The applicant should advise whether the assumptions on the passenger demand of bus as 838 refers to the peakiest hour's demand. Besides, the passenger

demand of GMB is not found in this Section;

(k) Section 6.1.6 - The applicant should provide statistical analysis to justify the proposed double width bus bay and GMB bay facilities inside the PTT;

(l) Section 6.2.1 - In additional to the conclusion for traffic engineering point of view, the applicant should advise the conclusion for public transport;

Rail Perspective

(m) Para. 4.9.2 - The applicant should advise the distribution of East Rail Line (EAL) passengers induced by the proposed development travelling to Admiralty and Lo Wu/Lok Ma Chau bounds;

(n) Para. 4.9.3 - The loading factor and carrying capacity of EAL based on 4 passengers per square meter should be used for conservative assessment purpose;

(o) Table 4.10 - The passengers travelling to the proposed development through EAL, i.e., 232 persons/hour, should also be included in projecting the morning peak hour passenger demand and loading factor of EAL;

Bus Perspective

(p) assessment of the existing public transport services should be included. The applicant should supplement with relevant utilisation surveys. Besides, the table number of Table 4.7-4.10 is not shown correctly. The applicant should revise;

(q) Para. 4.10 - The applicant should review the proposed public transport plan taking into account the existing public transport services, in particular, there should be assessment on whether (part of) the passenger demand could be catered by the existing public transport services and whether service enhancement is recommended. The applicant should advise the destination of the proposed bus route(s) taking into account the passenger demand. The applicant should also assess if there is sufficient spare capacity for the proposed bus route(s) at the relevant terminating point(s). The applicant should adopt 75% as the maximum occupancy rate of the proposed bus route(s) and review the service level of the proposed bus route(s). The current projected occupancy rate will reach about 100% and frequency enhancement will be required in accordance with the bus service adjustment guidelines. The applicant should advise the justifications for operating the proposed GMB service instead of a feeder bus route in view of the strong passenger demand which can only be catered by an extremely frequent GMB service at a headway of 2 minutes;

(r) Para. 5.1.3 and Figure T1 - The provision of bus terminus should not only echo to the estimated passenger demand of the proposed development but also the number of proposed bus routes, as well as different transportation modes (including but not limited to taxi, GMB, etc.) terminating and passing through the proposed development. According to Section 2.7.4 of the TPDM, one boarding / alighting space and two spaces for stacking should be provided for each bus route. The applicant should revisit;

(s) Para. 5.1.3 and Figure T1 - The bus terminus requirements should include the recommendation on (1) charging-enabling facilities required by Environmental Protection Department (EPD) and (2) other required built-in ancillary facilities (e.g.

kiosk, regulator's office, toilets). Reference should be made to respective TPDM and related guidelines. The applicant should include the scope of the extension of green transport means including but not limited to electric bus in suitable location(s), e.g. bus terminus. TD's comments should be sought on the design and layout of the bus terminus;

Traffic Engineering Perspective

(t) setting out dimensions of the width of the vehicular access leading to the Site should be indicated on all drawings;

(u) regarding the traffic improvement measures on J4 proposed by the applicant, the values do not align with those values presented in the report. The applicant should review / revise the calculation of the junction performance and the values presented in Table 4.5 of the TIA report;

(v) assumptions on the distribution of the development traffic onto the road network, directional splits and model split should be elaborated and detail discussed; and

(w) the applicant shall demonstrate the proposed upgrading of Ping Che Road is feasible, viable and can be implemented by the applicant. It is premature to consider the rezoning request without ensuring the proposal suggested by the applicant is feasible and viable.

3. Drainage

Comments of the Chief Engineer/Mainland North, Drainage Services Department:

she has the following comment on the Drainage Impact Assessment, which can be addressed in the later stage:

it is noted that 16% climate change adjustment was adopted. Pursuant to Section 6.8 of Stormwater Drainage Manual (SDM) Corrigendum No. 1/2022, the applicant should also provide assessment with consideration of the design allowance pursuant to Table 31 of the Corrigendum No. 1/2022 of the SDM.

4. Environmental

Comments of the Director of Environmental Protection:

(a) according to the information provided by the applicant, an on-site Sewage Treatment Plant (STP) of secondary treatment standard with a design capacity at 6,237m^3/day will be installed to handle the generated sewage from the Site. The applicant has confirmed that the design peak flow of the on-site STP would exceed 5,000m^3/day. Should there be any presence of existing/ planned residential area within 200m from the boundary of on-site STP, the on-site STP is likely a Designated Project (DP) under item F.2(b), Part I, Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499), which Environmental Permit is required for its construction and operation. The applicant is required to double check S4.1.1 of the EA report on the EIAO implication of the proposed STP. Should the project be confirmed to be a DP, the requirements stipulated under the EIAO shall be followed; and

(b) the applicant should also note that TPO and EIAO are two independent processes and approval of an EIA report is not a prerequisite of consideration of a project/plan by the Board.

5. <u>Urban Design and Visual</u>

Comments of the Chief Town Planner/Urban Design & Landscape, Planning Department (CTP/UD&L of PlanD):

she has the following comments on the Visual Impact Assessment (VIA) and Air Ventilation Assessment – Expert Evaluation (AVA-EE) which are yet to be addressed:

<u>Observation and Comments</u>

(a) the Site is situated in a rural locality predominantly comprising temporary structures/ open storages interspersed with some vegetated land. In a wider context to its further southwest are Cat Hill and Tsung Shan, and there are low-rise GIC facilities and village settlements including the Ta Kwu Ling Rural Centre Government Offices, Ping Che and Ping Che New Village to its further north and the Baptist Convention of H.K. Baptist Assembly to its further east (with BHs ranging from 13.1mPD to 34.6mPD). The proposed high-rise mixed use development (with maximum BH of 175mPD) is not fully in keeping with the existing surrounding rural and low-rise character;

(b) to substantiate the application, the applicant may consider exploring further design measures with respect to the existing low-rise and rural setting (e.g. by lowering the BHs, allowing greater variation in BHs, optimising the proposed domestic site coverages and BHs, etc.) or provide justifications otherwise;

(c) according to the applicant's submitted information, various design measures including building separations, permeable design of the ground level of PTT, landscape treatment along the boundary, etc. are proposed to mitigate the visual and/or air ventilation impacts;

(d) according to the Northern Metropolis Development Strategy published on 6.10.2021, a station of the Northern Link Eastward Extension is proposed near the Site in Ping Che. As shown in the Northern Metropolis Action Agenda released on 30.10.2023, the New Territories North (NTN) New Town generally covers and the Northeast New Territories Line will pass through Ping Che where the Site is located in. In fact, the Site falls within the study area of the ongoing 'Remaining Phase Development of the NTN – Planning and Engineering Study for NTN New Town and Man Kam To – Investigation' (the P&E Study). The planning (and hence urban design context) of the Site and its surrounding area is subject to the recommendations of the P&E Study.

<u>Supplementary Drawing for Visual and Air Ventilation Mitigation Measures</u>

(e) unlike what is indicated in the Legend, Setback 1 refers to "Northeast to Commercial T1" while Setback 2 refers to "Northeast to Podium", their widths are incorrect and do not represent the minimum widths from the site boundary. The applicant should review and rectify;

<u>Revised VIA</u>

(f) Section 5 (including Table 5.3) – The proposed high-rise development would become a

notable visual element in the surrounding neighbourhood which is rural and low-rise in character. With reference to the submitted photomontages (to which her comments are made below), the height and mass of the proposed development would reduce the visual openness and cause obstruction to the open sky view/mountain backdrop. In view of the conclusion of "moderately adverse" visual impacts at View Points (VPs) 1 to 4, it would be more tenable and consistent to grade the "Effect on Public Viewers" as "moderately adverse" rather than "slightly adverse". The applicant may wish to review whether the grading of "moderately adverse" at VPs 1 to 3 under "Visual Composition, and the grading of "moderately adverse" at VP1 and of "slightly adverse" at VP5 under the "Effect on Visual Resources" would be more appropriate;

(g) Figure 3 at VP1 – It seems that the proposed development should be located slightly to the left (i.e. approximately in the middle of the photo) and appear to be taller and wider. The applicant should review and rectify;

(h) Figure 4 – The applicant should review whether the building height of Tower 4 under the Indicative Scheme should read as +171.85mPD;

(i) Figure 6 – It seems that Towers 5 and 6 instead of Tower 2 can be seen from VP4. The applicant should review and rectify. The applicant should also annotate Cheung Shan with its height in mPD for ease of reference;

(j) Para. 6.1.4 – The conclusion that "the Indicative Scheme is considered to be fully acceptable from visual perspective" is not one of classifications of the resultant overall impact according to the Town Planning Board Guidelines No. 41;

(k) in view of the comments above, the applicant should review the relevant section(s) on the visual impact in the Supporting Planning Statement (SPS) accordingly;

AVA-EE

(l) Para. 3.1.6 – ENE, as one of the prevailing annual winds, is missing;

(m) Para. 4.2.6 – With reference to Table 3.2, the prevailing annual winds at the Site should be N, ENE, E and ESE while the prevailing summer winds at the Site should be E, ESE, SE, SSE and SSW;

(n) Para. 4.2.8 – The annual prevailing annual wind at the Site should be N instead of NNE;

(o) Sections 5 to 7 – Her previous comments/observations to proposed mitigation measures are still not fully addressed and hence reiterated below:

  (i) Sections 5.3 to 5.7 – "Open space" is indicated as one of the downwind areas under the N, ESE and SE winds, the applicant should clarify whether it actually refers to the open area with temporary structures instead of open space (such as sitting-out area, etc.) in the surrounding of the Site and revise as appropriate;

  (ii) the applicant should review if open area with temporary structures is also one of the downwind areas under the ENE, E, SSE and SSW winds and supplement as appropriate;

  (iii) according to the Sustainable Building Design Guidelines (SBDG), a notional wind

path may change in direction by not more than 15 degrees provided its direction after the change of course is always within 15 degrees from its original path. However, it seems that some of the wind flows shown in Figures 5-1, 5-2, 5-6, 5b to 5e and 5h to 5i involve change in direction by more than 15 degrees under the N, ENE and SSE winds. As far as the comparison between the OZP Compliant Scheme and Proposed Development is concerned, the applicant should critically review the evaluation on N, ENE and SSE winds in paras. 5.3.3, 5.4.3 and 5.6.3;

(iv) Sections 5.3 to 5.7 and Figures 5-1 to 5-7 – According to the SBDG, the minimum width of the air corridor along its path between buildings shall not be less than 15m. However, it seems that some of the proposed building separations shown in Figures 5-2 and 5-5 under the ENE and SE winds are less than 15m in width. As commented previously, the applicant is advised that the widths of the setbacks should be measured from the site boundary and the widths of the building separations/setbacks should be measured from those perpendicular to the prevailing winds. The applicant shall specify the location and width of the proposed building separation/setback under each wind flow direction;

(v) Sections 5.3 to 5.7 and 7 – The proposed development would inevitably induce some wind blockage, which is however not mentioned under each wind direction. The applicant should supplement;

(vi) Sections 5.3 to 5.7 – It seems that paras. 5.3.3, 5.4.3, 5.4.4, 5.5.3, 5.5.4, 5.6.3 and 5.7.3, though under the sub-heading of "OZP Compliance Scheme without Proposed Development", actually present the evaluation of OZP Compliance Scheme with the Proposed Development under the respective wind flow direction. The applicant should review and rectify;

(vii) Paras. 5.5.4 and 5.6.3 – The applicant should clarify if Ping Che Road is a major air path under the prevailing SE/SSE wind and supplement as appropriate;

(viii) Para. 6.1.7 – The applicant should review whether the proposed clubhouse design would allow wind flow from E and ESE directions instead of E and NE directions;

(p) for the sake of clarity, the applicant should rectify the irregularities/inconsistencies of Sections 5 to 7. For examples: (a) NNE should read N wind in the 3rd line in para. 5.3.2; (b) Figure 5-6 illustrates the prevailing wind flow under the SSE wind instead of the N wind in the last sentence of para. 5.6.3; (c) Figure 5-7 illustrates the prevailing wind flow under the SSW wind instead of the N wind in the last sentence of para. 5.7.3; (d) it seems that Figures 5-8, 5-11 & 5-12 and Annex C as indicated in para. 6.1.11 are not included in the current submission, etc.; and

(q) in view of the comments above, the applicant should review the relevant section(s) on the air ventilation impact in the SPS accordingly.

6. <u>Landscape</u>

Comments of the CTP/UD&L of PlanD on the Landscape Master Plan (LMP) and Tree Preservation and Removal Proposal (TPRP):

(a) according to the submission, it is anticipated that the Site is positioned as high-density residential development with residential and mixed uses in its vicinity. However, the

land use proposals of the P&E Study is still under review. The proposed rezoning for high density mixed use development will bring significant change to the existing rural landscape character of "AGR" zone from landscape planning perspective;

(b) based on the aerial photo of 2022, the Site is situated in an area of miscellaneous rural fringe landscapes landscape character comprising small houses, buildings, tree clusters, vegetated areas, woodland within the "Green Belt" zone to the north, and temporary structures mainly within "OS" surrounding the Site;

(c) according to the LMP and TPRP, a total number of 130 common trees are identified within the Site and no registered Old and Valuable Tree, stonewall trees, rare and protected species of tree or vegetation, and tree of particular interest are identified. All 130 existing trees including 4 undesirable species are proposed to be felled. 126 nos. of new trees mostly with native species are proposed within the Site and landscape treatments, such as podium gardens, sky gardens, green wall, open spaces including sun lawn, rose garden and multi-functional deck, and ornamental tree and shrub plantings along the proposed development are proposed. Local open space of not less than 6,174m^2 would be provided for the target population of 6,174 anticipated population. Minimum 20% greenery area with at least 10% coverage at Primary Zone will be provided in accordance with the requirement of Practice Notes for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAP) APP-152;

(d) the applicant is advised to revise/adjust the current design layout to maximise the planting areas for more tree plantings within the Site; and

(e) the applicant should be advised that approval of the application does not imply approval of tree works such as pruning, transplanting and felling. The applicant is reminded to seek approval for any proposed tree works from relevant departments prior to commencement of the works.

7. <u>Social Welfare</u>

Comment of the Director of Social Welfare on the proposed Child Care Centre (CCC):

(a) from licensing perspective, the applicant should take note that all child care centres, irrespective of its funding sources, must be registered in compliance with the requirements under the Child Care Services Ordinance (Chapter 243), the Child Care Services Regulations (Chapter 243A) and the latest version of the Operation Manual for Pre-primary Institutions. Moreover, the prospective operator should ensure that there is no objection from the Board and the premises proposed for use should also be in compliance with the fire safety, structural safety, as well as all other relevant statutory requirements on a CCC; and

(b) CCC (including residential CCC and special CCC) are registered and monitored by Child Care Centres Advisory Inspectorate of the Social Welfare Department. On the other hand, CCC providing kindergarten education to children aged 3-6 in the same premises are registered and monitored by the Joint Office for Kindergartens and Child Care Centres of the Education Bureau (EDB). Regarding application procedures for registration of kindergarten-cum-CCC, detailed information can be found at EDB Website via the following hyperlink:

https://www.edb.gov.hk/en/edu-system/preprimary-kindergarten/application-for-

registration-of-child-carecentre-in-kindergarten/index.html

8. Water Supply

Comments of the Chief Engineer/Construction, Water Supplies Department (CE/C of WSD):

(a) existing water mains inside the Site as shown in the Mains Reserve Plan (MRP) (**Appendix IVa**) will be affected. The applicant is required to either divert or protect the water mains found on site;

(b) 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 Government Land (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

(c) if diversion is not required, the following conditions shall apply:

(i) existing water mains are affected as indicated on the MRP and no development which requires resting of water mains will be allowed;

(ii) details of site formation works shall be submitted to the Director of Water Supplies (DWS) for approval prior to commencement of works;

(iii) no structures shall be built or materials stored within 1.5m from the centre line(s) of water main(s) shown on the plan. Free access shall be made available at all times for staff of the DWS or their contractor to carry out construction, inspection, operation, maintenance and repair works;

(iv) no trees or shrubs with penetrating roots may be planted within the Water Works Reserve or in the vicinity of the water main(s) shown on the plan. No change of existing site condition may be undertaken within the aforesaid area without the prior agreement of the DWS. Rigid root barriers may be required if the clear distance between the proposed tree and pipe id 2.5m or less, and the barrier must extend below the invert level of the pipe;

(v) 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

(vi) tree planting may be prohibited in the event that the DWS considers that there is any likelihood of damage being caused to water mains.

9. Building Matters

Comments of the Chief Building Surveyor/New Territories West, Buildings Department (CBS/NTW of BD) under the Buildings Ordinance (BO):

(a) the development intensity shall not exceed the permissible as stipulated under the First Schedule of Building (Planning) Regulation (B(P)R). If the Site is not abutting on a

specified street having a width not less than 4.5m, the development intensity shall be determined under Regulation 19(3) of the B(P)R during the building plan submission stage;

(b) the Site shall be provided with means of obtaining access thereto from a street under Regulation 5 of the B(P)R and emergency vehicular access (EVA) shall be provided for all the buildings to be erected on the Site in accordance with the requirements under Regulation 41D of the B(P)R. Noting that road upgrading works are proposed to widen the existing access road, the said works should be completed before application of Occupation Permit if the said road serves any purposes under the BO (e.g. emergency vehicular access and/or site classification);

(c) all existing/future streets/roads within the development lot(s) should be excluded from site area of the proposed development for plot ratio and site coverage calculation under the B(P)R;

(d) areas of the proposed social welfare facilities and PTT are to be included in GFA and site coverage calculation under the BO. Comments will be provided on application for exemption of GFA and site coverage to these facilities upon receiving detail design and justification in plan submission stage;

(e) any parking spaces to be disregarded from GFA calculation under the Regulation 23(3)(b) of the B(P)R shall be subject to the requirements laid down in Appendix C of PNAP APP-2;

(f) Residential Recreational Facilities may be excluded from GFA calculation subject to requirements under PNAP APP-104;

(g) the proposed hotel use on 25/F - 34/F of Tower 1 should satisfy all the pre-requisites under PNAP APP-40 before hotel concession under Regulation 23A of the B(P)R may be granted;

(h) sustainable building design requirements and pre-requisites under PNAP APP-151 and APP-152 shall be complied with if GFA concession for green and amenity features and non-mandatory/ non-essential plant rooms and services is to be exempted/disregarded;

(i) if the proposed use under application is subject to issue of a license, the applicant should be reminded that any existing structures on the Site intended to be used for such purposes are required to comply with the building safety and other relevant requirements as may be imposed by the licensing authority;

(j) 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) Regulation in respect of disposal of foul water and surface water respectively; and

(k) detailed comments will be given in the building plan submission stage.

10. <u>Food and Environmental Hygiene</u>

Comments of the Director of Food and Environmental Hygiene Department (DFEH):

(a) no Food and Environmental Hygiene Department (FEHD)’s facilities should be affected;

(b) in accordance with Section 4 of Food Business Regulation, Cap.132X, the expression "food business" means, any trade or business for the purpose of which any person engages in the handling of food or food is sold by means of a vending machine. But it does not include any canteen in work place (other than a factory canteen referred to in section 31) for the use exclusively of the persons employed in the work place. As such, a staff canteen that exclusively use by the staff members of that working place does not require a food business licence from this department. However, if the said canteen provided foods to the outsiders with payment, a food business licence is required. Furthermore, pursuant to section 4 of the Food Business Regulation (Cap. 132X), the expression of "food business" does not include any club;

(c) proper licence / permit issued by FEHD is required if there is any food business / catering service / activities regulated by the DFEH under the Public Health and Municipal Services Ordinance (Cap. 132) and other relevant legislation for the public:

(i) under the Food Business Regulation, Cap. 132X, a food business licence is required for the operation of the relevant type of food business listed in the Regulation. For any premises intended to be used for food business (e.g. a restaurant, a food factory, a fresh provision shop), a food business licence from the FEHD in accordance with the Public Health and Municipal Services Ordinance (Cap. 132) shall be obtained. The application for licence, if acceptable by the FEHD, will be referred to relevant government departments such as the BD, Fire Services Department and PlanD for comment. If there is no objection from the departments concerned, a letter of requirements will be issued to the applicant for compliance and the licence will be issued upon compliance of all the requirements;

(ii) depending on the mode of operation, generally there are three types of food business licence/ permit that the operator of shop and services may apply for under the Food Business Regulation (the Regulation):

- if food is sold to customers for consumption on the premises, a restaurant licence should be obtained;
- if food is only prepared for sale for consumption off the premises, a food factory licence should be obtained;
- if fresh, chilled or frozen beef, mutton, pork, reptiles (including live snake), fish (including live fish) and poultry is sold, a fresh provision shop licence should be obtained; and
- if milk, frozen confections, non-bottled drinks, cut fruit etc. are to be sold without preparation of other kind of food, relevant restricted food permits should be obtained;

(iii) the operation of the eating place must not cause any environmental nuisance to the surrounding. The refuse generated by the proposed eating place are regulated as trade refuse. The management or owner of the Site is responsible for its removal and disposal at their expenses. The operation of any business should not cause any obstruction or environmental nuisance in the vicinity;

(d) proper licence issued by FEHD is required if related place of entertainment is involved. Any person who desires to keep or use any place of public entertainment for example a theatre and cinema or a place, building, erection or structure, whether temporary or permanent, on one occasion or more, capable of accommodating the public presenting or carrying on public entertainment within Places of Public Entertainment (PPE) Ordinance (Cap. 172) and its subsidiary legislation, such as a concert, opera, ballet, stage performance or other musical, dramatic or theatrical entertainment, cinematograph or laser projection display or an amusement ride and mechanical device which is designed for amusement, a PPE Licence (or Temporary PPE Licence) should be obtained from FEHD whatever the general public is admitted with or without payment;

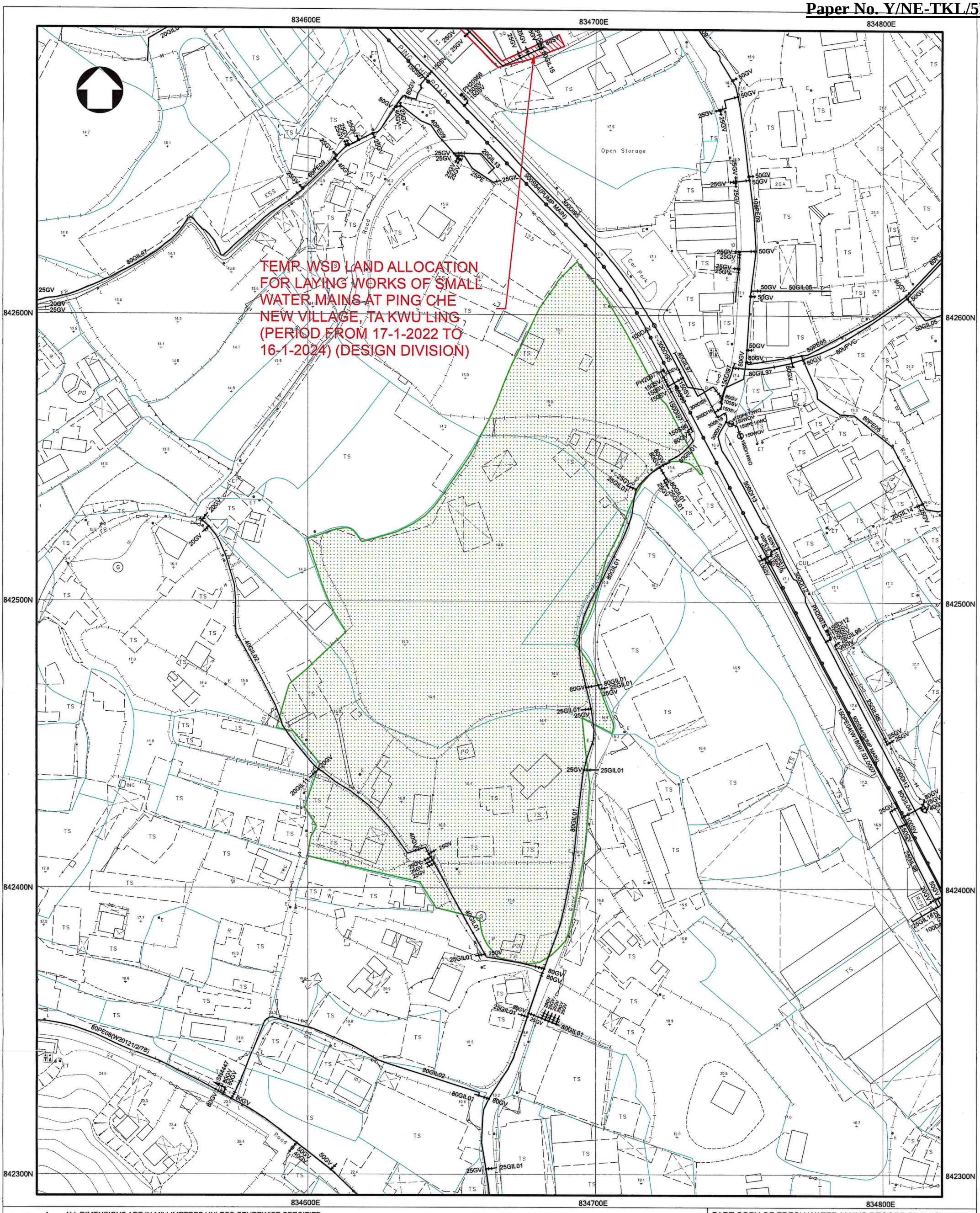
(e) a swimming pool licence must be obtained from FEHD for any artificially constructed pool used for swimming or bathing and to which the public have access (whether on payment or otherwise) or which is operated by any club, institution, association or other organization. A swimming pool licence is not required for any swimming pool which serves not more than 20 residential units and to which the public have no access;

(f) there should be no encroachment on the public place and no environmental nuisance should be generated to the surroundings. Its state should not be a nuisance or injurious or dangerous to health and surrounding environment. Also, for any waste generated from such activities/ operation, the applicant should arrange disposal properly at their own expenses;

(g) if FEHD is required to take up management responsibility of new facilities (e.g. public toilets and refuse collection points), FEHD should be separately consulted. Prior consent from FEHD must be obtained and sufficient amount of recurrent cost may have to be provided to FEHD;

(h) if provision of cleansing service for new roads, streets, cycle tracks, footpaths, paved areas, etc. is required, FEHD should be separately consulted. Prior consent from FEHD must be obtained and sufficient amount of recurrent cost may have to be provided to FEHD; and

(i) if domestic waste collection service of FEHD is required in future, prior comments from FEHD on the waste collection plan, including the accessibility and manoeuvrability of refuse collection vehicles to refuse collection points, should be sought.



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 EXISTING WSD CABLE IN THE VICNITY OF THE SITE.
7. NO PROPOSED WSD CABLE IN THE VICNITY OF THE SITE.
8. THE SITE IS NOT WITHIN WSD GATHERING GROUNDS.
9. 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-24A & 24C

FILE REF: (22) IN WSD/M/SP 3051/437/77S/98 PT.1

REF. CODE: 48W23M	SHEET 1 OF 1	SCALE 1:1200

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Water Supplies Department

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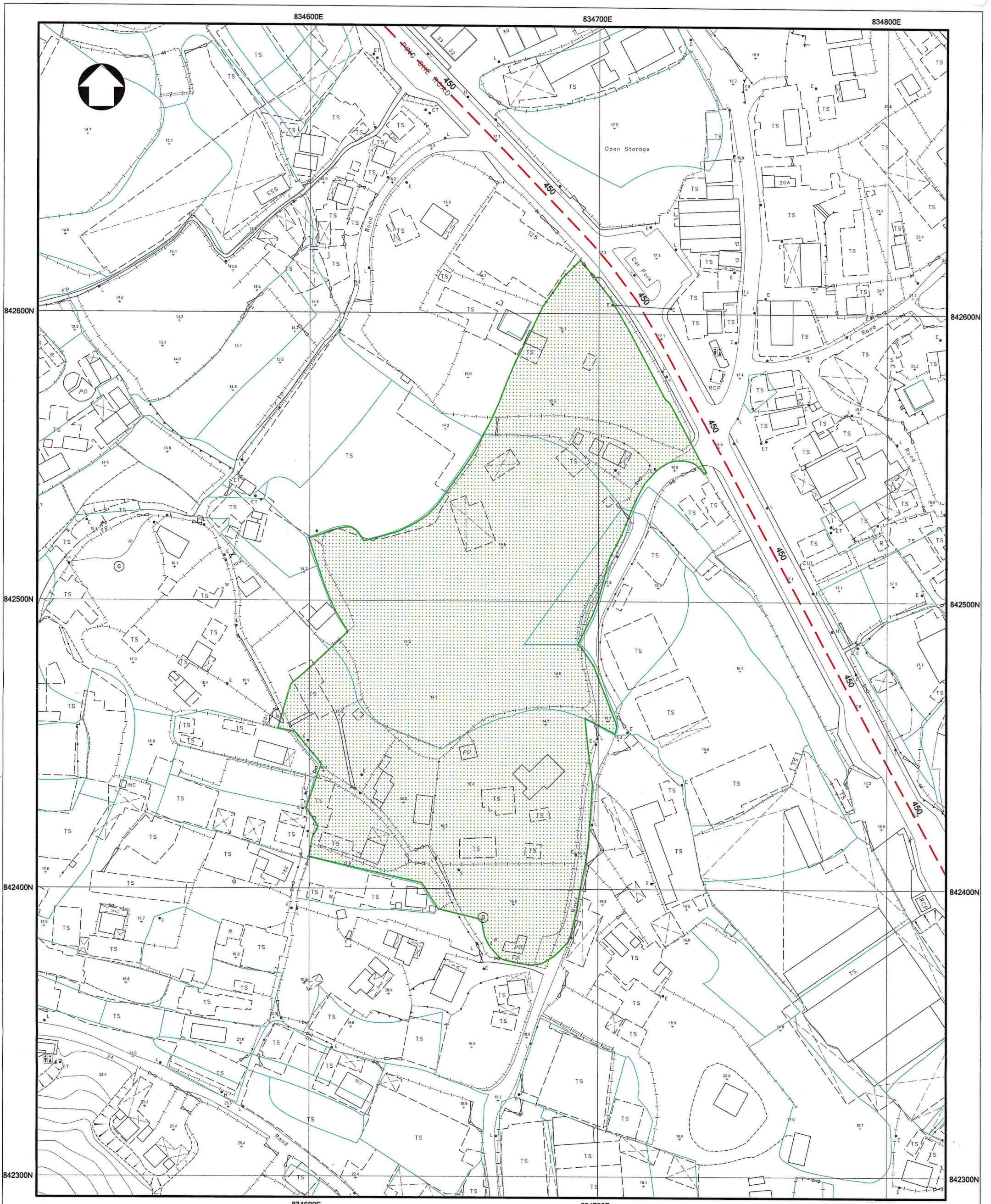

NOTES:
1. PROPOSED FRESH WATER MAINS SHOWN THUS
2. NO PROPOSED SALT WATER MAINS IN THE VICINITY OF THE SITE.
3. FOR PROPOSED WATER MAINS, PLEASE REFER TO PLANNING REPORT NO(S). 3/2012.

SUBJECT SITE

PRIVATE LOT BOUNDARY (FOR REF. ONLY)

SUPPLEMENTARY INFORMATION OF PROPOSED WATER MAINS PART COPY OF SURVEY SHEET NO(S).

3-NW-24A & 24C

FILE REF: (22) IN WSD/M/SP 3051/437/77S/98 PT.1

REF. CODE: 20W23P	SHEET 1 OF 1	SCALE 1:1200

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