

2024年 7月 3 日

此文件在 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 2024 -07- 3 1
The Town Planning Board will formally acknowledge
the date of receipt of the application only upon receipt
of all the required information and documents.

Form No. 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

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

2401863

29.7.2024 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/HSK/1
	Date Received 收到日期	2024-07-31

- 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。
- 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 樓及新界沙田上禾輦路 1 號沙田政府合署 14 樓)索取。
- 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)

Pok Oi Hospital

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)

KTA Planning Limited

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 <input checked="" type="checkbox"/> No 否 <input type="checkbox"/> (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)	No.58 Sha Chau Lei Tsuen, Ha Tsuen, Yeung Long, New Territories (Lot No. 2273 in DD 125 and the Extension Thereto)
(c) Site Area 申請地點面積	3,388.7 (Rezoning Site) .....sq.m 平方米 <input checked="" type="checkbox"/> About 約

(d) Area of Government land included (if any) 所包括的政府土地面積 (倘有)	N/A.....sq.m 平方米 <input type="checkbox"/> About 約
(e) Current use(s) 現時用途	<p>The Pok Oi Hospital Yeung Chun Pui Care and Attention Home</p> <p>(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)</p>

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，或有關係的鄉事委員會[&]

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 Hung Shui Kiu and Ha Tsuen Outline Zoning Plan No. S/HSK/2
(b) Land use zone(s) involved (if applicable) 涉及的土地用途地帶(如適用)	"Government, Institution or Community" ("G/IC")

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)

- | | |
|--|---|
| <input type="checkbox"/> Comprehensive Development Area []
綜合發展區 [] | <input type="checkbox"/> Commercial [] 商業 [] |
| <input type="checkbox"/> Residential (Group <input type="checkbox"/> A/ <input type="checkbox"/> B/ <input type="checkbox"/> C/ <input type="checkbox"/> D/ <input type="checkbox"/> E) []
住宅 (<input type="checkbox"/> 甲類 / <input type="checkbox"/> 乙類 / <input type="checkbox"/> 丙類 / <input type="checkbox"/> 丁類 / <input type="checkbox"/> 戊類) [] | <input type="checkbox"/> Village Type Development []
鄉村式發展 [] |
| <input type="checkbox"/> Agriculture [] 農業 [] | <input type="checkbox"/> Industrial [] 工業 [] |
| <input type="checkbox"/> Industrial (Group D) [] 工業 (丁類) [] | <input type="checkbox"/> Open Storage [] 露天貯物 [] |
| <input checked="" type="checkbox"/> Government, Institution or Community []
政府、機構或社區 [] | <input type="checkbox"/> Open Space [] 休憩用地 [] |
| <input type="checkbox"/> Recreation [] 康樂 [] | <input type="checkbox"/> Green Belt [] 綠化地帶 [] |
| <input type="checkbox"/> Country Park [] 郊野公園 [] | <input type="checkbox"/> Coastal Protection Area []
海岸保護區 [] |
| <input type="checkbox"/> Conservation Area [] 自然保育區 [] | <input type="checkbox"/> Site of Special Scientific Interest []
具特殊科學價值地點 [] |
| <input type="checkbox"/> Other Specified Uses (<input type="checkbox"/> Business/ <input type="checkbox"/> Industrial Estate/ <input type="checkbox"/> Mixed Use/ <input type="checkbox"/> Rural Use/ <input type="checkbox"/> Petrol Filling Station/
<input type="checkbox"/> Others (please specify _____)) [] | |
| 其他指定用途 (<input type="checkbox"/> 商貿 / <input type="checkbox"/> 工業邨 / <input type="checkbox"/> 混合用途 / <input type="checkbox"/> 鄉郊用途 / <input type="checkbox"/> 加油站 /
<input type="checkbox"/> 其他 (請註明: _____)) [] | |
| <input type="checkbox"/> Road 道路 | <input type="checkbox"/> 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)

The maximum building height as stipulated on the Approved OZP is proposed to be
 amended from 3 storeys to about 47.9 mPD. Please refer to Section 4 of the Supporting
 Planning Statement attached.

☐ 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.

A large rectangular area with a diagonal line from the bottom-left to the top-right and horizontal dotted lines, indicating a space for handwritten notes.

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


.....
WONG PUI SAI KITTY
.....
Name in Block Letters
姓名（請以正楷填寫）

☐ Applicant 申請人 / ☒ Authorised Agent 獲授權代理人

.....
Director
.....
Position (if applicable)
職位（如適用）

Professional Qualification(s) ☒ Member 會員 / ☐ Fellow of 資深會員
專業資格

- ☒ 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 No. 324

on behalf of
代表 **KTA Planning Limited**

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

Date 日期 **29/07/2024**
..... (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

<input checked="" type="checkbox"/> Proposed Gross floor area (GFA) 擬議總樓面面積	.....17,922..... sq.m. 平方米	<input checked="" type="checkbox"/> About 約
<input checked="" type="checkbox"/> Proposed plot ratio 擬議地積比率	.....5.8.....	<input checked="" type="checkbox"/> About 約
<input checked="" type="checkbox"/> Proposed site coverage 擬議上蓋面積	.....58..... %	<input checked="" type="checkbox"/> About 約
<input checked="" type="checkbox"/> Proposed number of blocks 擬議座數	.....1.....	
<input checked="" type="checkbox"/> Proposed number of storeys of each block 每座建築物的擬議層數	.....11..... storeys 層	
	<input type="checkbox"/> include 包括.....storeys of basements 層地庫	
	<input type="checkbox"/> exclude 不包括.....storeys of basements 層地庫	
<input checked="" type="checkbox"/> Proposed building height of each block 每座建築物的擬議高度	.....42.4..... m 米	<input checked="" type="checkbox"/> About 約
	.....47.9..... mPD 米(主水平基準上)	<input checked="" type="checkbox"/> About 約
<input checked="" type="checkbox"/> Domestic part 住用部分*		
GFA 總樓面面積	.....8,752..... sq.m. 平方米	<input checked="" type="checkbox"/> About 約
number of units 單位數目	.....
average unit size 單位平均面積	..... sq.m. 平方米	<input type="checkbox"/> About 約
estimated number of residents 估計住客數目	.....about 282.....	
* includes Care & Attention Home for the Elderly, Hostel for Severely Mentally Handicapped Persons, and Hostel for Moderately Mentally Handicapped Persons		
<input checked="" type="checkbox"/> Non-domestic part 非住用部分		
<input type="checkbox"/> hotel 酒店	..... sq.m.平方米	<input type="checkbox"/> About 約
	..... sq.m.平方米	<input type="checkbox"/> About 約
	(please specify the number of rooms 請註明房間數目:))	
<input type="checkbox"/> office 辦公室	..... sq.m.平方米	<input type="checkbox"/> About 約
<input type="checkbox"/> shop and services/eating place 商店及服務行業/食肆	..... sq.m.平方米	<input type="checkbox"/> About 約
<input checked="" type="checkbox"/> 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 Children Care Centre, Day Activity Centre, Integrated Vocational Rehabilitation Services Centre, Day Care Centre for the Elderly, and other self-financed welfare-related ancillary facilities - about 9,170 sq.m	
<input type="checkbox"/> 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)	
<input checked="" type="checkbox"/> Open space 休憩用地	(please specify land area(s)) (請註明面積)	
<input checked="" type="checkbox"/> private open space 私人休憩用地	.....282..... sq.m.平方米	<input checked="" type="checkbox"/> Not less than 不少於
<input type="checkbox"/> public open space 公共休憩用地	..... sq.m.平方米	<input type="checkbox"/> Not less than 不少於

<input checked="" type="checkbox"/> Transport-related facilities 與運輸有關的設施		
<input checked="" type="checkbox"/> 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		4 (including 1 accessible carparking space)
Motorcycle Parking Spaces 電單車車位		1
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)		Light Bus : 6 nos. Refuse Collection Vehicle : 1 no. Ambulance : 1 no.
<input checked="" type="checkbox"/> 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		1
Coach Spaces 旅遊巴車位		
Light Goods Vehicle Spaces 輕型貨車車位		
Medium Goods Vehicle Spaces 中型貨車車位		1
Heavy Goods Vehicle Spaces 重型貨車車位		1
Others (Please Specify) 其他 (請列明)		
<input type="checkbox"/> 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)
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]
		Please refer to Table 3.3 of Supporting Planning Statement attached.
Proposed use(s) of uncovered area (if any) 露天地方(倘有)的擬議用途 Landscape area, circulation area, pedestrian and vehicular access, car parking spaces and loading/unloading area		
Any vehicular access to the site? 是否有車路通往地盤?		
Yes 是	<input checked="" type="checkbox"/> 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)) An access road off Ping Ha Road	
	<input type="checkbox"/> 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	<input type="checkbox"/>	
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																																
<p>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。</p>																																
<p>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?</p>	<p>Yes 是</p> <p>No 否</p>	<p><input type="checkbox"/> Please provide details 請提供詳情</p> <p>.....</p> <p>.....</p> <p>.....</p> <p><input checked="" type="checkbox"/></p>																														
<p>Does the development proposal involve the operation on the right? 擬議發展是否涉及右列的工程?</p>	<p>Yes 是</p> <p>No 否</p>	<p><input type="checkbox"/> (Please indicate on site plan the boundary of concerned land/pond(s), and particulars of stream diversion, the extent of filling of land/pond(s) and/or excavation of land) (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)</p> <p><input type="checkbox"/> Diversion of stream 河道改道</p> <p><input type="checkbox"/> Filling of pond 填塘 Area of filling 填塘面積 sq.m 平方米 <input type="checkbox"/> About 約 Depth of filling 填塘深度 m 米 <input type="checkbox"/> About 約</p> <p><input type="checkbox"/> Filling of land 填土 Area of filling 填土面積 sq.m 平方米 <input type="checkbox"/> About 約 Depth of filling 填土厚度 m 米 <input type="checkbox"/> About 約</p> <p><input type="checkbox"/> Excavation of land 挖土 Area of excavation 挖土面積 sq.m 平方米 <input type="checkbox"/> About 約 Depth of excavation 挖土深度 m 米 <input type="checkbox"/> About 約</p> <p><input checked="" type="checkbox"/></p>																														
<p>Would the development proposal cause any adverse impacts? 擬議發展計劃會否造成不良影響?</p>	<table border="0"> <tr> <td>On environment 對環境</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On traffic 對交通</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On water supply 對供水</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On drainage 對排水</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On slopes 對斜坡</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Affected by slopes 受斜坡影響</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Landscape Impact 構成景觀影響</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Tree Felling 砍伐樹木</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Visual Impact 構成視覺影響</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Others (Please Specify) 其他 (請列明)</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input type="checkbox"/></td> </tr> </table> <p>.....</p> <p>.....</p> <p>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)</p> <p>Please refer to the Appendix 2 of the Supporting Planning Statement attached.</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>		On environment 對環境	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	On traffic 對交通	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	On water supply 對供水	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	On drainage 對排水	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	On slopes 對斜坡	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	Affected by slopes 受斜坡影響	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	Landscape Impact 構成景觀影響	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	Tree Felling 砍伐樹木	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	Visual Impact 構成視覺影響	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>	Others (Please Specify) 其他 (請列明)	Yes 會 <input type="checkbox"/>	No 不會 <input type="checkbox"/>
On environment 對環境	Yes 會 <input type="checkbox"/>	No 不會 <input checked="" type="checkbox"/>																														
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Others (Please Specify) 其他 (請列明)	Yes 會 <input type="checkbox"/>	No 不會 <input type="checkbox"/>																														

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^②

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

② 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.
在該靈灰安置所內，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	No.58 Sha Chau Lei Tsuen, Ha Tsuen, Yeung Long, New Territories (Lot No. 2273 in DD 125 and the Extension Thereto)		
Site area 地盤面積	3,388.7 (Rezoning Site) (includes Government land of 包括政府土地	sq. m 平方米 <input checked="" type="checkbox"/> About 約	sq. m 平方米 <input type="checkbox"/> About 約)
Plan 圖則	Approved Hung Shui Kiu and Ha Tsuen Outline Zoning Plan No. S/HSK/2		
Zoning 地帶	"Government, Institution or Community" ("G/IC")		
Proposed Amendment(s) 擬議修訂	<input type="checkbox"/> Amend the Covering Notes of the Plan 修訂圖則《註釋》的說明頁 <input checked="" type="checkbox"/> 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》 <input type="checkbox"/> Rezone the application site from _____ to _____ 把申請地點由 _____ 地帶改劃為 _____		
Development Parameters (for indicative purpose only) 發展參數(只作指示用途)			
(i) Gross floor area and/or plot ratio 總樓面面積及/或地積比率		sq.m 平方米	Plot Ratio 地積比率
	Domestic 住用	8,752 <input checked="" type="checkbox"/> About 約 <input type="checkbox"/> Not more than 不多於	2.83 <input checked="" type="checkbox"/> About 約 <input type="checkbox"/> Not more than 不多於
	Non-domestic 非住用	9,170 <input checked="" type="checkbox"/> About 約 <input type="checkbox"/> Not more than 不多於	2.97 <input checked="" type="checkbox"/> About 約 <input type="checkbox"/> Not more than 不多於
(ii) No. of block 幢數	Domestic 住用		
	Non-domestic 非住用		
	Composite 綜合用途	1	

(iii) Building height/No. of storeys 建築物高度／層數	Domestic 住用		m 米 <input type="checkbox"/> (Not more than 不多於)
			mPD 米(主水平基準上) <input type="checkbox"/> (Not more than 不多於)
			Storeys(s) 層 <input type="checkbox"/> (Not more than 不多於) (<input type="checkbox"/> Include 包括/ <input type="checkbox"/> Exclude 不包括 <input type="checkbox"/> Carport 停車間 <input type="checkbox"/> Basement 地庫 <input type="checkbox"/> Refuge Floor 防火層 <input type="checkbox"/> Podium 平台)
	Non-domestic 非住用		m 米 <input type="checkbox"/> (Not more than 不多於)
			mPD 米(主水平基準上) <input type="checkbox"/> (Not more than 不多於)
			Storeys(s) 層 <input type="checkbox"/> (Not more than 不多於) (<input type="checkbox"/> Include 包括/ <input type="checkbox"/> Exclude 不包括 <input type="checkbox"/> Carport 停車間 <input type="checkbox"/> Basement 地庫 <input type="checkbox"/> Refuge Floor 防火層 <input type="checkbox"/> Podium 平台)
	Composite 綜合用途	about 42.4	m 米 <input type="checkbox"/> (Not more than 不多於)
		about 47.9	mPD 米(主水平基準上) <input type="checkbox"/> (Not more than 不多於)
		11	Storeys(s) 層 <input checked="" type="checkbox"/> (Not more than 不多於) (<input type="checkbox"/> Include 包括/ <input type="checkbox"/> Exclude 不包括 <input type="checkbox"/> Carport 停車間 <input type="checkbox"/> Basement 地庫 <input type="checkbox"/> Refuge Floor 防火層 <input type="checkbox"/> Podium 平台)
(iv) Site coverage 上蓋面積		58	% <input checked="" type="checkbox"/> About 約
(v) No. of units 單位數目			
(vi) Open space 休憩用地	Private 私人	282	sq.m 平方米 <input checked="" type="checkbox"/> Not less than 不少於
	Public 公眾		sq.m 平方米 <input type="checkbox"/> 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	13
	Private Car Parking Spaces 私家車車位	4
	Motorcycle Parking Spaces 電單車車位	
	Light Goods Vehicle Parking Spaces 輕型貨車泊車位	1
	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)	
	Light Bus	6
	Refuse Collection Vehicle	1
	Ambulance	1
	Total no. of vehicle loading/unloading bays/lay-bys 上落客貨車位／停車處總數	3
	Taxi Spaces 的士車位	1
	Coach Spaces 旅遊巴車位	
	Light Goods Vehicle Spaces 輕型貨車車位	
	Medium Goods Vehicle Spaces 中型貨車位	1
	Heavy Goods Vehicle Spaces 重型貨車車位	1
	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	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Block plan(s) 樓宇位置圖	<input type="checkbox"/>	<input type="checkbox"/>
Floor plan(s) 樓宇平面圖	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sectional plan(s) 截視圖	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Elevation(s) 立視圖	<input type="checkbox"/>	<input type="checkbox"/>
Photomontage(s) showing the proposed development 顯示擬議發展的合成照片	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Master landscape plan(s)/Landscape plan(s) 園境設計總圖／園境設計圖	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Others (please specify) 其他 (請註明)	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>		
Reports 報告書		
Planning Statement/Justifications 規劃綱領/理據	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Environmental assessment (noise, air and/or water pollutions) 環境評估 (噪音、空氣及／或水的污染)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic impact assessment (on vehicles) 就車輛的交通影響評估	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic impact assessment (on pedestrians) 就行人的交通影響評估	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Visual impact assessment 視覺影響評估	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Landscape impact assessment 景觀影響評估	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tree Survey 樹木調查	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Geotechnical impact assessment 土力影響評估	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Drainage impact assessment 排水影響評估	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sewerage impact assessment 排污影響評估	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Risk Assessment 風險評估	<input type="checkbox"/>	<input type="checkbox"/>
Others (please specify) 其他 (請註明)	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>		
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。

For Official Use Only 請勿填寫此欄	Application No. 申請編號	
	Date Received 收到日期	

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 樓及新界沙田上禾輦路 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
<input type="checkbox"/> Mr. 先生 / <input type="checkbox"/> Mrs. 夫人 / <input type="checkbox"/> Miss 小姐 / <input type="checkbox"/> Ms. 女士 / <input type="checkbox"/> Company 公司 / <input checked="" type="checkbox"/> Organisation 機構) <div style="border: 1px solid black; padding: 5px; min-height: 30px;">Pok Oi Hospital</div>

2. Name of Authorised Agent (if applicable) 獲授權代理人姓名/名稱 (如適用)
<input type="checkbox"/> Mr. 先生 / <input type="checkbox"/> Mrs. 夫人 / <input type="checkbox"/> Miss 小姐 / <input type="checkbox"/> Ms. 女士 / <input checked="" type="checkbox"/> Company 公司 / <input type="checkbox"/> Organisation 機構) <div style="border: 1px solid black; padding: 5px; min-height: 30px;">KTA Planning Limited</div>

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 <input checked="" type="checkbox"/> No 否 <input type="checkbox"/> (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)	No.58 Sha Chau Lei Tsuen, Ha Tsuen, Yeung Long, New Territories (Lot No. 2273 in DD 125 and the Extension Thereto)
(c) Site Area 申請地點面積	<div style="text-align: right;"> 3,388.7 (Rezoning Site) 3,090 (Development Site).....sq.m 平方米 </div> <div style="text-align: right;"> <input checked="" type="checkbox"/> About 約 </div>

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 Hung Shui Kiu and Ha Tsuen Outline Zoning Plan No. S/HSK/2
(b) Land use zone(s) involved (if applicable) 涉及的土地用途地帶(如適用)	"Government, Institution or Community" ("G/IC")

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)	
<input type="checkbox"/> Comprehensive Development Area [] 綜合發展區 [] <input type="checkbox"/> Residential (Group <input type="checkbox"/> A/ <input type="checkbox"/> B/ <input type="checkbox"/> C/ <input type="checkbox"/> D/ <input type="checkbox"/> E) [] 住宅 (<input type="checkbox"/> 甲類 / <input type="checkbox"/> 乙類 / <input type="checkbox"/> 丙類 / <input type="checkbox"/> 丁類 / <input type="checkbox"/> 戊類) [] <input type="checkbox"/> Agriculture [] 農業 [] <input type="checkbox"/> Industrial (Group D) [] 工業(丁類) [] <input type="checkbox"/> Government, Institution or Community [] 政府、機構或社區 [] <input type="checkbox"/> Recreation [] 康樂 [] <input type="checkbox"/> Country Park [] 郊野公園 [] <input type="checkbox"/> Conservation Area [] 自然保育區 [] <input type="checkbox"/> Other Specified Uses (<input type="checkbox"/> Business/ <input type="checkbox"/> Industrial Estate/ <input type="checkbox"/> Mixed Use/ <input type="checkbox"/> Rural Use/ <input type="checkbox"/> Petrol Filling Station/ <input type="checkbox"/> Others (please specify _____)) [] 其他指定用途 (<input type="checkbox"/> 商貿 / <input type="checkbox"/> 工業邨 / <input type="checkbox"/> 混合用途 / <input type="checkbox"/> 鄉郊用途 / <input type="checkbox"/> 加油站 / <input type="checkbox"/> 其他 (請註明: _____)) [] <input type="checkbox"/> Road 道路	<input type="checkbox"/> Commercial [] 商業 [] <input type="checkbox"/> Village Type Development [] 鄉村式發展 [] <input type="checkbox"/> Industrial [] 工業 [] <input type="checkbox"/> Open Storage [] 露天貯物 [] <input type="checkbox"/> Open Space [] 休憩用地 [] <input type="checkbox"/> Green Belt [] 綠化地帶 [] <input type="checkbox"/> Coastal Protection Area [] 海岸保護區 [] <input type="checkbox"/> Site of Special Scientific Interest [] 具特殊科學價值地點 [] <input type="checkbox"/> Others (please specify _____) 其他 (請註明: _____)
Please insert subzone in [] as appropriate. 請於[]內註明支區，如適用。	

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

<input checked="" type="checkbox"/> Proposed Gross floor area (GFA) 擬議總樓面面積	..... 17,922 sq.m. 平方米	<input checked="" type="checkbox"/> About 約
<input checked="" type="checkbox"/> Proposed plot ratio 擬議地積比率	..... 5.8*	<input checked="" type="checkbox"/> About 約
<input checked="" type="checkbox"/> Proposed site coverage 擬議上蓋面積	..... 58* %	<input checked="" type="checkbox"/> About 約
<input checked="" type="checkbox"/> Proposed number of blocks 擬議座數	..... 1	
<input checked="" type="checkbox"/> Proposed number of storeys of each block 每座建築物的擬議層數	..... 11 storeys 層	
* Calculated based on Development Site Area		
	<input type="checkbox"/> include 包括.....storeys of basements 層地庫	
	<input type="checkbox"/> exclude 不包括.....storeys of basements 層地庫	
<input checked="" type="checkbox"/> Proposed building height of each block 每座建築物的擬議高度	..... 42.4 m 米	<input checked="" type="checkbox"/> About 約
	Not more than 47.9 mPD 米(主水平基準上)	<input type="checkbox"/> About 約
<input checked="" type="checkbox"/> Domestic part 住用部分**		
GFA 總樓面面積	..... 8,752 sq.m. 平方米	<input checked="" type="checkbox"/> About 約
number of units 單位數目	.....
average unit size 單位平均面積	..... sq.m. 平方米	<input type="checkbox"/> About 約
estimated number of residents 估計住客數目	..... about 282	
** includes Care & Attention Home for the Elderly, Hostel for Severely Mentally Handicapped Persons, and Hostel for Moderately Mentally Handicapped Persons		
<input checked="" type="checkbox"/> Non-domestic part 非住用部分		
<input type="checkbox"/> hotel 酒店	..... sq.m.平方米	<input type="checkbox"/> About 約
	..... sq.m.平方米	<input type="checkbox"/> About 約
	(please specify the number of rooms 請註明房間數目:))	
<input type="checkbox"/> office 辦公室	..... sq.m.平方米	<input type="checkbox"/> About 約
<input type="checkbox"/> shop and services/eating place 商店及服務行業/食肆	..... sq.m.平方米	<input type="checkbox"/> About 約
<input checked="" type="checkbox"/> 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 Children Care Centre, Day Activity Centre, Integrated Vocational Rehabilitation Services Centre, Day Care Centre for the Elderly, and other self-financed welfare-related ancillary facilities - about 9,170 sq.m	
<input type="checkbox"/> 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)	
<input checked="" type="checkbox"/> Open space 休憩用地	(please specify land area(s)) (請註明面積)	
<input checked="" type="checkbox"/> private open space 私人休憩用地	..... 282 sq.m.平方米	<input checked="" type="checkbox"/> Not less than 不少於
<input type="checkbox"/> public open space 公共休憩用地	..... sq.m.平方米	<input type="checkbox"/> Not less than 不少於

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	No.58 Sha Chau Lei Tsuen, Ha Tsuen, Yeung Long, New Territories (Lot No. 2273 in DD 125 and the Extension Thereto)		
Site area 地盤面積	3,388.7 (Rezoning Site) 3,090 (Development Site) (includes Government land of 包括政府土地	sq. m 平方米	<input checked="" type="checkbox"/> About 約 <input type="checkbox"/> About 約)
Plan 圖則	Approved Hung Shui Kiu and Ha Tsuen Outline Zoning Plan No. S/HSK/2		
Zoning 地帶	"Government, Institution or Community" ("G/IC")		
Proposed Amendment(s) 擬議修訂	<input type="checkbox"/> Amend the Covering Notes of the Plan 修訂圖則《註釋》的說明頁 <input checked="" type="checkbox"/> 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》 <input type="checkbox"/> Rezone the application site from _____ to _____ 把申請地點由_____地帶改劃為_____		

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

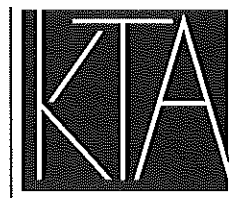
(i) Gross floor area and/or plot ratio 總樓面面積及／或地積比率		sq.m 平方米	Plot Ratio 地積比率
(ii) No. of block 幢數	Domestic 住用	8,752 <input checked="" type="checkbox"/> About 約 <input type="checkbox"/> Not more than 不多於	2.83* <input checked="" type="checkbox"/> About 約 <input type="checkbox"/> Not more than 不多於
	Non-domestic 非住用	9,170 <input checked="" type="checkbox"/> About 約 <input type="checkbox"/> Not more than 不多於	2.97* <input checked="" type="checkbox"/> About 約 <input type="checkbox"/> Not more than 不多於
	Composite 綜合用途	1	

* Calculated based on Development Site Area

(iii) Building height/No. of storeys 建築物高度／層數	Domestic 住用		m 米 <input type="checkbox"/> (Not more than 不多於)
			mPD 米(主水平基準上) <input type="checkbox"/> (Not more than 不多於)
			Storeys(s) 層 <input type="checkbox"/> (Not more than 不多於) (<input type="checkbox"/> Include 包括 <input type="checkbox"/> Exclude 不包括 <input type="checkbox"/> Carport 停車間 <input type="checkbox"/> Basement 地庫 <input type="checkbox"/> Refuge Floor 防火層 <input type="checkbox"/> Podium 平台)
	Non-domestic 非住用		m 米 <input type="checkbox"/> (Not more than 不多於)
			mPD 米(主水平基準上) <input type="checkbox"/> (Not more than 不多於)
			Storeys(s) 層 <input type="checkbox"/> (Not more than 不多於) (<input type="checkbox"/> Include 包括 <input type="checkbox"/> Exclude 不包括 <input type="checkbox"/> Carport 停車間 <input type="checkbox"/> Basement 地庫 <input type="checkbox"/> Refuge Floor 防火層 <input type="checkbox"/> Podium 平台)
	Composite 綜合用途	about 42.4	m 米 <input type="checkbox"/> (Not more than 不多於)
		47.9	mPD 米(主水平基準上) <input checked="" type="checkbox"/> (Not more than 不多於)
		11	Storeys(s) 層 <input checked="" type="checkbox"/> (Not more than 不多於) (<input type="checkbox"/> Include 包括 <input type="checkbox"/> Exclude 不包括 <input type="checkbox"/> Carport 停車間 <input type="checkbox"/> Basement 地庫 <input type="checkbox"/> Refuge Floor 防火層 <input type="checkbox"/> Podium 平台)
(iv) Site coverage 上蓋面積	58 % <input checked="" type="checkbox"/> About 約		
(v) No. of units 單位數目			
(vi) Open space 休憩用地	Private 私人	282	sq.m 平方米 <input checked="" type="checkbox"/> Not less than 不少於
	Public 公眾		sq.m 平方米 <input type="checkbox"/> 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	13
	Private Car Parking Spaces 私家車車位	4
	Motorcycle Parking Spaces 電單車車位	
	Light Goods Vehicle Parking Spaces 輕型貨車泊車位	1
	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)	
	Light Bus	6
	Refuse Collection Vehicle	1
	Ambulance	1
	Total no. of vehicle loading/unloading bays/lay-bys 上落客貨車位／停車處總數	3
	Taxi Spaces 的士車位	1
	Coach Spaces 旅遊巴車位	
	Light Goods Vehicle Spaces 輕型貨車車位	
	Medium Goods Vehicle Spaces 中型貨車車位	1
	Heavy Goods Vehicle Spaces 重型貨車車位	1
	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
<u>Plans and Drawings 圖則及繪圖</u>		
Master layout plan(s)/Layout plan(s) 總綱發展藍圖／布局設計圖	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Block plan(s) 樓宇位置圖	<input type="checkbox"/>	<input type="checkbox"/>
Floor plan(s) 樓宇平面圖	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sectional plan(s) 截視圖	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Elevation(s) 立視圖	<input type="checkbox"/>	<input type="checkbox"/>
Photomontage(s) showing the proposed development 顯示擬議發展的合成照片	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Master landscape plan(s)/Landscape plan(s) 園境設計總圖／園境設計圖	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Others (please specify) 其他 (請註明)	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>		
<u>Reports 報告書</u>		
Planning Statement/Justifications 規劃綱領/理據	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Environmental assessment (noise, air and/or water pollutions) 環境評估 (噪音、空氣及／或水的污染)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic impact assessment (on vehicles) 就車輛的交通影響評估	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic impact assessment (on pedestrians) 就行人的交通影響評估	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Visual impact assessment 視覺影響評估	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Landscape impact assessment 景觀影響評估	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tree Survey 樹木調查	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Geotechnical impact assessment 土力影響評估	<input type="checkbox"/>	<input type="checkbox"/>
Drainage impact assessment 排水影響評估	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sewerage impact assessment 排污影響評估	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Risk Assessment 風險評估	<input type="checkbox"/>	<input type="checkbox"/>
Others (please specify) 其他 (請註明)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Geotechnical Appraisal and Foundation Proposal</u>		
<hr/>		
Note: May insert more than one 「✓」. 註：可在多於一個方格內加上「✓」號		



PLANNING LIMITED
規劃顧問有限公司

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傳真FAX (852) 3426 9737
電郵EMAIL kta@ktaplanning.com

By Email and Hand

Our Ref: S3108/58SCLT/24/011Lg

17 January 2025

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

Dear Sir/Madam,

**Proposed Amendment to the Building Height Restriction of
the "Government, Institution or Community" Zone
for Permitted Social Welfare Facility
(Redevelopment of The Pok Oi Hospital Yeung Chun Pui
Care and Attention Home)
No.58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long, New Territories
(Planning Application No. Y/HSK/1)**

Reference is made to the captioned S12A Planning Application which is scheduled for consideration by the Town Planning Board ("TPB") on 24 January 2025.

We hereby submit a Consolidated Supporting Planning Statement ("Consolidated SPS") to facilitate the consideration of the captioned Planning Application by TPB. The Consolidated SPS contains the latest version of the development scheme and technical assessments that had been previously submitted to TPB under various Further Information ("F.I.") submissions. Hence, the attached Consolidated SPS would supersede the various F.I.s submitted on 10 September 2024, 30 September 2024, 4 December 2024 and 8 January 2025. We also confirm that information included in the attached Consolidated SPS had been previously submitted during the course of the Planning Application and does not contain any new information.

Should you have any queries in relation to the above and attached, please do not hesitate to contact the undersigned at [REDACTED] or Mr Wilson Man at [REDACTED]

Thank you for your kind attention.

Yours faithfully
For and on behalf of
KTA PLANNING LIMITED


Kitty Wong

Encl. Consolidated SPS (4 hardcopies)

cc. DPO/TM&YL – Ms Charlotte Lam (by email)
the Applicant & Team

KW/WM/vy



**S12A AMENDMENT OF PLAN APPLICATION
APPROVED HUNG SHUI KIU AND HA TSUEN
OUTLINE ZONING PLAN NO. S/HSK/2**

**Proposed Amendment to the Building Height Restriction of the
“Government, Institution or Community” Zone
for Permitted Social Welfare Facility
(Redevelopment of The Pok Oi Hospital Yeung Chun Pui Care and
Attention Home)
No.58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long, New Territories
(Lot No. 2273 in DD 125 and the Extension Thereto)**

Supporting Planning Statement

September 2024

Applicant:

Pok Oi Hospital

Consultancy Team:

KTA Planning Ltd.

P&T Architects Ltd.

AEC Ltd.

AECOM Asia Company Ltd.

MVA Hong Kong Ltd.



S3108_PS_V03



PLANNING LIMITED
規 劃 顧 問 有 限 公 司

Executive Summary

This Planning Application is prepared and submitted on behalf of Pok Oi Hospital (“the Applicant”) to seek approval from the Town Planning Board (“TPB”) under section 12A of the Town Planning Ordinance for the proposed amendment to the building height restriction (“BHR”) of the “Government, Institution or Community” (“G/IC”) zone on the Approved Hung Shui Kiu and Ha Tsuen Outline Zoning Plan (“the Approved OZP”) No. S/HSK/2 to enable the permitted Social Welfare Facility at No.58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long, New Territories (“the Site”).

To optimize the use of the Site and to enhance its services capacity to meet the increasing demand for social welfare and rehabilitation services, the Applicant proposes to redevelop Pok Oi Hospital Yeung Chun Pui Care and Attention Home (“YCP C&A Home”) into a new building with a building height of 47.9mPD under the Special Scheme on Privately Owned Sites for Welfare Uses (“Special Sites Scheme”). The proposal involves an increase in GFA from about 2,351 m². to about 17,922m² (i.e. an increase of about 662%). Besides expanding the current service places for Care and Attention Home for the Elderly, new Child Care Centre (“CCC”), Day Activity Centre (“DAC”), Integrated Vocational Rehabilitation Services Centre (“IVRSC”), Hostel for Severely Mentally Handicapped Persons (“HSMH”), Hostel for Moderately Mentally Handicapped Persons (“HMMH”), Day Care Centre for the Elderly (“DE”) and other self-financed welfare-related ancillary facilities will also be provided.

The Proposed Development is fully justified due to the following reasons:

- The Proposed Development with provision of social welfare and rehabilitation facilities in great demand is totally in-line with Government’s Special Sites Scheme to increase the provision of the much-needed facilities at their own sites through expansion or redevelopment. Approval of this Planning Application would allow the smooth and timely implementation of the Special Sites Scheme.
- The redevelopment of YCP C&A Home would help to alleviate the shortage of quality social welfare and rehabilitation services for the persons in need. It also shortens the waiting list for these welfare services.
- The proposal will put valuable land resources into more efficient use for the provision of additional and much-needed social welfare and rehabilitation facilities, which would be in-line with the Government’s “Single Site, Multiple Use” development model.
- The expanded YCP C&A Home would have better spatial arrangement and facilities to support the Applicant’s future development in order to continue offering quality social welfare and rehabilitation services.

- The decanting of existing residents will be accommodated in three phases. The Applicant will ensure that the existing care and attention services for the elderly will not be suspended during the course of redevelopment.
- The proposed redevelopment of YCP C&A Home for the provision of enhanced social welfare and rehabilitation service will continue to follow and be in-line with the planning intention of the “G/IC” zone.
- The Indicative Development Scheme has taken into consideration of the established planning and urban design framework of the Hung Shui Kiu New Development Area and the development intensity is considered appropriate.
- The Applicant has strived to make the greatest endeavours to come up with an optimal design by incorporating various design merits to respond positively to the surrounding context.
- Various technical assessments have been carried out and the findings concluded that the Proposal is technically feasible without posing negative impact onto the surrounding environment.

In light of the above, the Planning Application should be supported by the TPB from planning and technical points of view.

行政摘要

(內文如有差異，應以英文版本為準)

此規劃申請是代表申請人博愛醫院(下稱「申請人」)根據城市規劃條例第12A條，向城市規劃委員會(下稱「城規會」)申請修訂洪水橋及廈村分區計劃大綱核准圖編號 S/HSK/2 (下稱「大綱核准圖」)「政府、機構或社區」地帶的建築物高度限制，以容許位於新界元朗廈村沙洲里村 58 號的申請地點作經常准許的「社會福利設施」用途。

為了充分利用申請地點的土地和應付社福及康復服務日益增加的需求，申請人擬議透過「私人土地作福利用途特別計劃」(下稱「特別計劃」)原址重建博愛醫院楊晉培護理安老院為一座主水平基準上約 47.9 米的新建築物。擬議發展牽涉總樓面面積的增加，由約 2,351 平方米增加至 約 17,922 平方米(即增加約百分之六百六十二)。除了增加現有的長者護理安老院服務外，擬議重建將提供新的社會福利設施，包括幼兒中心、展能中心、綜合職業康復服務中心、嚴重智障人士宿舍、中度智障人士宿舍、長者日間護理中心和其他自負盈虧的福利相關附屬設施。

申請人提出是次規劃申請是基於以下理據：

- 擬議發展完全符合「特別計劃」以透過擴建或重建增加社會福利設施的供應。批准規劃申請能讓擬議重建得以順利及適時地落實。
- 原址重建博愛醫院楊晉培護理安老院能有效舒緩優質社會福利及康復服務的短缺，同時減少輪候時間。
- 擬議重建能更有效地善用珍貴的土地資源，為有需要人士提供社會福利設施，符合政府「一地多用」的發展模式。
- 原址擴建能改善現時安老院的空間佈局，以配合申請人的未來發展及持續提供優質的社會福利及康復服務。
- 擬議重建工程和住宿過渡安排將分為三個階段進行，申請人會確保現時的長者照顧及安老服務不會受重建工程影響。
- 擬議原址重建以優化現時社會福利及康復服務將繼續符合大綱核准圖「政府、機構或社區」地帶的規劃意向。
- 擬議發展計劃已適切地考慮了洪水橋新發展區的規劃及城市設計框架，而擬議發展的密度被視為合適。
- 申請人已致力提供最理想的建築設計以融合各種規劃得益，並配合周邊環境。

- 擬議發展的規模不大，多個技術評估報告均證明擬議發展將不會對地區造成不良影響。

根據以上各點，申請人希望是次的規劃申請能獲得城規會支持。

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S12A Amendment of Plan Application
Approved Hung Shui Kiu and Ha Tsuen OZP No. S/HSK/2

Proposed Amendment to the Building Height Restriction
of the “Government, Institution or Community” Zone
For Permitted Social Welfare Facility
(Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home)
at No.58 Sha Chau Lei Tsuen, Ha Tsuen,
Yuen Long, New Territories
(Lot No. 2273 in DD 125 and the Extension Thereto)

Supporting Planning Statement

1. INTRODUCTION

1.1 Background

1.1.1 This Planning Application is prepared and submitted on behalf of Pok Oi Hospital (“the Applicant”) to seek approval from the Town Planning Board (“TPB”) under section 12A of the Town Planning Ordinance for the proposed amendment to the building height restriction (“BHR”) of the “Government, Institution or Community” (“G/IC”) zone on the Approved Hung Shui Kiu and Ha Tsuen Outline Zoning Plan (“the Approved OZP”) No. S/HSK/2 to enable the permitted Social Welfare Facility at No.58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long, New Territories (“the Site”). The Proposal involves the redevelopment of the Pok Oi Hospital Yeung Chun Pui Care and Attention Home (“YCP C&A Home”) into a new building with building height of about 47.9 mPD under the Special Scheme on Privately Owned Sites for Welfare Uses (“Special Sites Scheme”) for enhancing its services capacity to meet the increasing demand. This Supporting Planning Statement is to provide the TPB with necessary information to facilitate consideration of this Planning Application.

1.2 Report Structure

1.2.1 Following this Introductory Section, the site and planning context will be briefly set out in Section 2. The Indicative Development Scheme is included in Section 3 followed by the rezoning proposal in Section 4. Section 5 involves planning merits and justifications for the Proposed Development, while Section 6 concludes and summarizes this Supporting Planning Statement.

2. SITE AND PLANNING CONTEXT

2.1 Site Location and Existing Condition

2.1.1 The Site (also the Rezoning Site) is located at No.58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long (Lot No. 2273 in DD 125 and the Extension Thereto). It is bounded by Sha Chau Lei Road to its east, access road to its north, Sha Chau Lei Tsuen to its west and Ching Chung Care and Attention Home for the Aged to its south. The Site is currently occupied by the YCP C&A Home (**Figures 2.1** and **2.2** refer). The Rezoning Site area is about 3,388.7m², while the Development Site area (includes Lot No. 2273 in DD125 only for the calculation of plot ratio and site coverage) is about 3,090m². The vehicular access is via an access road off Ping Ha Road at its north.

2.1.2 The existing 3-storey YCP C&A Home with GFA of about 2,351m² was completed in 1984. The target service users are elderlies who require personal care and attention in the course of daily living activities that are unable to live at home, but do not require intensive nursing cares. The YCP C&A Home offers a total of 143 subvented places of C&A Home/CoC (mainly 8-bed dormitory rooms on each floor with facilities for daily activities for the elderly). Every two dormitory rooms (total 16 elders) are sharing a single bathroom with toilets and shower area. An outdoor garden on G/F offers a large open space for daily activities.

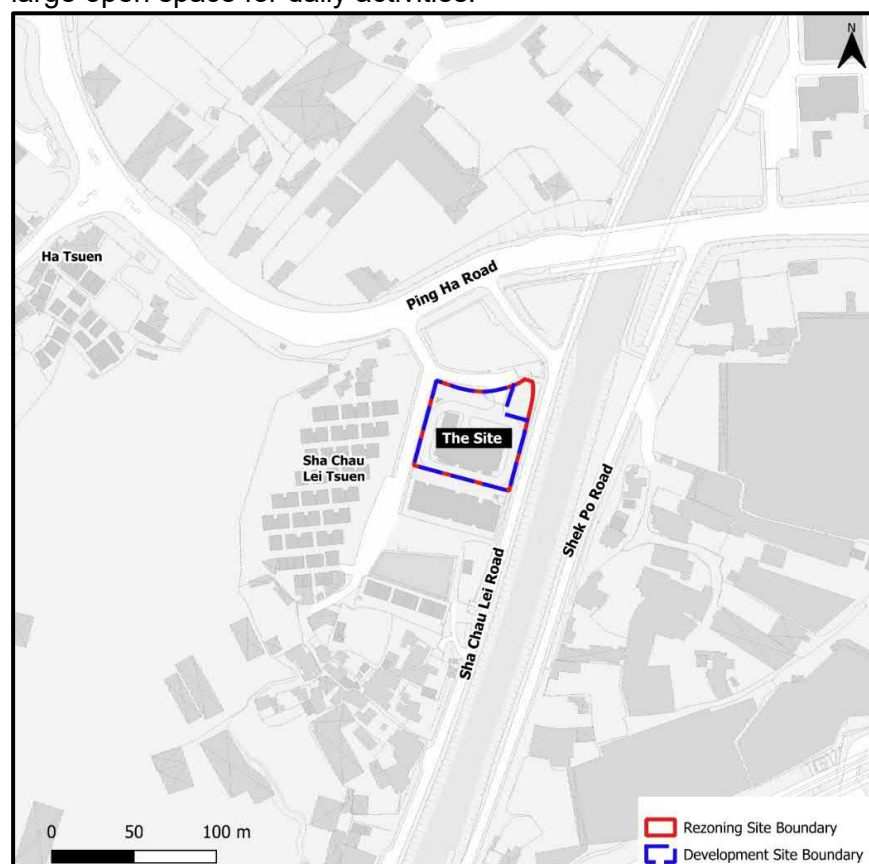


Figure 2.1 Site Location Plan



LEGEND

 Rezoning Site Boundary

 Development Site Boundary

① Subject Site

② Sha Chau Lei Tsuen Village Office and Village Houses

③ Ching Chung Care and Attention Home and Subject Site

④ Sha Chau Lei Sitting Out Area

⑤ Open Storage and Temporary Structures across Tin Shui Wai Main Channel

⑥ Subject Site viewed from Sha Chau Lei Road

⑦ CEDD Site Office

⑧ Temporary Carpark

2.2 Land Status

2.2.1 The Site falls within Lot No. 2273 in DD 125 and the Extension Thereto (**Figure 2.3** refers). According to the lease conditions, Lot No. 2273 is restricted for the use of "*a non-profit-making residential care and attention home for the aged and such ancillary purposes as may be approved by the Director of Social Welfare*". In terms of development conditions, buildings erected or to be erected on the lot shall not contain more than three storeys nor exceed a height of 10.67m above the mean formation level of the land on which it stands, and the maximum site coverage of the lot shall not exceed 50% of the area of the lot.

2.2.2 Three non-building areas are stipulated on the lease, including one abuts its western boundary with a width of 3m, another one of 10m in width abuts its northern boundary, as well as the whole Extension Thereto of Lot No. 2273 ("Extension Area") in DD 125. It is stated that the Extension Area shall not be taken into account for the purposes of calculating plot ratio or site coverage. In this Planning Application, the Extension Area will be excluded from the Development Site Area of about 3,090m² for the calculation of plot ratio and site coverage. An application for lease modification to Lands Department upon obtaining approval from the TPB will be required for any deviations from the development restrictions as stipulated under the lease.

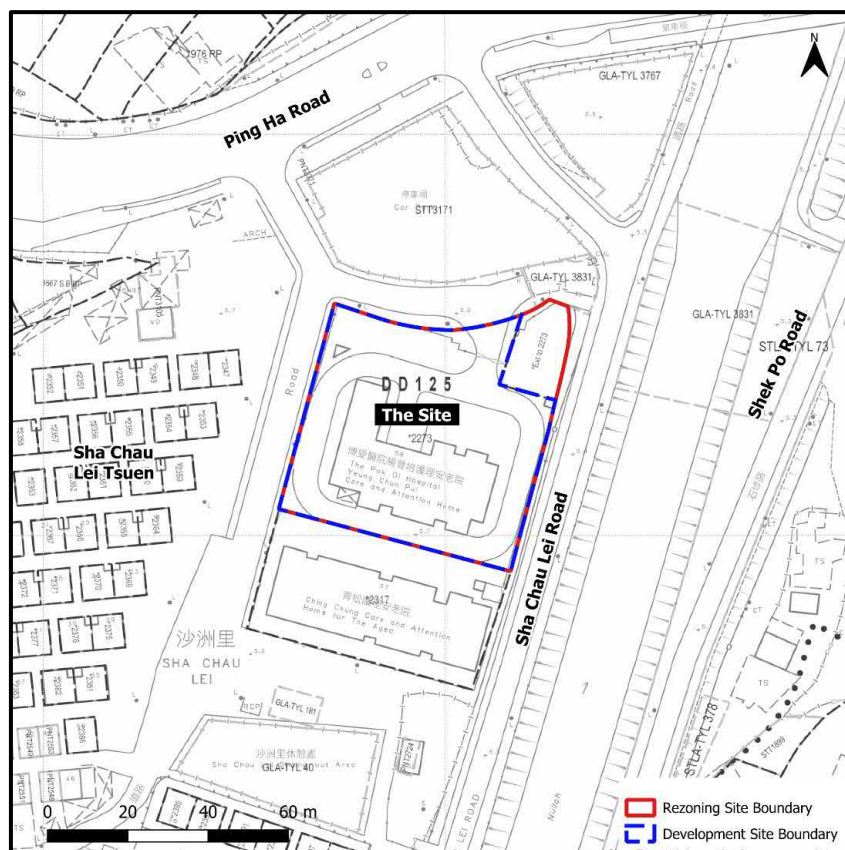


Figure 2.3 Lot Index Plan

2.3 Surrounding Land Use Pattern

2.3.1 The Site is situated in an area characterized by mixed land uses including village settlements, G/IC facilities and temporary open storages, workshops, warehouses, carparks and site offices (**Figure 2.4** refers). Details of the surrounding land uses are as follows:

- To the immediate south of the Site is Ching Chung Care and Attention Home for the Aged operated by Ching Chung Taoist Association of Hong Kong Limited located in the same “G/IC” zone.
- To the further south is Sha Chau Lei Sitting-out Area, open storage and temporary structures.
- To the west is Sha Chau Lei Tsuen with low-rise village houses and open storage.
- To the north of the Site are a temporary open-air public carpark and a site office of Civil Engineering and Development Department (“CEDD”) located in the same “G/IC” zone.
- To the further north across Ping Ha Road is a cluster of open storages and warehouses in an area zoned “G/IC”.
- To the further east across the Tin Shui Wai Main Channel is mainly occupied by some temporary structures and open storages in an area mainly zoned “Residential (Group A) 2”, “Residential (Group A) 3” and “Commercial”.



Figure 2.4 Surrounding Land Uses

2.4 Planning Context

Statutory

- 2.4.1 The Site falls within an area zoned “G/IC” on the Approved OZP (**Figure 2.5** refers). According to the Statutory Notes of the Approved OZP, the planning intention of “G/IC” zone is “*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, organisations providing social services to meet community needs, and other institutional establishments*”. “Social Welfare Facility” is under Column 1 of the Statutory Notes which is an always permitted use.

2.4.2 According to the “Remarks” of the Statutory Notes of the “G/I/C” zone, “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 height in terms of number of storey(s) or metres above Principal Datum as stipulated on the Plan, or the height of the existing building, whichever is the greater”. The Site is subjected to a BHR of 3 storeys.

2.4.3 As the increase in building height from 3 storeys to about 47.9mPD is substantial which numerically may not be considered as “minor”, a proposed amendment to the Notes of the Approved OZP would be required. The Applicant puts forward this S12A Planning Application with an increase in BHR to enable the Proposed Development on the Site.

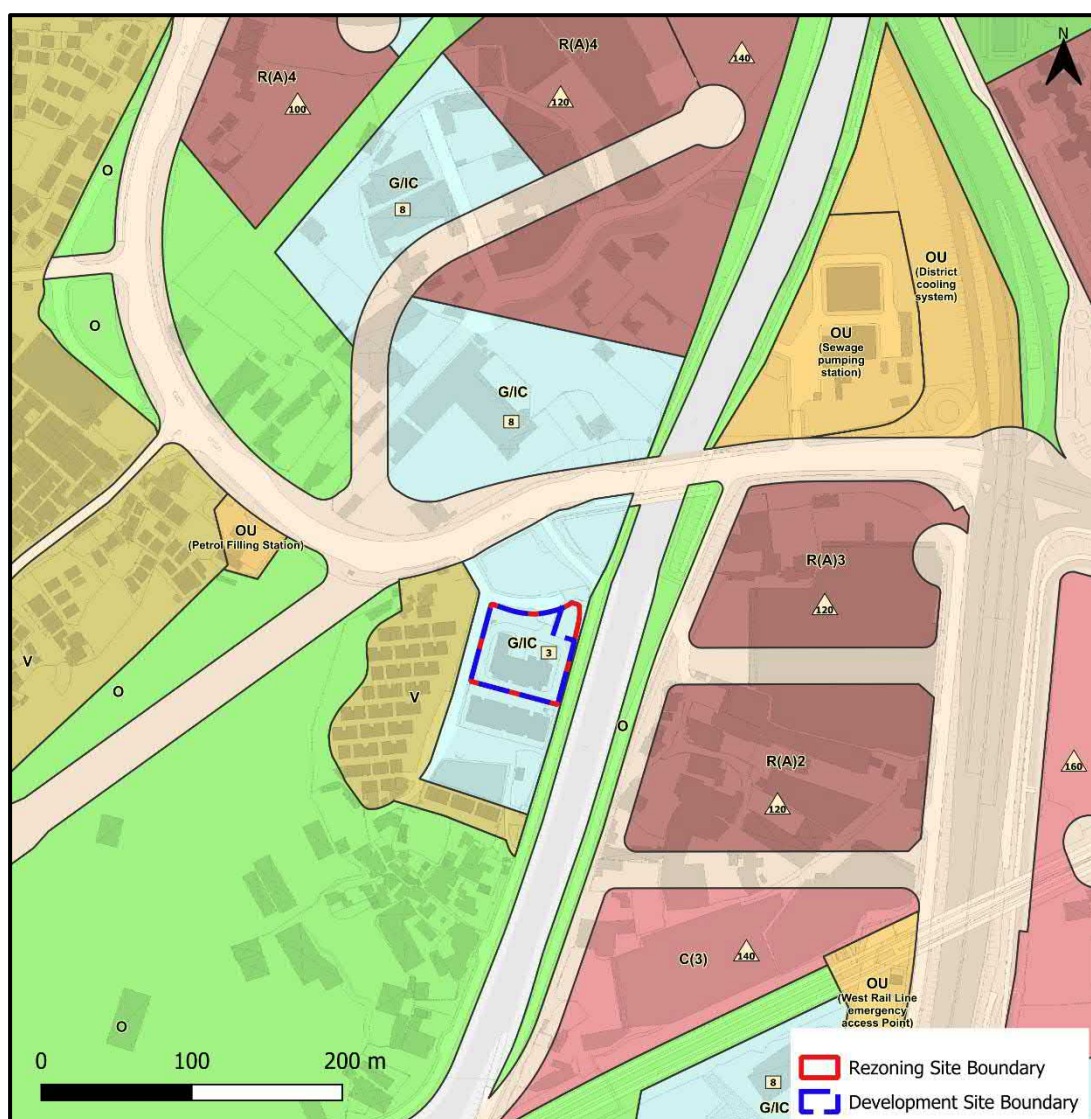


Figure 2.5 Zoning Context Plan (Extracted from the Approved OZP No. S/HSK/2)

2.5 Urban Design Framework of HSK/HT NDA

- 2.5.1 Under the Planning and Urban Design Concept of the HSK/HT NDA, the Site is located at a transition area between the Regional Park and Sports Ground area and the District Commercial Node (**Figure 2.6** refers). Various view corridors and breezeways as well as the two major view corridors (also known as “Fung Shui Lanes”) are proposed within the area for preserving the existing view and facilitating local air ventilation performance.
- 2.5.2 The Site is in close proximity to a number of Residential (Group A) (“R(A)”) and Commercial (“C”) zones (with BHR ranging from 135 -160 mPD) to the east and low-rise village cluster of Sha Chau Lei Tsuen (with building height of 3 storeys) in an area zoned “Village Type Development” to its west. In general, a stepped height profile is formulated, descending from the planned District Commercial Node to the east of the Site (with BHR of about 160 mPD) towards the village settlements in Sha Chau Lei Tsuen (**Figures 2.6 and 2.7** refer).

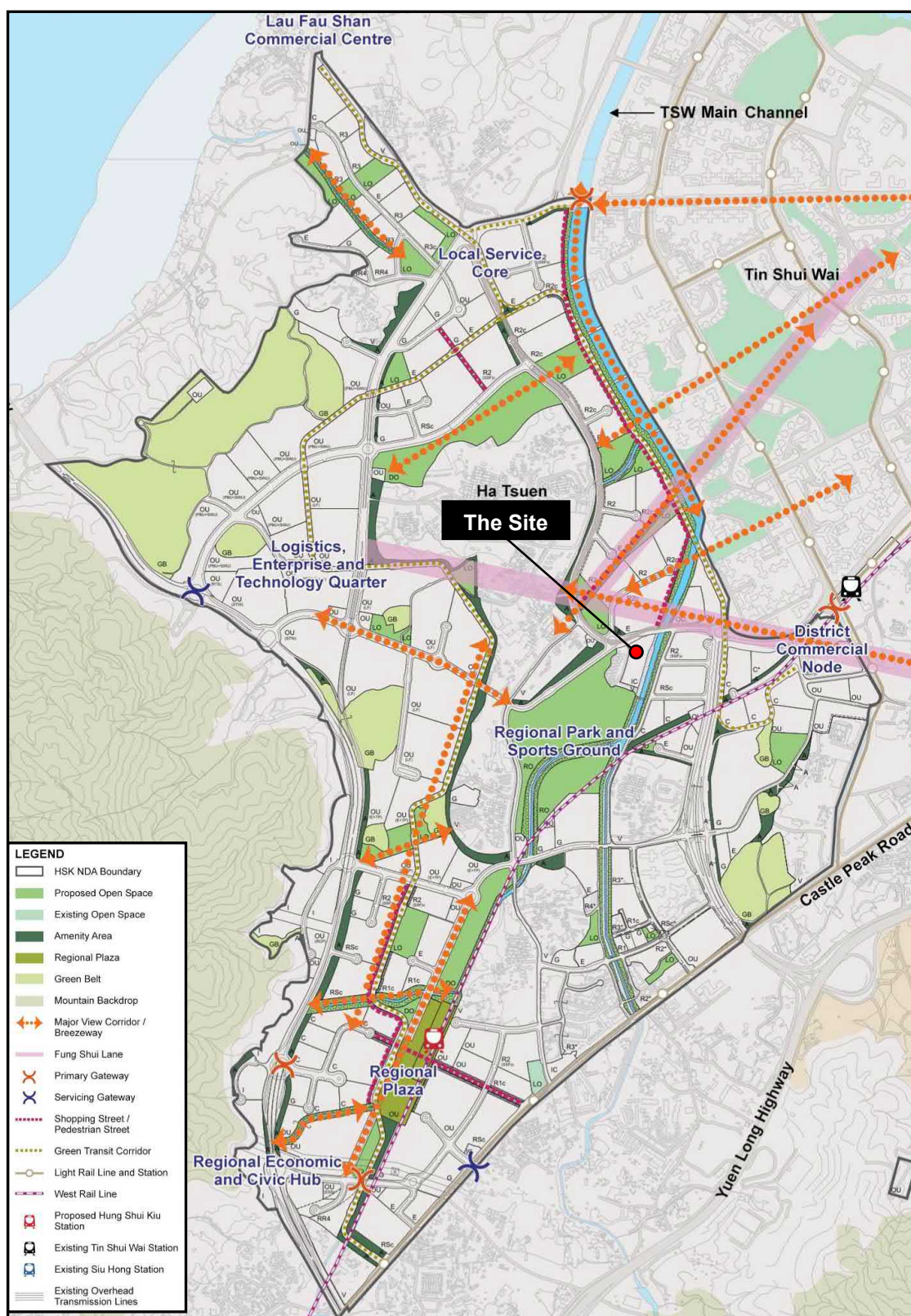


Figure 2.6 Planning and Urban Design Concept of HSK/HT NDA (Extracted from the Approved OZP No. S/HSK/2)

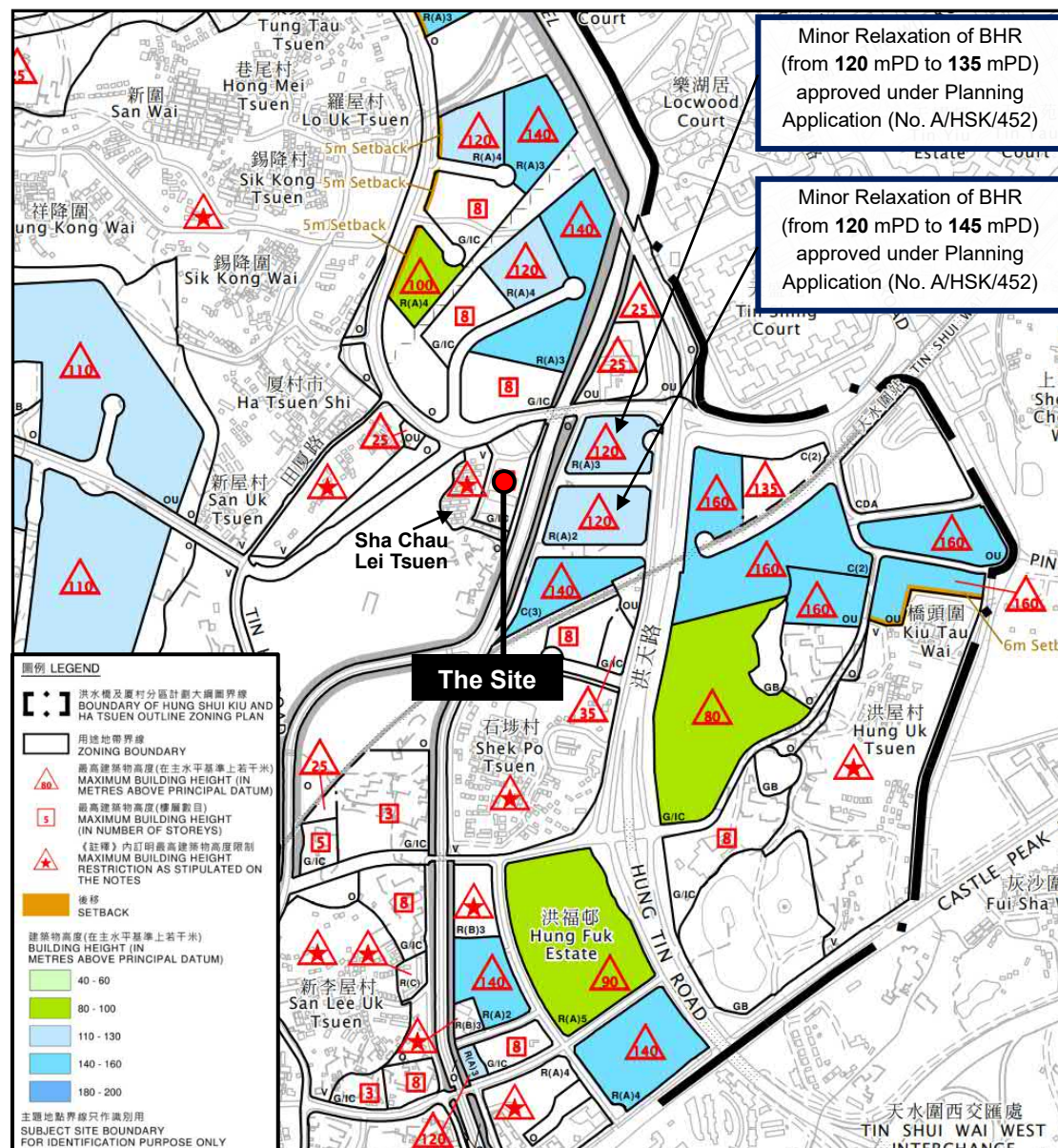


Figure 2.7

Building Height Concept of HSK/HT NDA (Extracted from the Approved OZP No. S/HSK/2)

2.6 Special Scheme on Privately Owned Sites for Welfare Uses

2.6.1 Following the announcement of optimizing the land owned by non-governmental organisations ("NGOs") through redevelopment or expansion, especially to provide additional and diversified facilities for elderly and disabilities in the 2013 Policy Address, the Labour and Welfare Bureau ("LWB") launched the first phase of the "Special Sites Scheme" in September 2013. The NGOs will provide or increase on their own sites (through expansion, redevelopment or new development) the welfare facilities considered by the Government being in acute demand, in particular to increase elderly and rehabilitation service places. In the 2018 Policy Address, the Chief Executive announced the implementation of a new phase of the Special Sites Scheme to enhance the types of welfare services and increase the types of welfare-related ancillary facilities in the list to meet the diversified needs of service users. Applicant organizations would have to provide a net increase in the provision of one or more than one service on the list of social welfare facilities set out by the Government:

Elderly Services

1. Care and attention home providing continuum of care
2. Nursing home
3. Day care centre for the elderly
4. Care and attention home providing continuum of care cum day care unit for the elderly
5. Nursing home cum day care unit for the elderly

Rehabilitation Services

6. Care and attention home for severely disabled persons
7. Hostel for moderately mentally handicapped persons
8. Hostel for severely mentally handicapped persons
9. Long stay care home
10. Integrated vocational rehabilitation services centre
11. Day activity centre
12. Special child care centre
13. Hostel for severely physically handicapped persons
14. Supported hostel for mentally and physically handicapped persons
15. Office base of on-site pre-school rehabilitation services

Child Care Services

16. Child care centre
17. Residential child care centre
18. Small group home

Types of Welfare-related Ancillary Facilities

As suggested in the second phase of the Special Sites Scheme, NGOs applicants may apply to the Social Welfare Department (“SWD”) for providing welfare-related ancillary facilities in their projects. Some of the examples are set out by the Government:

- (a) Medical facilities (including both Chinese and Western medical clinics) for welfare service users within the same site;
- (b) Dental facilities for welfare service users within the same site, as well as the service users of those welfare facilities on the “Shopping List” operated by any NGOs, and vulnerable groups (such as elderly persons on the Comprehensive Social Security Assistance or the Old Age Living Allowance, and persons with disabilities);
- (c) Training facilities for carers of the elderly, persons with disabilities and children with special needs, etc.;
- (d) Acupuncture or massage service centre for welfare service users within the same site;
- (e) Service for assessment of children with special education needs;
- (f) Showroom and/or shop for innovative and gerontechnology products relating to the ageing society and needs of persons with disabilities;
- (g) Shop or kiosk selling daily necessities or caring products for the elderly and persons with disabilities; and
- (h) Café/canteen, involving the provision of vocational training and employment opportunities for persons with disabilities or the elderly, or for provision of meal services for service users, staff or visitors within the same site.

- 2.6.2 The LWB received 63 projects proposals submitted by 43 NGOs in the first phase of the Special Sites Scheme. Additional 25 applications from 16 NGOs were received by LWB in the second phase of Special Sites Scheme by the deadline on 30 August 2019. The applicant organisations may apply for grants under the Lotteries Fund (“LF”) to conduct a technical feasibility study (“TFS”) for their project proposals, and upon completion of the TFS, seek further funding support under the Special Sites Scheme to meet the capital cost of their projects according to the prevailing mechanism.

2.7 Overview on the Provision of Social Welfare and Rehabilitation Services in Hong Kong

2.7.1 The social welfare and rehabilitation services in Hong Kong area mainly categorized in day services and residential services. The former mainly refers to the Day Activity/Care Centre, Sheltered Workshops, while the latter refers to residential facilities with extensive care. It is understood that there is a shortage of welfare premises resulting in long waiting times for different types of social welfare and rehabilitation services, especially for residential services. According to Government's statistics published in 2022, the enrolment rates of Residential Care Homes for the Elderly ("RCHes") and Residential Care Homes for Persons with Disabilities ("RCHDs") remain at a high level, in particular the subvented/contract homes (**Table 2.2** refers). In addition, the average waiting time for relevant residential services for Moderate Mentally Handicapped Person was about 144.8 months in 2021-2022 while the waiting time for Severely Mentally Handicapped Person was about 150.8 months in 2021-2022 (**Table 2.3** refers).

Table 2.1 Enrolment Rates of Residential Care Homes in Hong Kong

Type of Homes		Enrolment Rate
RCHes	Subvented and contract homes	91%
	Private homes ¹	71%
	Self-financing homes ²	68%
RCHDs	Subvented homes	97%
	Private homes ¹	91%
	Self-financing homes ²	86%

¹ Including homes participating in bought place schemes.

² Homes operated by non-governmental organizations.

Source: Written reply by the Secretary for Labour and Welfare on the enrolment position of various types of residential care home in the Legislative Council on 16 November 2022

Table 2.2 Average Waiting Time for Relevant Rehabilitation Services in Hong Kong

Type of Services	Average Waiting Time (Months)	
	2020-2021	2021-2022
Hostel for Severely Mentally Handicapped Persons	156.1	150.8
Hostel for Moderately Mentally Handicapped Persons	127.6	144.8

Source: Written reply by the Secretary for Labour and Welfare on the enrolment position of various types of residential care home in the Legislative Council on 16 November 2022.

3. THE PROPOSED REDEVELOPMENT SCHEME

3.1 Indicative Development Proposal

- 3.1.1 The existing YCP C&A Home was put into service since 1984 and the building condition has become dilapidated which requires frequent repair and costly maintenance. It fails to meet the contemporary requirements for fire safety and barrier free access for the disabled. Hence, there is a pressing need for redevelopment to enable a better spatial arrangement for more efficient use of the Site.
- 3.1.2 To optimize the use of the Site and to alleviate the increasing demand for rehabilitation services and care services, the Applicant proposes to redevelop the existing 3-storey YCP C&A Home into a new building with building height of about 47.9mPD.
- 3.1.3 In addition to expanding the current subvented Care and Attention Home for the Elderly providing a Continuum of Care ("C&A Home/CoC"), new services including Child Care Centre ("CCC"), Day Activity Centre ("DAC"), Integrated Vocational Rehabilitation Services Centre ("IVRSC"), Hostel for Severely Mentally Handicapped Persons ("HSMH"), Hostel for Moderately Mentally Handicapped Persons ("HMMH"), Day Care Centre for the Elderly ("DE") and other self-financed welfare-related ancillary facilities, including Showroom for Innovative and Gerontechnology Products, Clinics for Chinese Medicine, Western Medicine and Dental Service, Massage Service Centre and Canteen will also be provided. The existing and future capacity of the facilities at the Proposed Development is provided at **Table 3.1** below.

Table 3.1 Existing and Future Capacity of the Facilities at the Proposed Development

Type of Facilities	Existing Capacity	Proposed Capacity upon Redevelopment	Difference
Care & Attention Home for the Elderly providing a Continuum of Care ("C&A Home /CoC")	143 beds	192 beds	+49
Child Care Centre ("CCC")	0	59 places	+59
Day Activity Centre ("DAC")	0	50 places	+50
Integrated Vocational Rehabilitation Services Centre ("IVRSC")	0	80 places	+80
Hostel for Severely Mentally Handicapped Persons ("HSMH")	0	50 beds	+50
Hostel for Moderately Mentally Handicapped Persons ("HMMH")	0	40 beds	+40
Day Care Centre for the Elderly ("DE")	0	80 places	+80

- 3.1.4 On ground floor, “CCC” and common facilities including reception, E&M facilities, carpark and loading/unloading facilities will be provided, while “DE”, “C&A Home” and E&M facilities will be provided on the 1/F. 2/F to 6/F will mainly be occupied by dormitories for “C&A Home”, “HSMH” and “HMMH” with common facilities such as dinning/multipurpose rooms and ancillary office. Day activity centre, and welfare-related ancillary facilities such as showroom for innovative and gerontechnology products, clinics for Chinese medicine, western medicine and dental services, massage service centre, as well as kitchen and canteen will be proposed on 7/F and 8/F, while IVRSC will be located at 9/F. E&M facilities will be provided at 10/F. The pedestrian and vehicular entrance will be provided at the north of the Site, connected by a local access road off Ping Ha Road. The completion year of the Proposed Development is estimated to be 2032.
- 3.1.5 In order to maximize the provision of open space and greenery, sitting out area and amenity area on G/F, as well as open terraces on 1 to 2/F, 6/F and 7/F are proposed to promote residents’ engagement in the outdoor area. A total of not less than 282m² of open space will be provided for enjoyment by the future residents and staff.
- 3.1.6 The feasibility of Modular Integrated Construction (“MiC”) has been explored and will be adopted in the Proposed Development.
- 3.1.7 The Indicative Development Scheme is included at **Appendix 1** of this Supporting Planning Statement. The comparison of the key parameters of the Existing and Proposed Developments are provided in **Table 3.2** and the proposed floor uses are presented in **Table 3.3**.

Table 3.2 Key Development Parameters

	Existing Development	Proposed Development
Rezoning Site Area (about)	3,388.7m ²	3,388.7m ²
Development Site Area (about)	3,090m ²	3,090m ²
Total GFA (about)	2,351m ²	17,922m ²
• Domestic	N/A	8,752
• Non-Domestic	N/A	9,170
Total Plot Ratio (about) ¹	0.761	5.8
• Domestic	N/A	2.83
• Non-Domestic	N/A	2.97
Site Coverage (about) ¹	25%	58%
No. of Blocks	1	1
No. of Storey (about)	3	11
Building Height (about)	15.75mPD	47.9mPD
Absolute Building Height (about)	10.25m	42.4m
Note		
¹ Calculated based on Development Site Area of about 3,090m ² .		

Table 3.3 Proposed Floor Uses

Floor	Proposed Uses
G/F	CCC, Reception, Refuse collection point, Staff Office, Toilets, E&M facilities, Carpark and loading/unloading facilities and Landscape area
1/F	DE, Dormitory for C&A Home, Medical consultation/Nurse duty room/sick room, Interview room, Activity room, Reception, Rehabilitation area, Conference room, E&M facilities, Staff office and changing room, Back of house facilities, Toilets and Open Terrace
2/F	Dormitory for C&A Home, Multipurpose room, Nurse station cum medical consultation room, Pantry, Sick/Isolation/Quiet room, End-of-life care room, Back of house facilities, E&M facilities, Toilets and Open Terrace
3/F-4/F	Dormitory for C&A Home, Multipurpose room, Nurse station cum medical consultation room, Pantry, Sick/Isolation/Quiet room, Back of house facilities, Toilets and E&M facilities
5/F	Dormitory for HSMH, Activity rooms, Sick bay/Nurse duty room, Pantry, Reception, Physiotherapy services room, Staff office, Back of house facilities, Toilets and E&M facilities
6/F	Dormitory for HMMH, Activity rooms, Physiotherapy training cum exercise room, Sick bay/Nurse duty room, Pantry, Reception, Staff office, Back of house facilities, Toilets, E&M facilities and Open Terrace
7/F	Dental clinic, Western medicine clinic, Chinese medicine clinic, Massage area, Training area for DAC, Multipurpose room, Sick bay/Nurse duty room, Sitting room/peer room, Reception, Staff office, Interview room, Dumb waiter lobby, Back of house facilities, Toilets, E&M facilities and Open Terrace
8/F	Kitchen, Canteen, Multipurpose room, Showroom for Innovative and Gerontechnology Products, Age-friendly mock-up home, Back of house facilities, Toilets and E&M facilities
9/F	Workshop area for IVRSC, Conference cum training room, Staff office, Interview room, Dumb waiter lobby, Back of house facilities, Toilets and E&M facilities
10/F	E&M facilities

3.2 Self-financed Welfare-related Ancillary Facilities

3.2.1 As proposed by the Applicant, the self-financed welfare-related ancillary facilities, accounting for not more than 10 percent of the total GFA of the Proposed Development, will be provided for the benefits of service users and the general public.

Showroom for Innovative and Gerontechnology Products

3.2.2 A showroom for innovative and gerontechnology products is proposed at 8/F of the Proposed Development. The purpose is to showcase the latest available innovative and gerontechnology products for improving the living quality of elderly service users and senior citizens and reducing stress of caregivers. Exhibitions and product workshops will be organized periodically for service users and visitors.

Chinese Medicine Clinic

- 3.2.3 Chinese medicine clinic (with 1 no. of consultation room), providing consultation services and treatments including acupuncture and field effect therapy, is proposed at the Proposed Development. The clinic aims at providing convenient care service to the service users which helps identifying health problem at early stage.

Western Medicine Clinic

- 3.2.4 Western medicine clinic (with 1 no. of consultation room) provides health care services and medical treatment to the users at the Proposed Development, but more importantly to support ageing-in-place by giving preventive health care services, particularly for DE service users to avoid premature institutionalization.

Dental Clinic

- 3.2.5 Dental clinic (with 1 no. of consultation room) will be proposed in the development to provide dental care service to the service users as well as the neighbourhood who are eligible to apply the government-funded dental assistance programmes, for instance the Elderly Dental Assistance Expanded Programmed funded by the Community Care Fund, Dental Grants for Comprehensive Social Security Assistance recipients funded by Social Welfare Department, etc. Dental services including consultation and treatment as well as X-ray filming would be provided.

Massage Service Centre

- 3.2.6 The massage service centre will provide Traditional Chinese Medicine Tuina massage to help relieve tension, stress and pain of service users. The proposed service will be arranged by appointment.

Canteen

- 3.2.7 While the Proposed Development is located at village area and away from the nearby town, the proposed canteen could offer on-site catering services for customers. Due to the service expansion outlined in the redevelopment proposal, the number of required staff and prospective visitors is expected to increase compared with the current operation. To accommodate the anticipated high demand for catering services from users and employees, the proposed canteen will be an essential facility of the Proposed Development.

- 3.2.8 The breakdown of floor area (in Net Operating Floor Area and GFA) of the various social welfare facilities area provided in Table 3.4 below.

Table 3.4 Floor Area of Proposed Social Welfare Facilities

	Proposed Facilities	Proposed Net Operating Floor Area (NOFA in m ²) ¹	Proposed Gross Floor Area (GFA in m ²) ¹	Proportion	
Social Welfare Facilities	C&A Home /CoC	2,495	4,270	43%	92%
	CCC	341	544	5%	
	DAC	335	561	6%	
	IVRSC	452	616	6%	
	HSMH	724	1,258	13%	
	HMMH	533	1,219	12%	
	DE	511	694	7%	
Welfare-related Ancillary Facilities	Showroom for Innovative and Gerontechnology Products	310	438	4%	8%
	Clinic	114	172	2%	
	Massage Service Centre	106	126	1%	
	Canteen	102	112	1%	

Remarks: The NOFA and GFA for proposed social welfare facilities provided in the S12A Planning application are indicative only and are subjected to approval by the relevant Government Departments in the TFS and detailed design stage.

Note:

¹ Excluded common area and E&M facilities.

3.2.9 All social welfare and ancillary facilities will be operated by Pok Oi Hospital. The estimated maximum day-time population of the Proposed Development is 800 people. The operation hours of the various social welfare facilities are provided in **Table 3.5** below:

Table 3.5 Operation Hours of Proposed Social Welfare Facilities

	Proposed Facilities	Operation Hours
Social Welfare Facilities	C&A Home /CoC	24 hours
	CCC	0700-1900
	DAC	0800-2000
	IVRSC	0800-2000
	HSMH	24 hours
	HMMH	24 hours
	DE	0800-2000
Welfare-related Ancillary Facilities	Showroom for Innovative and Gerontechnology Products	0900-1700
	Clinic	0900-1900
	Massage Service Centre	0900-1900
	Canteen	0700-2000

3.2.10 The proposed operators, day-time population and operation hours will be subjected to detail operation planning and coordination with SWD in a later stage.

3.3 Programme for Redevelopment Works and Decanting Arrangement of the Residents

3.3.1 To ensure there would be no interruption in service provision, the decanting of existing residents will be arranged by the Applicant before the demolition of the existing building. In the first phase, the Applicant will suspend intaking new residents 12 months before demolition. In the second phase, residents will be divided into 3 batches according to their residential floors. Residents living on the highest floor (2/F) will be first relocated to the newly built Pok Oi Hospital Elderly Home situated at Fuk Hang Tsuen Road, Lam Tei, Tuen Mun, followed by residents on 1/F and G/F. Upon completion of the redevelopment, all decanted residents will be returned to the new complex in the last phase.

3.4 Key Design Considerations

3.4.1 In formulating the Indicative Development Scheme, the schematic design has taken into account the various site constraints as well as design considerations in order to ensure the Scheme is designed to create a high-quality development in harmony with the surrounding environment. The proposed Indicative Development Scheme has incorporated the following design considerations:

- Three trees, including *Dimocarpus Longan*, *Artocarpus Heterophyllus* and *Manilkara Zapota*, at the northeast portion of the Site will be retained with adequate building setback to ensure healthy growth of the tree.
- Provision of not less than 20% greenery coverage (i.e. minimum 678m² based on the Rezoning Area of 3,388.7m²) including the sitting out area, amenity area and buffer planting on G/F, as well as terraces greening at multi-levels. An overall greenery of about 800m² is proposed under the landscape proposal.
- Adoption of stepped terraced design for the dormitory floors (1/F, 2/F, 6/F and 7/F) to reduce the visual impact of the building bulk as viewed from pedestrian level, as well as allow better air flow and permeability. (**Figure 3.1** refers).
- Provision of building setback from Sha Chau Lei Road of about 5.2m and the village road at the west of about 4.4m to create a wider street canyon; additional setback of about 13m along the kerb of the northern boundary and 10.8m to the structure of Ching Chung Care and Attention Home for the Aged are also provided. Local setback of the northern site boundary is also provided to allow for a continuous footpath of about 2m in width (**Figure 3.2** refers).

- Compliance with Sustainable Building Design Guidelines ("SBDG") including 1) provision of building setback of minimum 7.5m from the centerline of abutting roads; 2) continuous projected façade length is less than 60m and 3) greenery provision of not less than 20%.
- With the need to accommodate essential components on G/F including access road, landscaped area, parking and loading/unloading facilities, manoeuvring space for vehicles as well as the need to comply with building setback and greenery requirement of SBDG, the building footprint of the podium in the current design has been optimized.

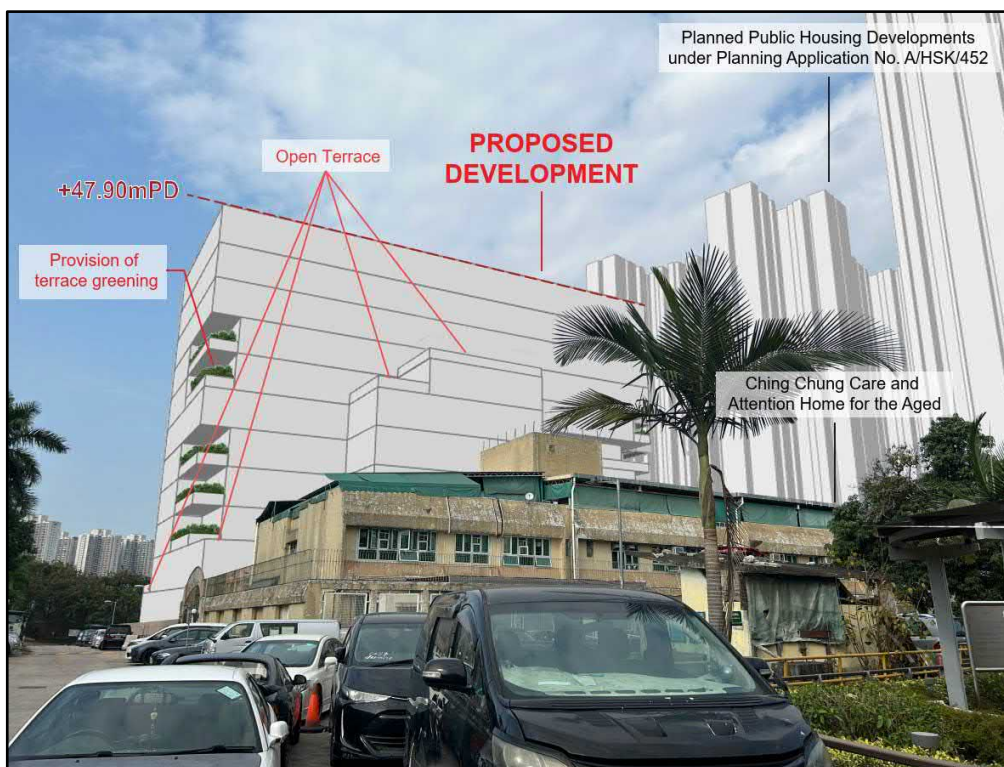


Figure 3.1 Proposed Stepped Terrace Design on 1/F, 2/F, 6/F and 7/F

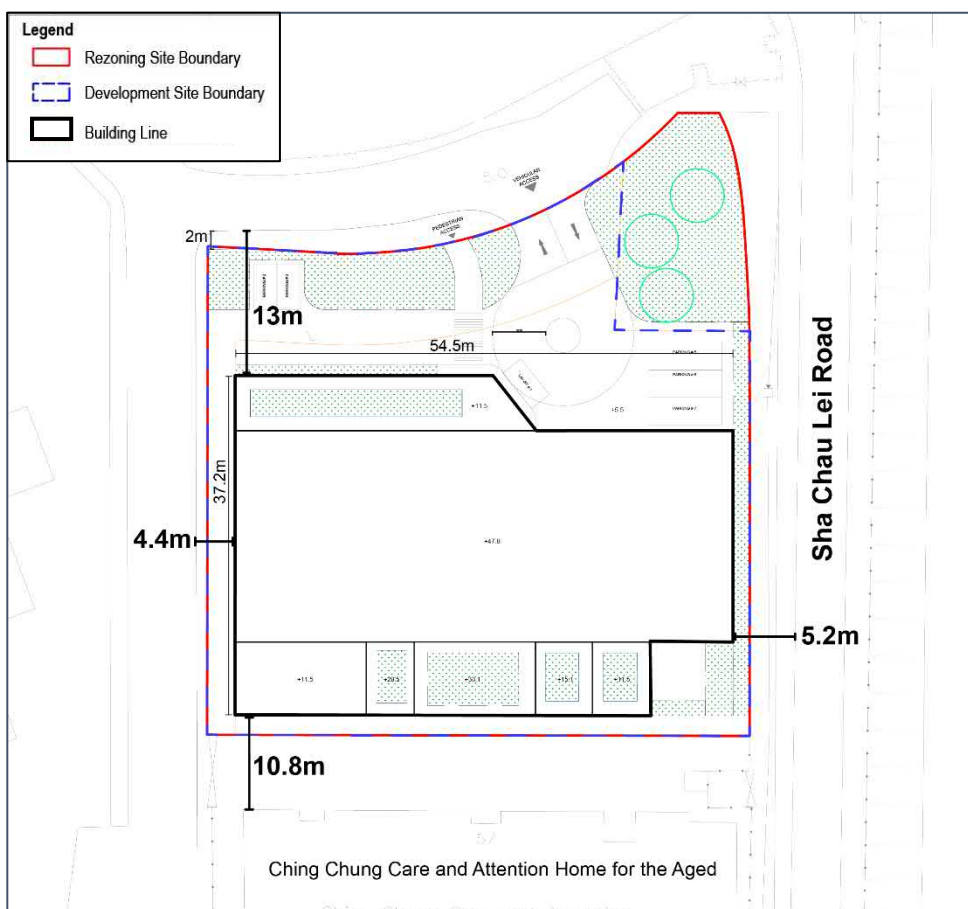


Figure 3.2 Provision of Building Setback

3.5 Landscape Proposal

3.5.1 The proposed landscape area will maintain the landscape resources of the Site and extend the existing open space. The landscape provisions for the Proposed Development are mainly on the ground floor and open terraces on 1/F-2/F, 6/F and 7/F. Moreover, the proposal includes the provision of buffer planting with trees and shrub to provide visual screening and soft transition to the adjacent landscape context, while the sitting out and amenity areas on several floor levels could enable users to engage in outdoor activities. Details of the landscape proposal are provided in **Appendix 2**.

3.6 Access Arrangement and Transportation Provision

3.6.1 While there are no relevant requirements stipulated in the latest Hong Kong Planning Standards and Guidelines (“HKPSG”) published by Planning Department for “C&A Home /CoC”, “CCC”, “DAC”, “IVRSC”, “HSMH”, “HMMH” and “DE”, there are requirements on parking and loading/unloading provision for clinics. The proposed parking and loading/unloading provisions for the Proposed Development according to users’ needs from previous studies are summarized in **Table 3.6** below:

Table 3.6 Internal Transport Facilities

Types	Provision
Parking	
▪ Private Car Parking (5m x 2.5m)	4*
▪ Light Bus (8m x 3m)	6
▪ Light Goods Vehicle (7m x 3.5m)	1
▪ Refuse Collection Vehicle (12m x 5m)	1
▪ Ambulance (9m x 3.5m)	1
Layby	
▪ Taxi Layby (5m x 2.5m)	1
▪ Medium Goods Vehicle (11m x 3.5m)	1
▪ Heavy Goods Vehicle (11m x 3.5m)	1

*Including 1 accessible car parking space

3.6.2 Vehicular access will be maintained at the existing location, i.e. an access road connecting to Ping Ha Road. The entrance will be widened to 8m to facilitate the movement of ambulances and refuse collection vehicles. A maneuvering space is proposed with a private car/taxi drop-off fronting the main entrance of the Proposed Development to provide convenient access for the users and visitors.

4. PROPOSED ZONING AMENDMENTS

4.1 The Rezoning Proposal

4.1.1 The Site currently falls within the area zoned “G/IC” on the Approved OZP. This S12A Planning Application seeks to amend the Statutory Notes of the “G/IC” zone to increase the BHR from 3 storeys to about 47.9mPD to facilitate the redevelopment of the YCP C&A Home for the provision of additional social welfare facilities. Under the “G/IC” zone, “Social Welfare Facility” is Column 1 use which is always permitted. As the proposed redevelopment with a building height of about 47.9 mPD exceeds the building height restriction of 3 storeys as stipulated on the Approved OZP and such increase may not be considered as “minor”, amendment to the OZP under S12A of the Town Planning Ordinance is required.

4.1.2 The planning intention of the “G/IC” would remain unchanged as:

“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.”

4.1.3 The maximum building height in terms of number of storeys as stipulated on the Approved OZP will be amended from 3 storeys to about 47.9mPD.

5. PLANNING MERITS AND JUSTIFICATIONS

5.1 The Proposed Redevelopment is In-line with Government's Policy

5.1.1 The proposed redevelopment of YCP C&A Home is one of the projects under the Government's Special Sites Scheme to increase the provision of much-needed social welfare facilities at its own site through expansion, redevelopment or new development. Under the Special Sites Scheme, the types of uses, capacity and floor area requirements have been generally accepted by SWD. In order to facilitate the approval of this Planning Application, the Applicant will continue to work closely with SWD to formulate the details of services, optimize the development plan and revise the proposal in accordance with the views of relevant Government Departments. Submission of technical feasibility study ("TFS") report to SWD was made in 5 July 2024 and the vetting is still in progress. Upon the completion of TFS, the Applicant will seek further funding support under the Special Sites Scheme to meet the capital cost of their projects according to the prevailing mechanism.

5.1.2 As the Special Sites Scheme serves as a concrete basis for planning for welfare services and manpower in the medium term, approval of this Planning Application would facilitate the implementation of the Special Sites Scheme to effectively relieve the increasing pressure on service demand and shorten the waiting time for rehabilitation service. The Proposed Development with provision of social welfare facilities in great demand is totally in-line with Government's Special Sites Scheme to increase the provision of the much-needed facilities at their own sites through expansion, redevelopment or new development.

5.2 Meeting the Imminent Demand for Social Welfare and Rehabilitation Facilities

5.2.1 Due to the limited availability of developable land in Hong Kong, there is a significant shortage of social welfare and rehabilitation services, particularly residential services. As above-mentioned, the enrolment rate of subvented RCHE and RCHDs are over 90% and the average waiting time for HMMH and HSMH in Hong Kong is 144.8 and 150.8 months respectively for the year 2021-22.

5.2.2 The redevelopment of YCP C&A Home would help alleviate the shortage of quality residential care and rehabilitation services for the persons in need. Increasing services capacity through in-situ redevelopment is an efficient way in terms of time and resources. New supply of social welfare facilities would be available in short time without the need to explore new available land. With the expected significant increase of population in the HSK/HT NDA, there is an urgent need to increase the supply of welfare and rehabilitation service so as to strengthen the comprehensive care and

support the needy persons.

5.3 The Proposed Development is a More Efficient Use of Land Resources

5.3.1 The existing YCP C&A Home has been in operation since 1984. Upon redevelopment, the Proposed Development could help optimize scarce land resources and meet the community's imminent demand for community services. The proposed expansion through redevelopment will be an optimized use for the Site. With an increase in GFA from about 2,351m² to about 17,922m² (i.e. an increase of about 662%), the proposal will make more efficient use of valuable land resources to provide additional and much-needed social welfare and rehabilitation facilities.

5.3.2 The redevelopment proposal involves a wider spectrum of social welfare and rehabilitation facilities as compared to the existing buildings. Echoing with the Government's Prevailing Policy on "single site, multiple use" development model, the proposed redevelopment would include "CCC", "DAC", "IVRSC", "HSMH", "HMMH" and "DE" on top of "C&A Home /CoC" which are provided within the building. Incorporating different uses at the same Site would not only better provide a one-stop integrated and seamless care service for the service users, it will also increase the agglomeration effects of centralizing various welfare facilities with similar nature at the same place. The close collaboration of a diverse range of welfare facilities in one location would undoubtedly create a synergy effect, resulting in significant benefits for a wide range of service users. For instance, elderly with poor health conditions could receive immediate health care services at their place of residence.

5.3.3 In terms of resource management, accommodating diverse welfare services at a single location could allow the flexibility to deploy Applicant's funding and manpower resources to ensure a high quality of health care and rehabilitation services.

5.4 The Proposal will Upgrade and Enhance the Existing Facilities

5.4.1 The existing building of YCP C&A Home has been in operation for nearly 40 years. Over the past years, no major renovation or refurbishment works have been carried out. The existing premises have shown various extents of dilapidation which require frequent repair and costly maintenance. Apart from the deteriorating building condition, the building design fails to meet the contemporary requirements for fire safety and barrier free access for the disabled. The redevelopment of the existing YCP C&A Home not only can meet the latest fire safety and building standards, but also provide additional floor space with higher quality facilities provision for the service users. Additional floor space through expansion would help to adequately respond to the special needs of rehabilitation service users within premises. More communal space including common room, activity room and playroom also

encourage the service users to engage in more community activities. Moreover, the ample open space provision at the sitting out area and amenity area on the G/F, as well open terraces on 1-2/F, 6/F and 7/F also offer more opportunities for the users to enjoy outdoor activities. The redevelopment of the YCP C&A Home would allow better spatial arrangement and facilities to support the Applicant's future development in order to continue offering quality social welfare and rehabilitation services.

5.5 The Existing Residential Care Services for the Elderly Will Not Be Affected During the Course of Redevelopment

5.5.1 The Applicant will ensure that the existing C&A services will not be affected during the course of redevelopment. Decanting arrangements will be accommodated in three phases. In the first phase, the Applicant will suspend intaking new residents 12 months before demolition. In the second phase, residents will be divided into 3 batches to relocate to the newly built Pok Oi Hospital Elderly Home situated at Fuk Hang Tsuen Road, Tuen Mun. Upon the completion of redevelopment, all decanted residents will be returned to the new complex in the last phase. The care and attention services provided by the Applicant will not be interrupted during the redevelopment process.

5.6 Incorporation of Various Design Merits

5.6.1 To provide flexibility for development with design merits / planning gains, amendment to the BHR will be considered based on individual merits. Considering the site characteristics and locational factor, the applicant has strived to make the greatest endeavours to come up with an optimal design. The Proposed Development incorporates a wide range of planning merits for consideration as follow:

Tree Preservation and Innovative Building Design

5.6.2 The building footprint has taken into account the three existing trees, Dimocarpus Longan, Artocarpus Heterophyllus and Manilkara Zapota. All trees will be retained in-situ and adequate building setback will be provided to ensure healthy growth of the tree. Moreover, with the adoption of stepped terraced design, the form and mass of the proposed building would create a more synergistic and visually permeable layout. The use of extensive landscaping on multiple levels would soften the form of the buildings and enhance the sense of visual integration. It is believed that the sensitive architectural design will ensure that the development will be well integrated within its future urban fabric and visual context.

Providing Building Setback to Enhance Air and Visual Permeability

5.6.3 A building setback from Sha Chau Lei Road of about 5.2m and the village road at the west of about 4.4m are provided to create a wider street canyon; a setback of about 13m along the kerb of the northern boundary and 10.8m

to the structure of Ching Chung Care and Attention Home for the Aged are also provided. The setback will reduce the sense of encroachment and visual intrusiveness of the concrete structures onto the pedestrians. Hence, the Proposed Development will facilitate visual and air permeability.

Providing Better Streetscape / Good Quality Street Level Public Urban Space

- 5.6.4 The Proposed Development reflects the effort by the Applicant to minimize the bulk of the building as far as possible with the provision of various building setbacks. Local setback of the northern site boundary is provided to allow for a continuous footpath of about 2m in width. The site coverage of the Proposed Development has been optimized. Stepped terraced design has been adopted to break down the visual bulk of the Proposed Development as viewed from pedestrian level. The terraced design also allows the provision of greenery connecting the different floors to not only soften the building mass but also to enhance the amenity of the development as well as the neighbourhood environment.

5.7 Continue to Meet the Prevailing Planning Intention

- 5.7.1 The Application Site is located in "G/IC" zone, which 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, organisations providing social services to meet community needs, and other institutional establishments. The current Planning Application only involves the increase of BHR in order to enable the Proposed Development on Site. The proposed redevelopment of YCP C&A Home for the provision of enhanced social welfare and rehabilitation service will continue to follow and be in-line with the planning intention of the "G/IC" zone of the Site.

5.8 Respecting the Established Planning and Urban Design Framework of HSK/HT NDA

- 5.8.1 The Indicative Development Scheme provides an appropriate response to the urban fabric and building height profile of the area. The Site and the surrounding area are planned in a stepped building height profile following the urban design framework of HSK/HT NDA. In general, a stepped height profile is formulated, descending from the planned District Commercial Node to the east of the Site (about 160 mPD in height) towards the village settlements in Sha Chau Lei Tsuen (3 storeys in height). With the proposed building height of about 47.9mPD, the Proposed Development will be congruous with the surrounding development intensity in terms of building height. It will continue to respect the building height profile established for the NDA as well as the major view corridors/breezeways.

5.9 The Proposal is Technically Feasible

Tree and Landscape Aspects (Appendix 2 refers)

- 5.9.1 A total of 3 nos. of trees are found within the Site and no trees with particular interest are identified, such as large size trees with diameter at breast height over 1m, rare and protected species. No Old and Valuable Tree (“OVT”) are observed on site according to LCSD’s Register of OVT. All the three existing trees are proposed to be retained and no tree is recommended to be removed or transplanted.

Traffic Aspect (Appendix 3 refers)

- 5.9.2 A Traffic Impact Assessment (“TIA”) has been conducted to assess the potential traffic impact on the surrounding road network. The operational performance of the identified junctions is assessed based on the derived future traffic flows and the planned future road network in design year 2035. The results of the junction operational assessment indicated that all assessed junctions will be operating within their capacities during the morning and evening peak traffic hours. No junction improvement is required. Besides, the pedestrian assessment reveals that the identified key footpath will be operating within its capacity during peak hours. Hence, the TIA has demonstrated that the future traffic induced by the Proposed Development would not cause any traffic impact on the surrounding road network.

Visual Aspect (Appendix 4 refers)

- 5.9.3 A total of 4 public viewing points (VPs) were identified to assess the visual impact or the proposed development. As seen from the photomontages in the Visual Impact Assessment (“VIA”), the Proposed Development with an increase in building height from 3 storeys to about 47.9 mPD will lead to reduction in some degree of visual openness due to obstruction of open sky view and greenery hillside backdrop. In order to reduce the effect of these potential impact, building is setback from Sha Cha Lei Road and the village road to create a wider street canyon and setback with buffer planting along the riverside to maintain a relax river promenade adjoining the site. The adoption of stepped terraced design and provision of ample landscape treatment could break down the visual bulk and soften the building mass of building. Hence, the Proposed Development would not generate significant adverse visual impact.

Traffic and Fixed Noise Aspects (Appendix 5 refers)

- 5.9.4 Road traffic noise assessment is being carried out for a “base case scenario”, which is based on the building design strategy mentioned above while without any noise mitigation measures proposed. The results of the assessment have indicated that the highest predicted noise level is 71dB(A) for dormitories/bedrooms/office and 63 dB(A) for sick bays in RCHE and

RCHD. One bedroom and 3 sickbays will exceed with the traffic noise criteria of 70dB(A) and 55dB(A) as set out in the HKPSG. Since noise exceedance is found in the Proposed redevelopment, traffic noise assessment for a "mitigation scenario" has been carried out. Mitigations including 1.8m fin and fixed windows have been adopted. Under the mitigated scenario, no room will exceed the traffic noise criteria of 70dB(A) and 55 dB(A) as set out in HKPSG. The Proposed Development would not be subjected to significant adverse road traffic noise impact under the mitigation scenario.

- 5.9.5 The potential fixed noise impact has been assessed. According to the assessment result, the Proposed Development will not subject to any additional and significant adverse noise impact from fixed noise sources. To ensure that the noise level at potentially affected NSRs will comply with the statutory requirement under Noise Control Ordinance stipulated in IND-TM, all on-site planned fixed plant within the Proposed Development shall be controlled and designed to meet the HKPSG requirement, i.e. 5 dB below the acceptable noise level or the prevailing background noise level, whichever is the lower.

Air Quality Aspect (Appendix 5 refers)

- 5.9.6 The major air pollution source in the vicinity of the Application Site during operational phase would be tailpipe emission generated from road traffic along open road. The Application Site is bounded by Ping Ha Road to the north, which is classified rural road. As a conservative approach, the buffer distance of 5m for local distributor as stipulated in the HKPSG is adopted. The Site is also bounded by Sha Chau Lei Road to the East and an access road to the west, no information is available for these two roads in The Annual Traffic Census 2022 and is assumed to be rural road. The buffer separation can meet the buffer distance requirement. Openable windows will be provided at dormitory of RCHE for ventilation. No openable windows will be designed at buffer zone. Centralized air conditioning will be provided at the Proposed Development and the location of fresh air intake will not encroach on the buffer zone as recommended in the HKPSG. No air quality impact due to vehicular emission is anticipated. In view of no chimney was identified within the assessment area, no air quality impact with respect to industrial chimney emission on the future domestic users in the Proposed Development is anticipated.

Sewerage Aspect (Appendix 6 refers)

- 5.9.7 The potential sewerage impact arising from the Site has been quantitatively assessed by comparing the estimated sewage flow from the Proposed Development and the capacity of the existing sewerage system in the vicinity. With peaking factor considered, the percentage of used capacity for the downstream sewers will range from about 10% to 39% during peak hours. The results of the assessment indicated that no sewer segments will exceed

the capacity after the discharge from the Proposed Development. Nevertheless, the existing DN150 sewer connecting the Site to sewer FMH1009620 will be upgrade to 200 mm.

Drainage Aspect (Appendix 6 refers)

- 5.9.8 Surface runoff is mainly from rainfall and it would be directed to existing public storm drains. As the Site is currently a gentle flat land paved with concrete surface and there will be no major changes in surface properties and gradient, the overall catchment characteristics will not be significantly altered. While the reduction of non-paved area is not expected, additional discharge to the public drainage system is not expected. Moreover, provision of additional greenery area will further increase filtration of stormwater and minimize surface runoff. It is concluded that the redevelopment works would not result in any adverse impact to the public drainage system.

Geotechnical Aspect (Appendix 7 refers)

- 5.9.9 Referring to the existing ground investigation reports, the ground condition comprises a top layer of fill, medium layer with alluvium and the bedrock level is around -40mPD. The existing nullah is approximately 30m beyond the site boundary. Excavation works near the nullah shall consider the natural flow of water and potential flooding or redirection of water towards undesired locations. Since the Proposed Development has no basement and the nullah is over 30m from the Site, only shallow excavation works will be carried out for pile cap construction and the impact shall be relatively insignificant. Deep foundation is proposed for the Proposed Development, such that the building will sit on bedrock. There is no adverse effect nor additional surcharge applied on the existing nullah. Two registered features are more than 100m away from the site location. The proposed development has no basement, but only shallow excavation works for pile cap construction. Hence, there is no adverse effect of the adjacent features. Monitoring should be set up when commence site work including ground investigation, excavation works and foundation works. Having reviewed the regional ground geology based on the existing available ground condition and investigation records, it is concluded that Proposed Development is structurally and geotechnically sound.

Air Ventilation Aspect

- 5.9.10 According to the Joint Housing, Planning and Lands Bureau ("HPLB") and Environment, Transport and Works Bureau ("ETWB") Technical Circular No. 1/06 on Air Ventilation Assessments ("AVAs"), the indicative scheme does not fall within the categories of the projects requiring AVA. Significant adverse air ventilation impact on the surrounding pedestrian wind environment is not anticipated.

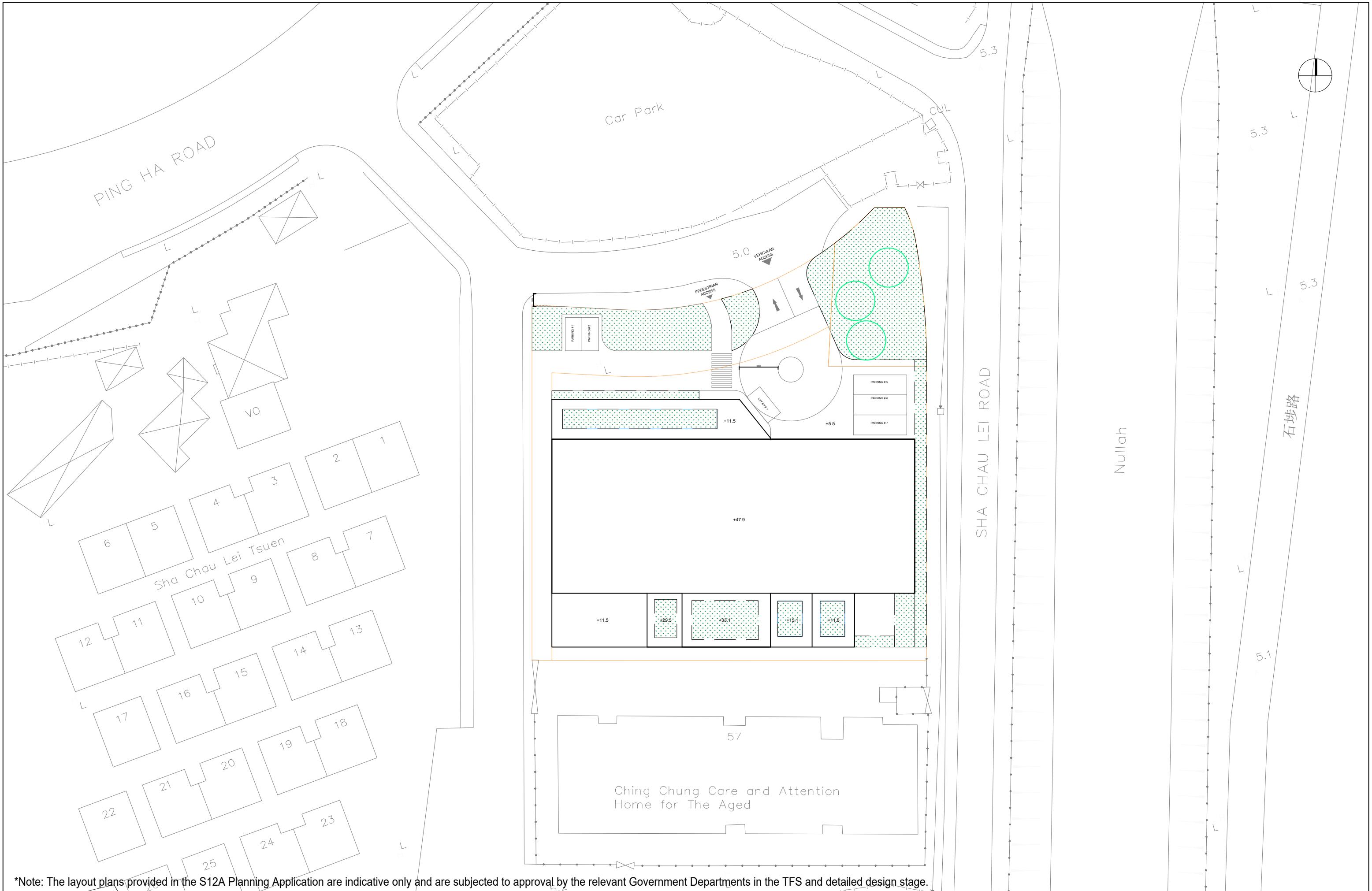
6. SUMMARY AND CONCLUSION

- 6.1 The Applicant, Pok Oi Hospital seeks approval from the TPB under Section 12A of the Town Planning Ordinance for the proposed amendment to the building height restriction from 3 storeys to about 47.9 mPD for the permitted Social Welfare Facility at No. 58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long, New Territories.
- 6.2 The Proposal involves the redevelopment of the YPC C&A Home under the Special Sites Scheme with an increase in GFA from about 2,351 sq.m. to about 17,922 sq.m. (i.e. an increase of about 662%).
- 6.3 The Proposed Development with provision of social welfare and rehabilitation facilities in great demand is totally in-line with Government’s Special Sites Scheme to increase the provision of the much-needed facilities at their own sites through expansion or redevelopment. Approval of this Planning Application would allow the smooth and timely implementation of the Special Sites Scheme.
- 6.4 The redevelopment of YCP C&A Home would help to alleviate the shortage of quality social welfare and rehabilitation services for the persons in need. It also shortens the waiting list for these welfare services.
- 6.5 The proposal will put valuable land resources into more efficient use for the provision of additional and much-needed social welfare and rehabilitation facilities, which would be in-line with the Government’s policy of “Single Site, Multiple Use”.
- 6.6 The expanded YCP C&A Home would allow better spatial arrangement and facilities to support the Applicant’s future development in order to continue offering quality social welfare and rehabilitation services.
- 6.7 The Applicant will guarantee that the existing C&A services will not be affected during the course of redevelopment. Decanting arrangements will be accommodated in three phases.
- 6.8 The proposed redevelopment of YCP C&A Home for the provision of enhanced social welfare and rehabilitation service will continue to follow and be in-line with the planning intention of the “G/IC” zone of the Site.
- 6.9 The Indicative Development Scheme has taken into consideration of the urban fabric and building height profile of the HSK/HT NDA and the proposed building height is considered appropriate.

- 6.10 The Applicant has strived to make the greatest endeavours to come up with an optimal design by incorporating various design merits in responding positively to the surrounding context.
- 6.11 Various technical assessments have been carried out and the findings concluded that the Proposal is technically feasible without posing negative impact onto the surrounding environment.

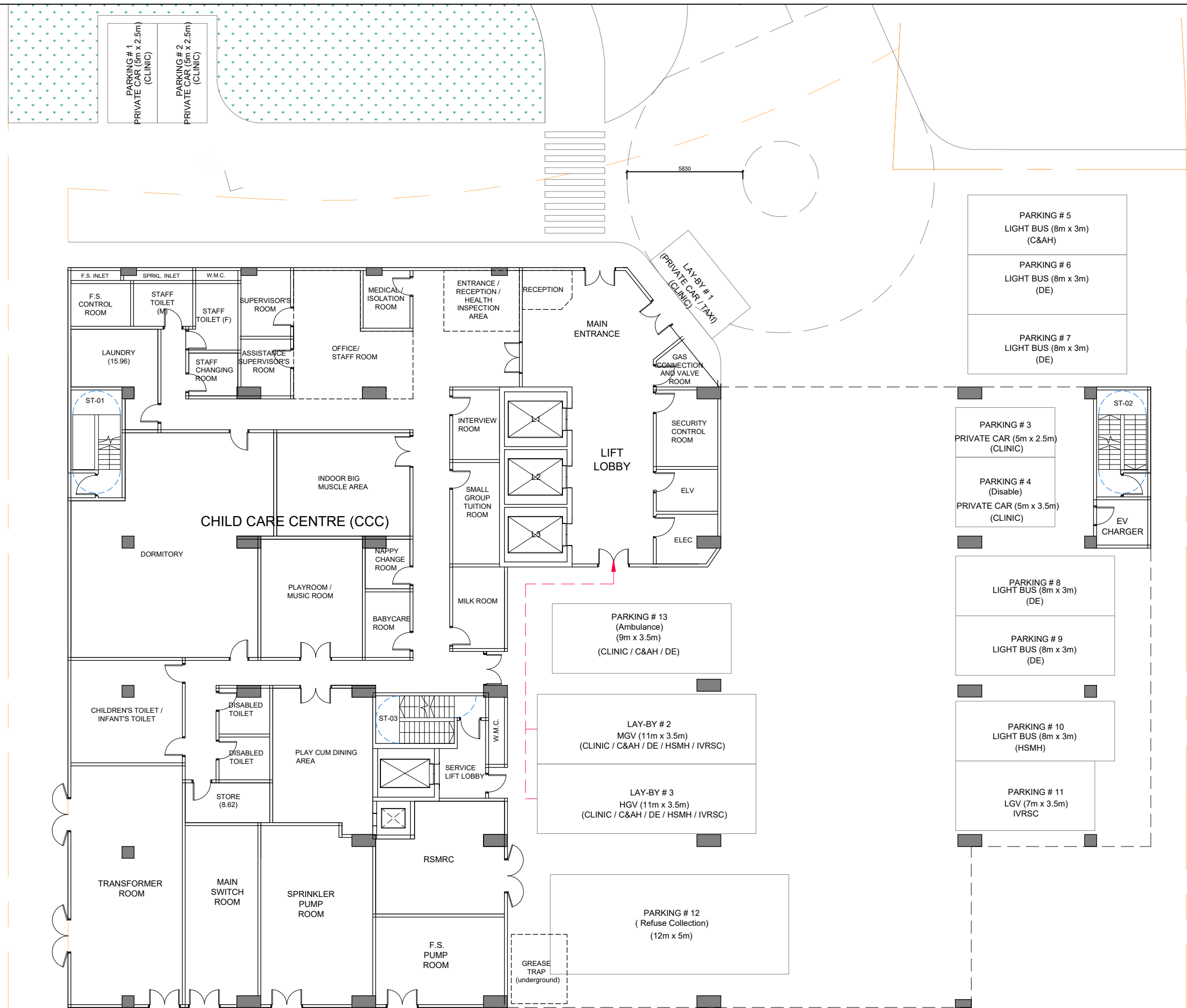
Appendix 1

Indicative Development Scheme



*Note: The layout plans provided in the S12A Planning Application are indicative only and are subjected to approval by the relevant Government Departments in the TFS and detailed design stage.





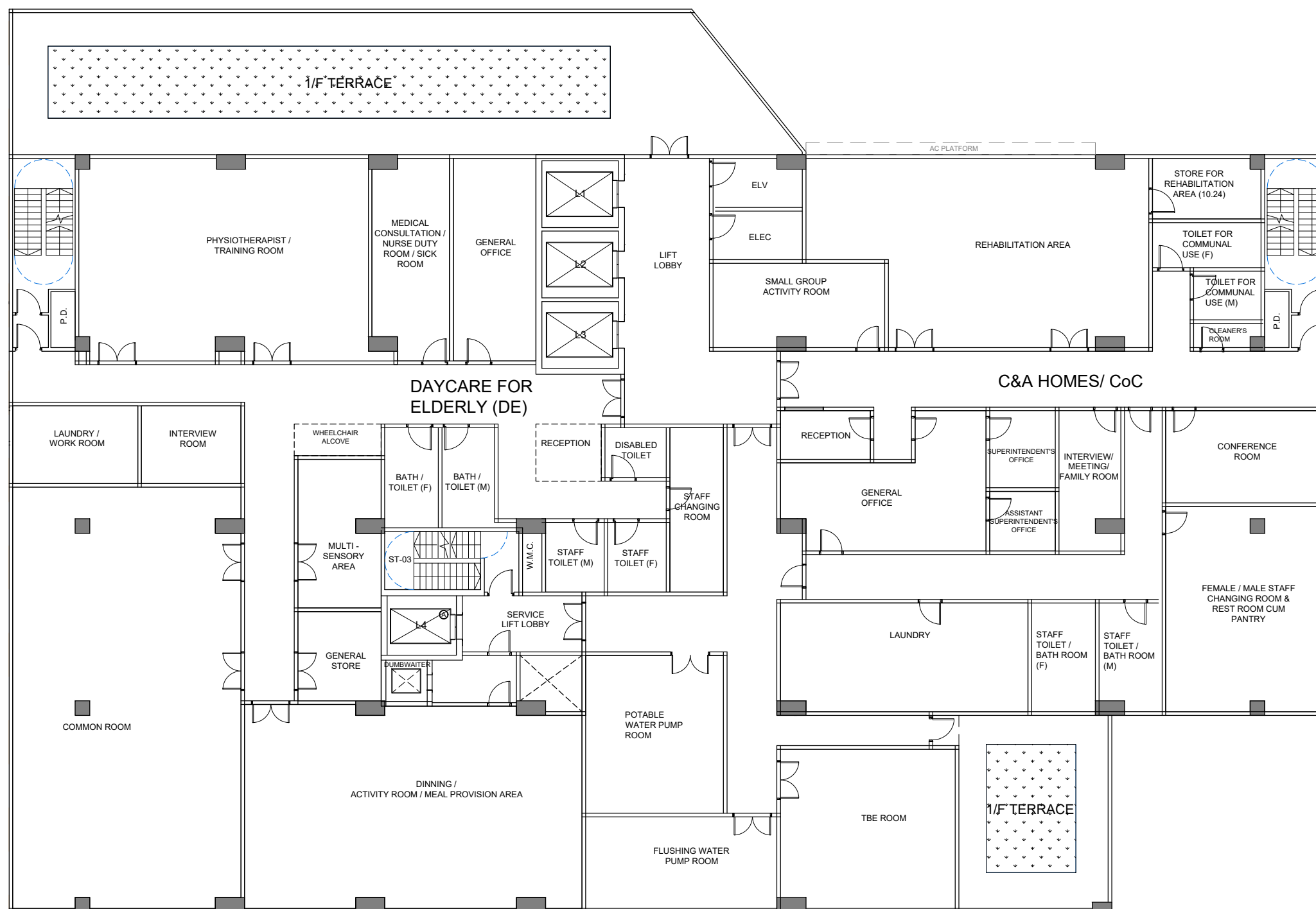
SHA CHAU LEI ROAD

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SHA CHAU LEI ROAD



*Note: The layout plans provided in the S12A Planning Application are indicative only and are subjected to approval by the relevant Government Departments in the TFS and detailed design stage.

Proposed Redevelopment of Pok Oi Hospital
Yeung Chun Pui Care and Attention Home in Yuen Long

FIRST FLOOR PLAN

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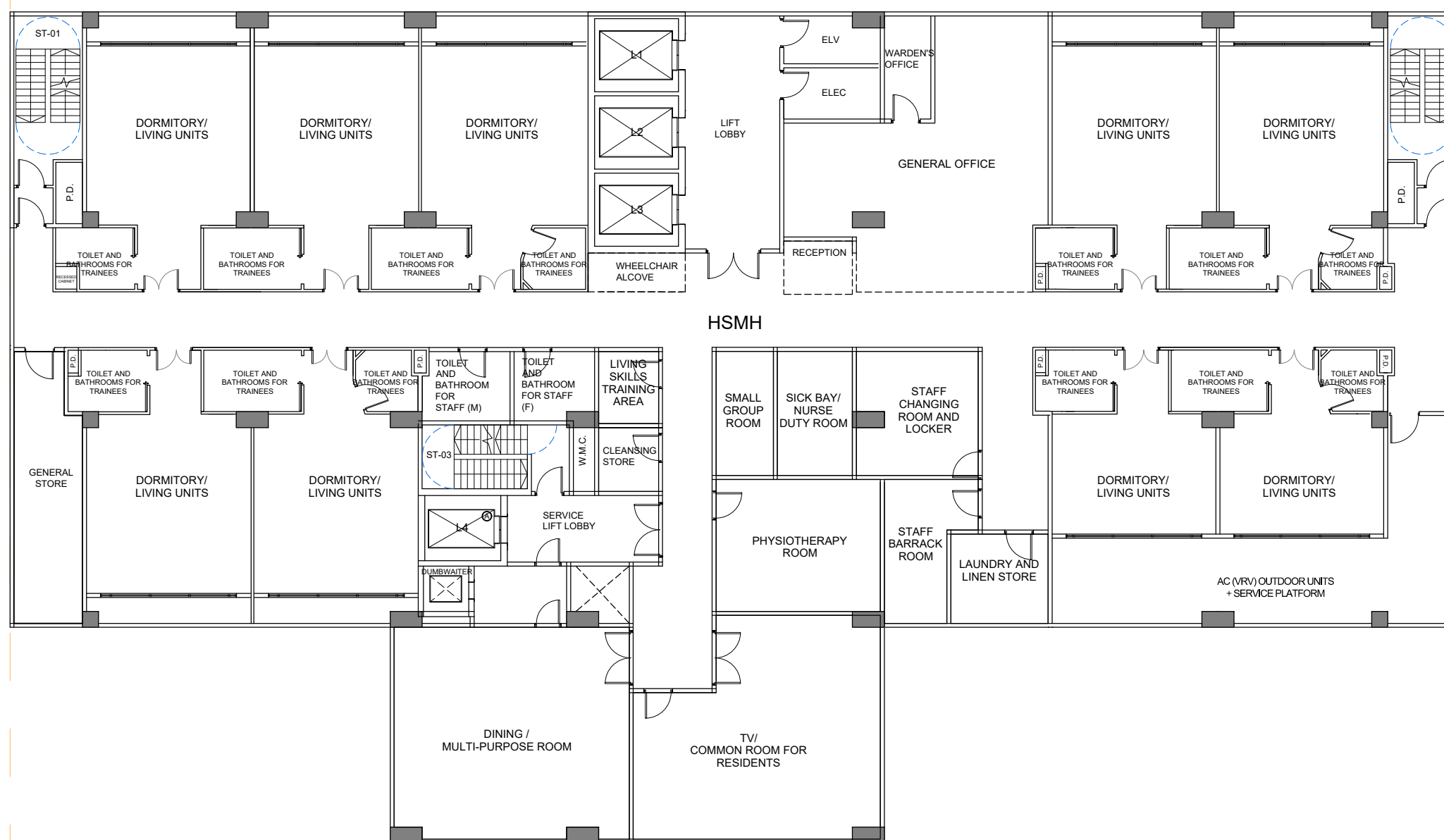








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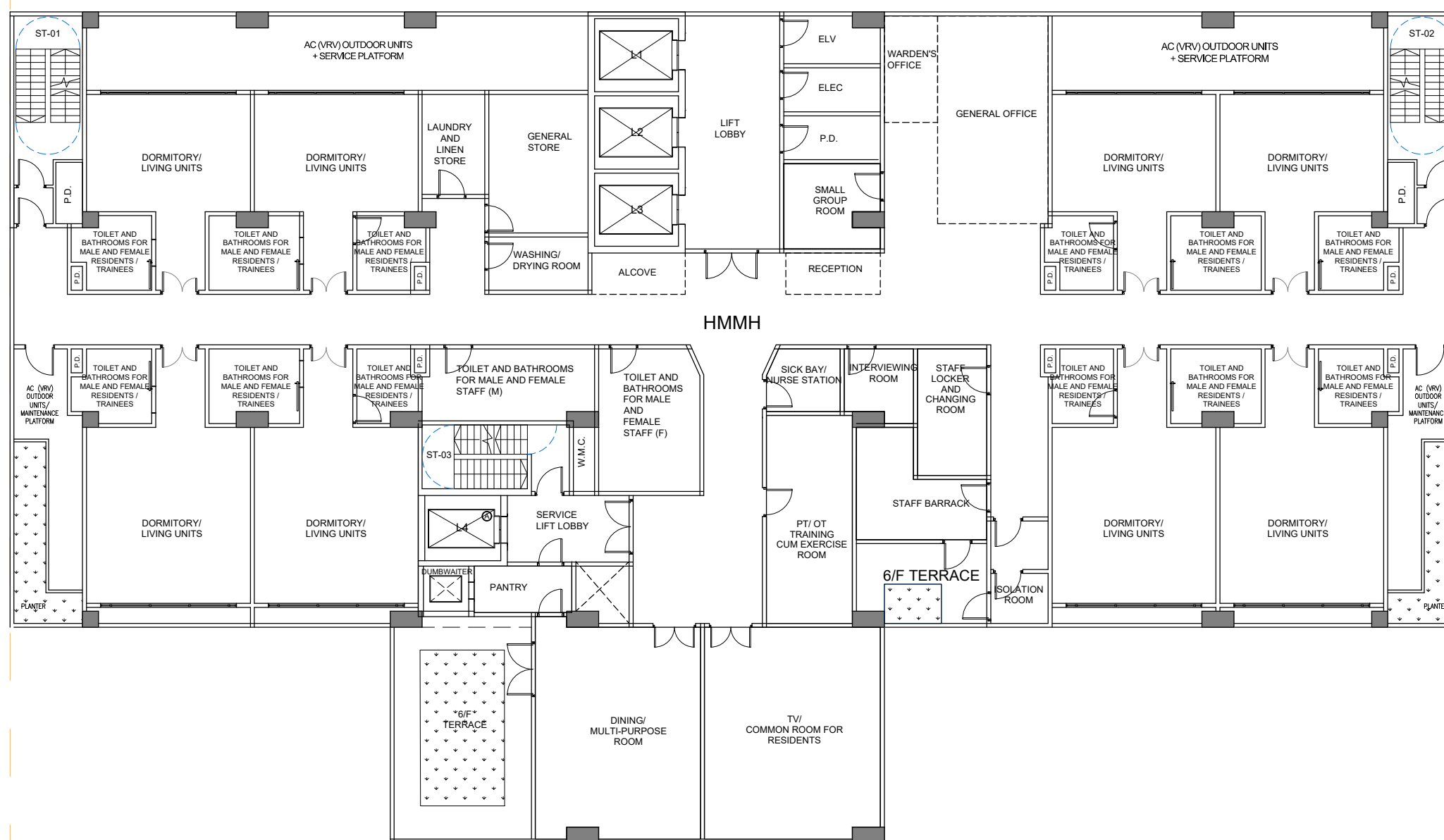


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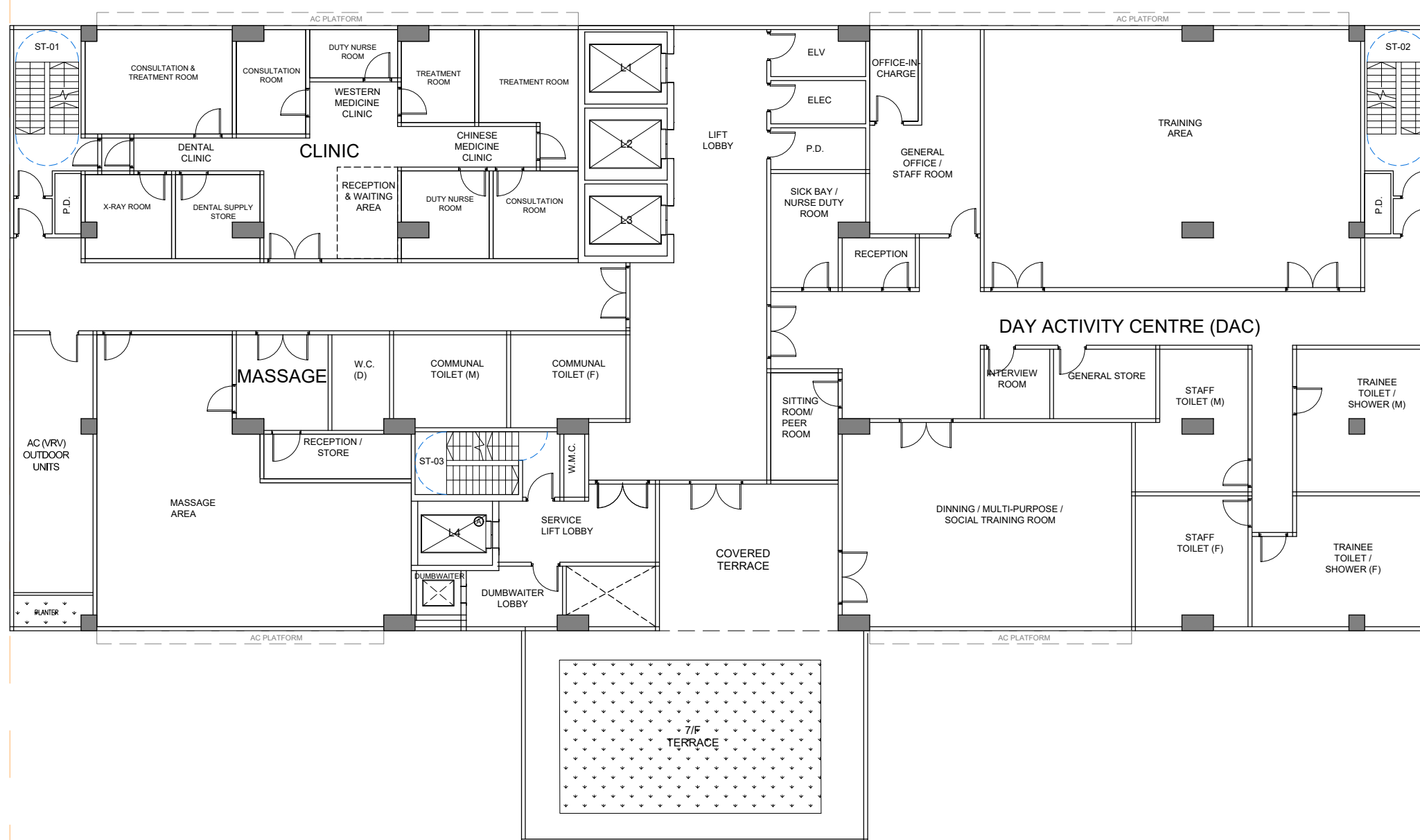


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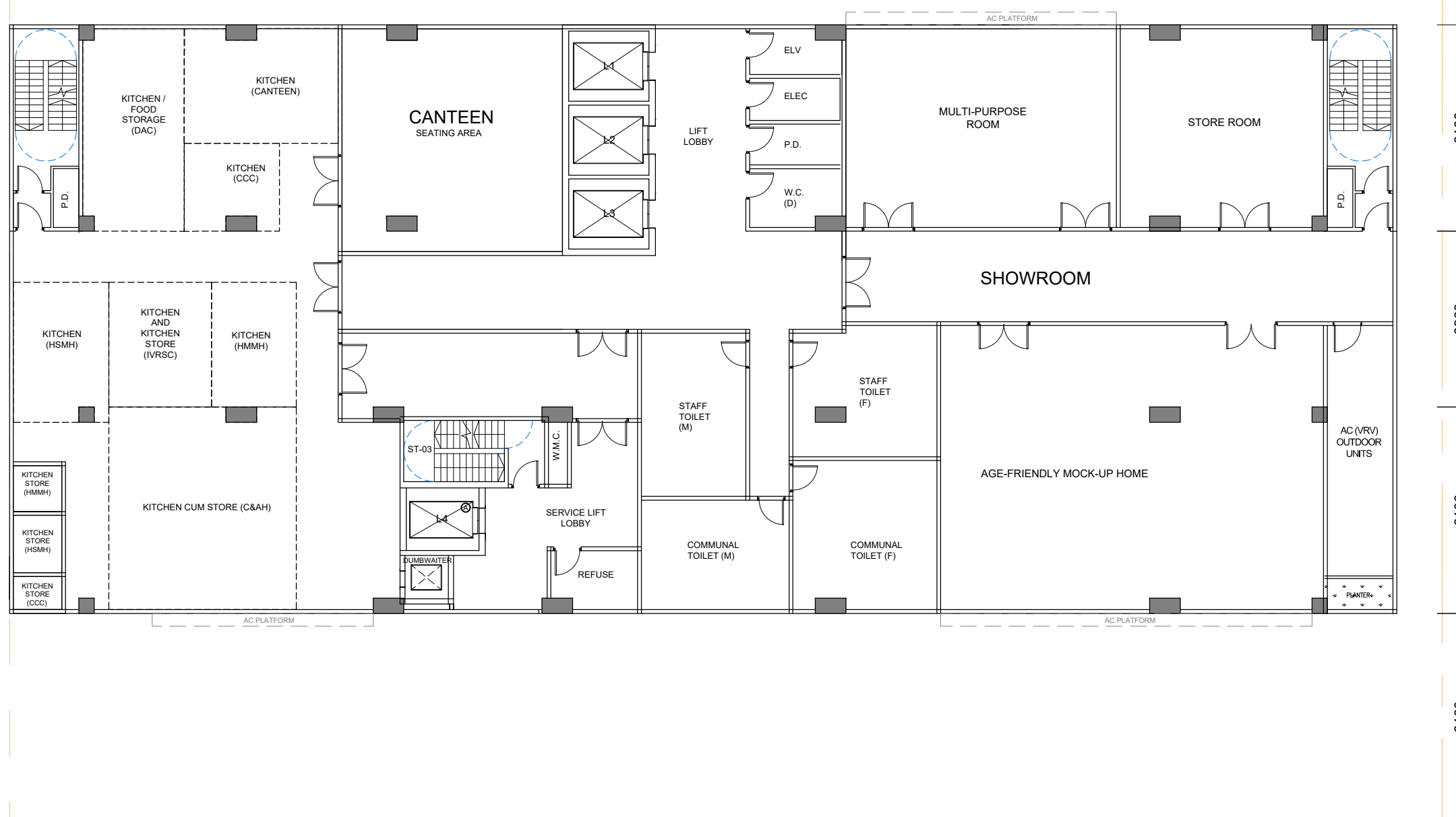


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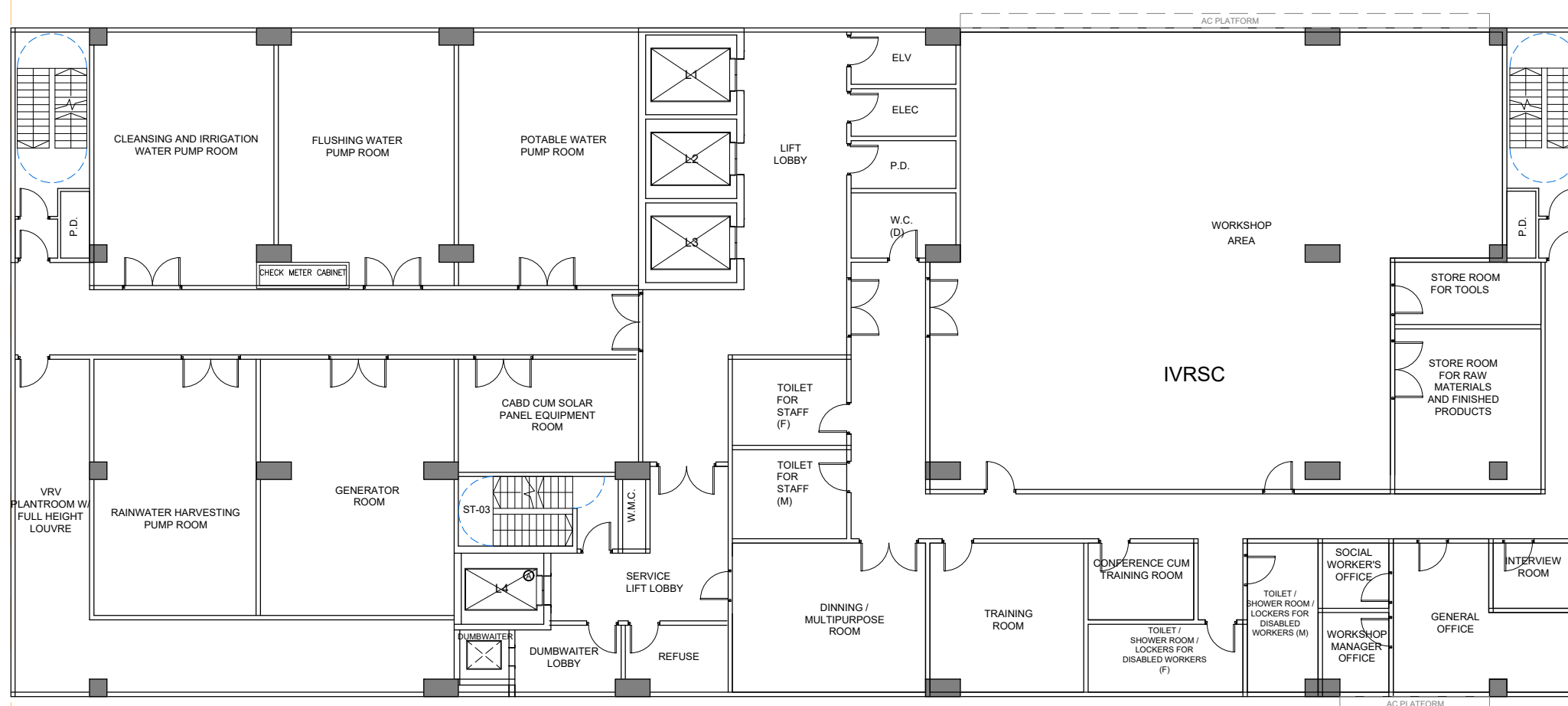


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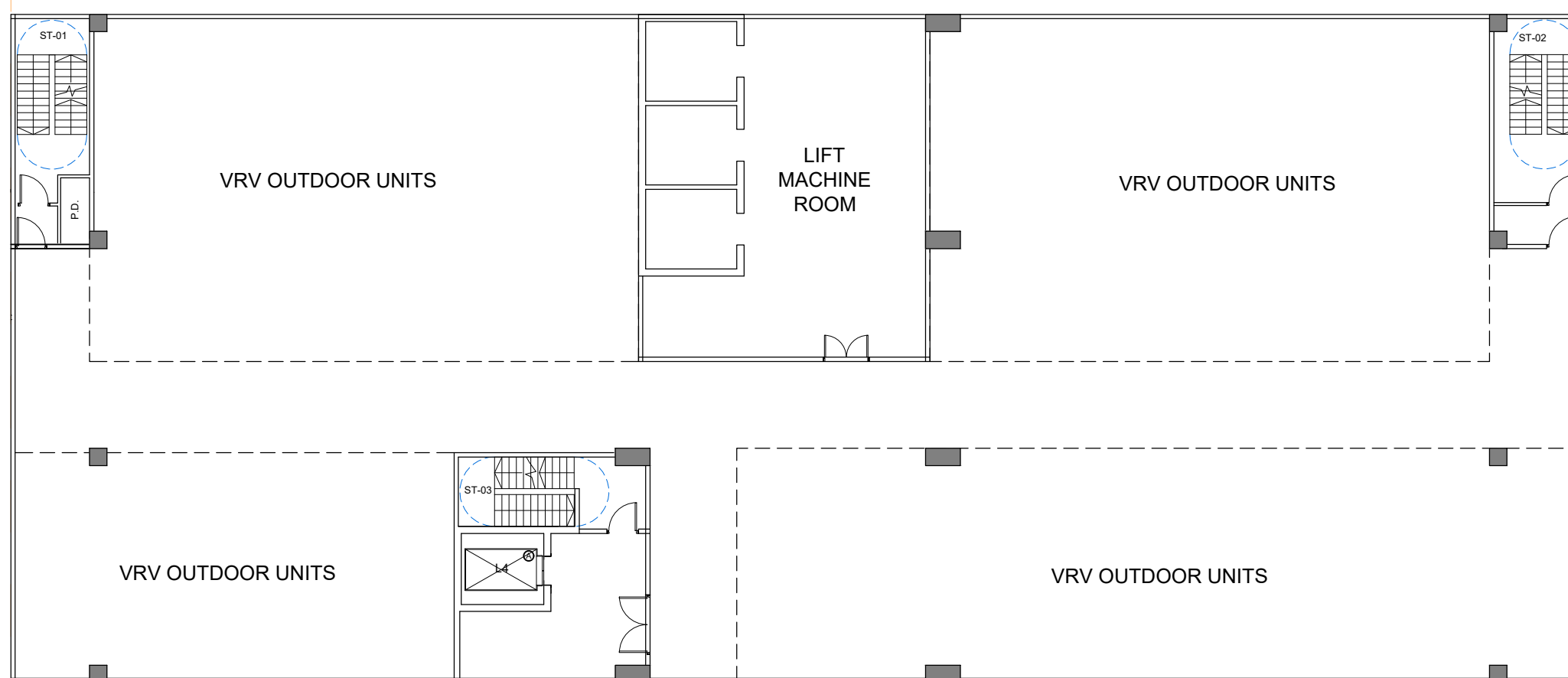


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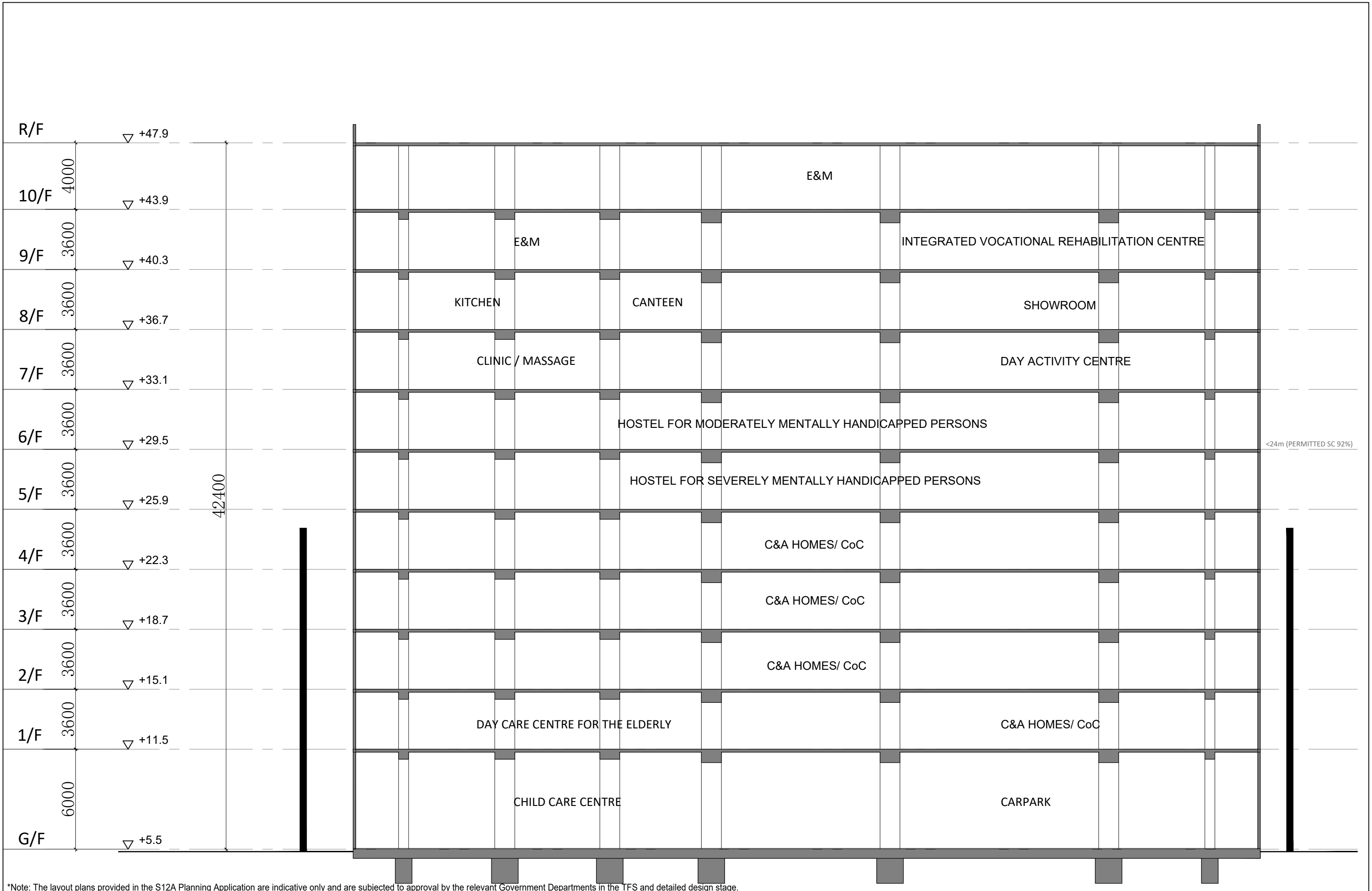


SHA CHAU LEI ROAD



*Note: The layout plans provided in the S12A Planning Application are indicative only and are subjected to approval by the relevant Government Departments in the TFS and detailed design stage.





*Note: The layout plans provided in the S12A Planning Application are indicative only and are subjected to approval by the relevant Government Departments in the TFS and detailed design stage.

Appendix 2

Landscape Impact Assessment and Landscape Proposal

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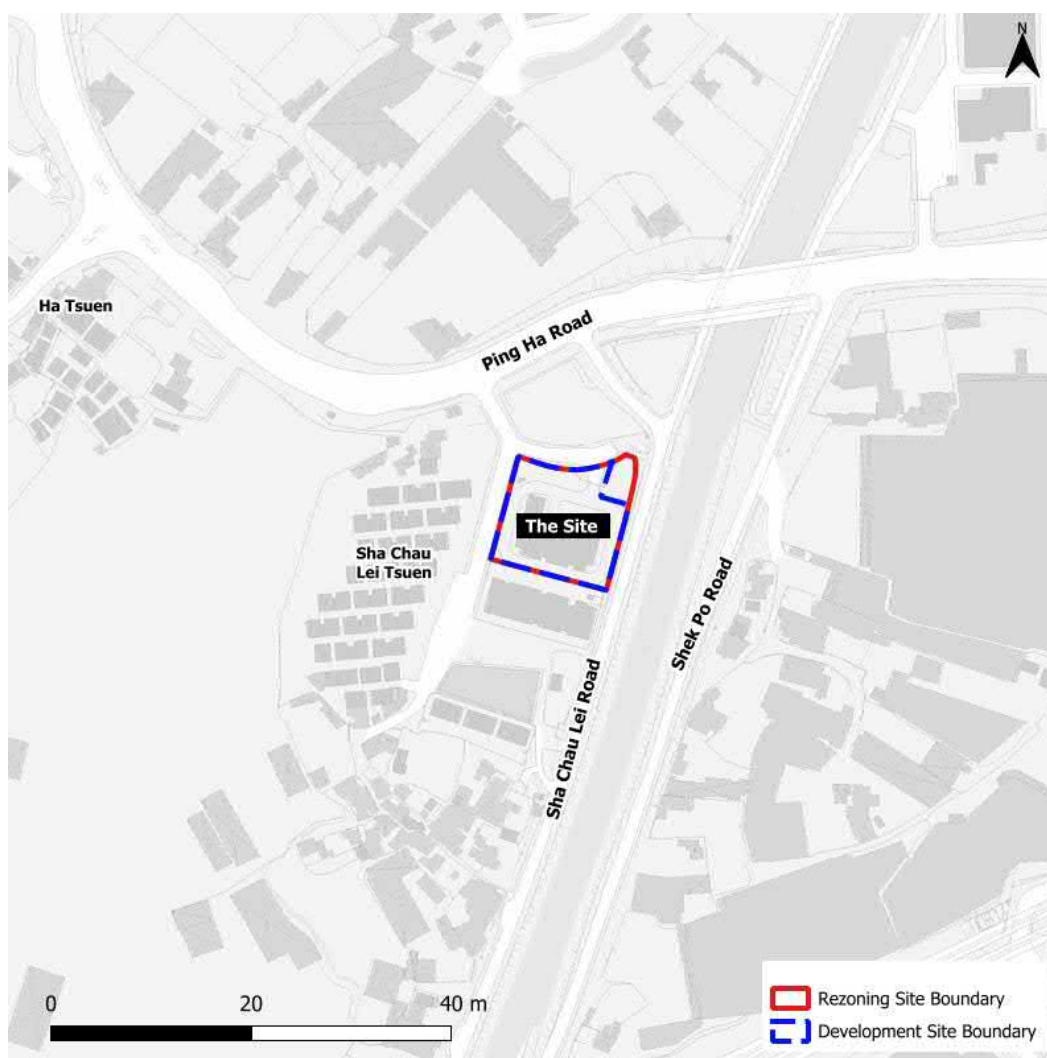
A	Preliminary tree survey findings
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1 INTRODUCTION

1.1 Background

- 1.1.1 The Project comprises the demolition of existing building and construction of new block for the Pok Oi Hospital Yeung Chun Pui Care and Attention Home at 58 Sha Chau Lei Tsuen, Ha Tsuen, Ping Ha Road, and Yuen Long at Lot No. 2273 and the Extension thereto in Demarcation District 125, bounded by Sha Chau Lei Road in the east, and a nullah running adjacent to Sha Chau Lei Road. The Rezoning Site Area is about 3,388.7 m² while the Development Site Area (for calculation of plot ratio and site coverage) is about 3,090 m².



- 1.1.2 The proposed redevelopment includes social welfare facilities to cater the increasing demand for elderly, rehabilitation and child care services, by providing more floor area and better and upgraded facilities, under The Special Schemes on Privately Owned Sites for Welfare Uses, administrated by Social Welfare Department (SWD) and self-financing welfare related ancillary facilities.

1.2 Purpose of the Report

- 1.2.1 The purpose of the Landscape Impact Assessment and Landscape Proposal is to review and evaluate any potential landscape impact arising from the the demolition of existing building and construction of new block for the Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long, and to propose mitigation measures where necessary to alleviate any potential adverse impact identified; and is to support the S12A Application for Proposed Demolition of existing building and Construction of new block for the Pok Oi Hospital Yeung Chun Pui Care and Attention Home at 58 Sha Chau Lei Tsuen, Ha Tsuen, Ping Ha Road, Yuen Long at Lot No. 2273 and the Extension in DD 125. The preparation of Landscape Proposal has made reference to the guideline of JPN No.3 "Landscape and Site Coverage of Greenery".
- 1.2.2 Preliminary Tree Survey findings is also included in the report.

1.3 Structure of this Report

- 1.3.1 This Report contains a tree survey, tree assessment schedule, tree survey plan, tree treatment plan and photographic records. Following this introductory section, the remainder of this Report for Landscape Impact Assessment and Landscape Proposal is arranged as follows:
- Section 2 describes legislations, standards and guidelines related to tree survey and tree preservation and removal proposal, landscape impact assessment and landscape proposal; and
 - Section 3 presents the tree survey baseline findings; and
 - Section 4 presents the landscape impact assessment; and
 - Section 5 presents the landscape proposal; and
 - Section 6 summarises the findings of this Report.

2 PROPOSED DEVELOPMENT

2.1 Planning and Lands Requirements

- 2.1.1 The Site is zoned “Government, Institution or Community” on the Approved Hung Shui Kiu and Ha Tsuen Outline Zoning Plan No. S/HSK/2 and is subjected to a building height restriction of 3 storeys. According to the Statutory Notes of the Approved OZP, ‘Social Welfare Facility’ is a column 1 use which is an always permitted use.
- 2.1.2 As shown in the latest proposed layout, the building height of the Proposed Development is +47.90mPD. The increase in building height from 3 storeys to +47.90mPD may not be considered ‘minor’ thus seeking a building height relaxation by lodging a S16 planning application for minor relaxation of the building height restrictions may not applicable. Hence, a S12A Amendment of Plan Application to amend the building height restriction of the “G/IC” zone may be required.
- 2.1.3 Planning merits and justifications including meeting the acute demand for the much needed social welfare facilities and efficient use of scarce land resources will be required in support of the Planning Application.
- 2.1.4 Building bulk would have a fundamental visual impact. Building height and disposition of building blocks of the Proposed Development at the Site should be carefully considered in order to be compatible with the adjacent buildings and avoid possible visual impact onto the sensitive receivers. Various appropriate and thoughtful building design i.e. setback and employment of landscape treatment may be considered as mitigation measures to alleviate the possible visual impact onto the surrounding area and maintain visual permeability from key viewing points. The potential visual impact from various public sensitive viewpoints in the area shall be identified and assessed in the visual impact assessment exercise in support of the S12A Planning Application.

3 PRELIMINARY TREE SURVEY FINDINGS

3.1 Findings of Preliminary Tree Survey

- 3.1.1 Based on the preliminary tree survey, a total of 3 nos. of existing tree observed on site. There are no OVTs identified in accordance with DEVB TC(W) No. 5/2020 identified within the project boundary. There are also no trees of particular interest, such as large size trees with DBH over 1m, rare and protected species identified. They are generally in poor to average form, average health and average amenity value, with species include *Artocarpus heterophyllus*, *Dimocarpus longan* and *Manilkara zapota*.

3.2 Preliminary Tree Treatment Recommendations

- 3.2.1 Among the tree surveyed, all 3 trees are proposed to be retained. No tree is recommended to be removed or transplanted. Tree Assessment Schedule and Photos of trees surveyed are shown in Appendix A.

3.3 Preliminary Tree Planting Plan

- 3.3.1 Considered the limited site area, the opportunity of tree planting is maximised where appropriate balancing the functional needs of the development and “right tree right place” principles.
- 3.3.2 Trees/shrub are proposed for visual screening purpose as far as possible in order to improve visual amenity wherever appropriate as part of the landscape proposal.

4 LANDSCAPE IMPACT ASSESSMENT

4.1 Introduction

- 4.1.1 This chapter is to review and evaluate any potential landscape impact arising from the proposed development, and to propose mitigation measures where necessary to alleviate any potential adverse impact identified.

4.2 Environmental Legislation, Standards and Guidelines

- 4.2.1 The following legislation, standards and guidelines are applicable to landscape and visual impact assessment associated with the construction and operation of the project: -

- Town Planning Ordinance (Cap.131);
- Guidance Notes on Application for Amendment of Plan under Section 12A;
- Hong Kong Planning Standards and Guidelines Chapters 4, 10 and 11;
- DEVB TCW No. 2/2012 - Allocation of Space for Quality Greening on Roads;
- DEVB TCW No. 6/2015 - Maintenance of Vegetation and Hard Landscape Features;
- DEVB TCW No. 5/2020 - Registration of Old and Valuable Trees, and Guidelines for their Preservation;
- LAO PN No. 6/2023 – Processing of Tree Preservation and Removal Proposals for Building Development in Private Projects; and
- Study on Landscape Value Mapping of Hong Kong.

4.3 Assessment Methodology

- 4.3.1 The assessment methodologies for landscape impact assessment are described as below:

- Identification of the construction and operation activities of the demolition and construction works which would cause potential landscape impacts;
- Identification of the key Landscape Resources (LRs) that might subject to the impact by the demolition and construction works;
- Assessment of landscape impact due to the proposed demolition and construction works;
- Recommendation of preliminary landscape mitigation measures to the demolition and construction works to minimize any potential adverse impact identified; and
- Evaluation of the residual landscape impact.

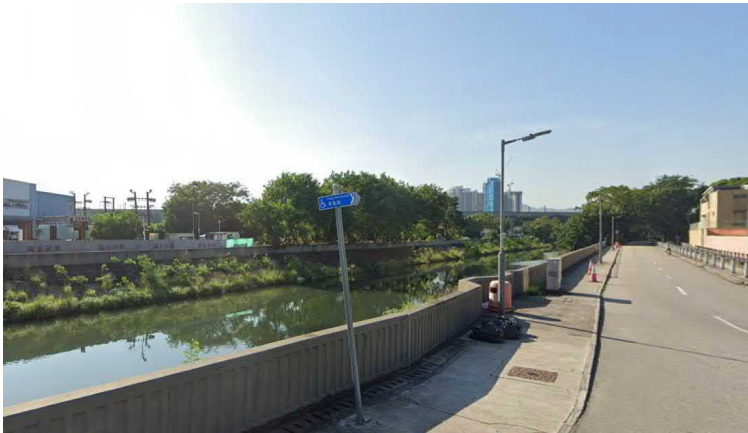

4.4 Baseline Findings



4.4.1 General



- 4.4.1.1 In view of the confined site area, it is anticipated no Landscape Resources (LRs) would be affected out of 100m from the project boundary. Therefore, key LR within 100m assessment boundary would be identified and discussed under this Landscape Impact Assessment.

- 4.4.1.2 The identified landscape resources which would be potentially affected by the proposed development, together with their sensitivities are described in **Table 4.1**. Based on the desktop study, there is no OVT identified. Locations of these landscape resources are mapped in **Figure 4.1**.

Table 4.1 – Baseline Landscape Resources (LRs) and their Sensitivity

LRs	Description	Sensitivity
LR1	<p>Watercourse</p> <p>This landscape resource refers to the channelised watercourse, namely Tin Shui Wai Main Nullah. This LR also includes some walkways along the watercourse and the vegetation associated with the watercourse, both within the channel and along the banks as well as the ridge of the banks. The vegetation mainly consists of grasses and shrubs, and also includes trees in some areas.</p> 	Low
LR2	<p>Vegetation in Sha Chau Lei Sitting Out Area</p> <p>This open space landscape is located at the south outside the site boundary with an area of around 1,000m² with a few number of existing trees, all in species <i>Archontophoenix alexandrae</i>. It includes a sitting out area ground and a playground. No registered OVT is identified.</p> 	Medium

LRs	Description	Sensitivity
LR3	<p>Vegetation in Village</p> <p>This landscape resources refers to the traditional villages, modern villages and small scale, low rise residential areas of lower density dominated by domestic structures (mainly of 2-3 storeys) interwoven with roads and paths, namely Sha Chau Lei Tsuen. This LR often has small orchard areas, private gardens, as well as amenity planting among the built structures. No registered OVT is identified.</p> 	Low
LR4	<p>Vegetation in Industrial Land and Open Storage</p> <p>This landscape resources refers to areas that are heavily adapted for human industrial use such as open areas for storage, parking, or other associated activities such as factory facilities, waste processing plants and other industrial buildings. There is very little existing vegetation within this LR with the exception of self-seeded trees and shrubs scattered around the areas. Generally, vegetation is found along the periphery of the boundary lot lines where trees and understory form rows of vegetation circumscribing the industrial uses within the site. No registered OVT is identified.</p> 	Low

LRs	Description	Sensitivity
LR5	<p>Vegetation in Care and Attention Home</p> <p>This landscape resource refers to landscape area within the care and attention home, namely Yeung Chun Pui Care and Attention Home within site boundary, and Ching Chung Care and Attention Home for the Aged located at the south outside of site boundary. This LR has limited planting areas with trees and shrubs for amenity purposes. No registered OVT is identified.</p> 	Medium
LR6	<p>Roadside Vegetation</p> <p>This landscape resources refers to all the associated major intersections and key adjacent roads, namely Ping Ha Road within the assessment boundary. There are tree and shrub planting along the sides of the roads for slope greening and amenity purposes. No registered OVT is identified, the ability to accommodate change for this LR is considered as high.</p> 	Low

4.5 Landscape Impact Assessment

- 4.5.1 The potential landscape impacts due to the proposed Works are itemized and assessed below.
- 4.5.2 The magnitude of unmitigated impacts on LRs associated with the Project are assessed and described in Table 4.2.

Table 4.2 – Magnitude of Changes on LRs during Construction and Operation

LRs/ LCAs	Description	Potential Source of Impact	Magnitude of Change (Large/Intermediate/Small/Negligible)
Landscape Resources			
LR1	Watercourse	Negligible	Negligible
LR2	Vegetation in Sha Chau Lei Sitting Out Area	Negligible	Negligible
LR3	Vegetation in Village	Negligible	Negligible
LR4	Vegetation in Industrial Land and Open Storage	Negligible	Negligible
LR5	Vegetation in Care and Attention Home	No existing trees would be affected by the proposed development. Only small amount of pot plants and shrubs would be removed.	Negligible to Small
LR6	Roadside Vegetation	Negligible	Negligible

4.6 Landscape Mitigation Measures

- 4.6.1 Based on the potential landscape impacts identified, a series of mitigation measures are recommended below to mitigate any adverse impacts. The mitigation measures are illustrated in Figure 5.1.
- a. **MM1: Preservation of existing vegetation** – All existing trees to be retained or not be affected by the project shall be carefully protected during construction in accordance with the latest guidelines on tree preservation during development issued by GLTM Section of DEVB.

- b. **MM2: Reinstatement of affected landscape areas** – To reinstate all landscape areas disturbed temporarily during construction on like to like basis or for better quality.
- c. **MM3: Provision of buffer planting** – To provide buffer planting with tree and shrub where appropriate for visual screening and soft transition to the adjacent landscape context.
- d. **MM4: Maximizing greenery opportunity** – To provide amenity planting and terrace planting as far as possible for leisure and visual amenity.

4.7 Evaluation of Residual Impacts

- 4.7.1 Only a small amount of LR5 with medium sensitivity will be affected with all existing trees can be preserved. The magnitude of change is negligible to small and the unmitigated landscape impact is insubstantial to slight. By assuming the proposed mitigation measures are implemented, the predicted residual landscape impact of the proposed development shall be reduced to insubstantial.

5 LANDSCAPE PROPOSAL

5.1 Design Objectives

5.1.1 The Landscape Design Objectives include the followings:

- To preserve existing trees as much as possible within the proposed development;
- To provide tree planting for improving visual amenity; and
- To maximize greenery opportunities for the enjoyment of the users.

5.2 Landscape Proposals

5.2.1 The Landscape Proposal for the proposed development are illustrated in Figure 5.1. Landscape Design Proposals for the proposed development include the followings: -

- Provision of buffer planting with tree and shrub where appropriate to provide visual screening and soft transition to the adjacent landscape context.
- Sitting out and amenity areas on several floor levels that enable different users to engage in outdoor activities.
- Amenity trees species are proposed as follows:

Table 5.1 Indicative Tree Planting Species

Species Name	Chinese Name	Size	Approx. Quantity
<i>Cinnamomum burmannii</i> *	陰香	Heavy Standard / Standard	2
<i>Sterculia lanceolata</i> *	假蘋婆	Heavy Standard / Standard	4
<i>Podocarpus macrophyllus</i> *	羅漢松	Standard	9
<i>Viburnum odoratissimum</i> *	珊瑚樹	Standard	3
Total (nos.)			18

* Native

5.3 Greenery Calculation

5.3.1 Based on the proposed Landscape Proposal, approximately 800m² is proposed as greenery areas, which achieves 20% site coverage of greenery with lawn and amenity planting in accordance to PNAP APP-152 and DEVD TCW No.3/2012 based on the Rezoning Site Area of 3,388.7m². The greenery areas are illustrated in Figure 5.2.

5.4 Hard and Soft Landscape Proposals

5.4.1 The hard landscape elements include footpath, planters, landscape furniture. These elements will be designed and / or selected using the following general criteria:

- Reasonable Cost and maintenance requirement – materials shall be easily

maintained and managed.

- Visual compatibility with existing developments.

5.4.2 The soft landscape elements include plant materials, soil media and planter drainage. These elements will be selected using the following general criteria:

- Fast Growing – able to provide the desired landscape design intent within short period of time.
- Use of Native Species where possible to enhance local biodiversity.
- Seasonal Interest – providing seasonal variety or special seasonal flowers, fruit or foliage colour
- Non-Toxic – relatively safe and non-poisonous materials.
- Appropriate spacing for tree planting according to the different tree species and mature size is required.
- Adequate soil depth shall be allowed for tree/shrub/groundcover planting.

5.5 Irrigation Strategy

5.5.1 For generally flat accessible areas, hand operated water points will be provided.

6 CONCLUSIONS

6.1 Conclusions

- 6.1.1 This Landscape Impact Assessment and Landscape Proposal has provided a review of the potential landscape impacts associated with the construction and operation of the proposed development, based on the architectural design information available at this technical feasibility stage.
- 6.1.2 The proposed development only affects a small amount of existing potted plants and shrubs with all existing trees to be preserved. These impacts have been minimized to an insubstantial level through careful consideration of proposed mitigation measures and landscape treatments of proposed development works.
- 6.1.3 Landscape Proposal is proposed to optimise the living environment of the proposed development and mitigate the potential impact on existing landscape resources due to the proposed development.
- 6.1.4 Proposed buffer planting at the periphery of the development forms a visual screen to the development on at grade level and provide green transition to adjacent landscape context.
- 6.1.5 It is concluded with the landscape proposals for the proposed development as illustrated in the Landscape Proposal, would blend in well with the existing and planned landscape context of the area.

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Figure 4.1

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PROPOSED DEVELOPMENT OF
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PUI CARE AND ATTENTION HOME
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LANDSCAPE PROPOSAL &
PROPOSED MITIGATION MEASURE

SHEET NUMBER

Figure 5.1



LEGEND

- Application Boundary
- Buidling Outline Above

- Existing Trees to be Retained
- Proposed Tree Planting
- Proposed Shrub Planting

- 1 Sitting Out Area
- 2 Amenity Area
- 3 Buffer Planting
- 4 Terrace Planting with Shrubs and Lawn
- 5 Planter at Balcony

- MM1 Preservation of existing vegetation
- MM2 Reinstatement of affected landscape areas
- MM3 Provision of buffer planting
- MM4 Maximizing greenery opportunities



SHA CHAU LEI ROAD

LEGEND

- Application Boundary
- Building Outline Above

- Existing Trees to be Retained
- Proposed Tree Planting
- Proposed Shrub Planting

- 1 Sitting Out Area
- 2 Amenity Area
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- 5 Planter at Balcony

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- MM2 Reinstatement of affected landscape areas
- MM3 Provision of buffer planting
- MM4 Maximizing greenery opportunities

PROJECT

PROPOSED DEVELOPMENT OF
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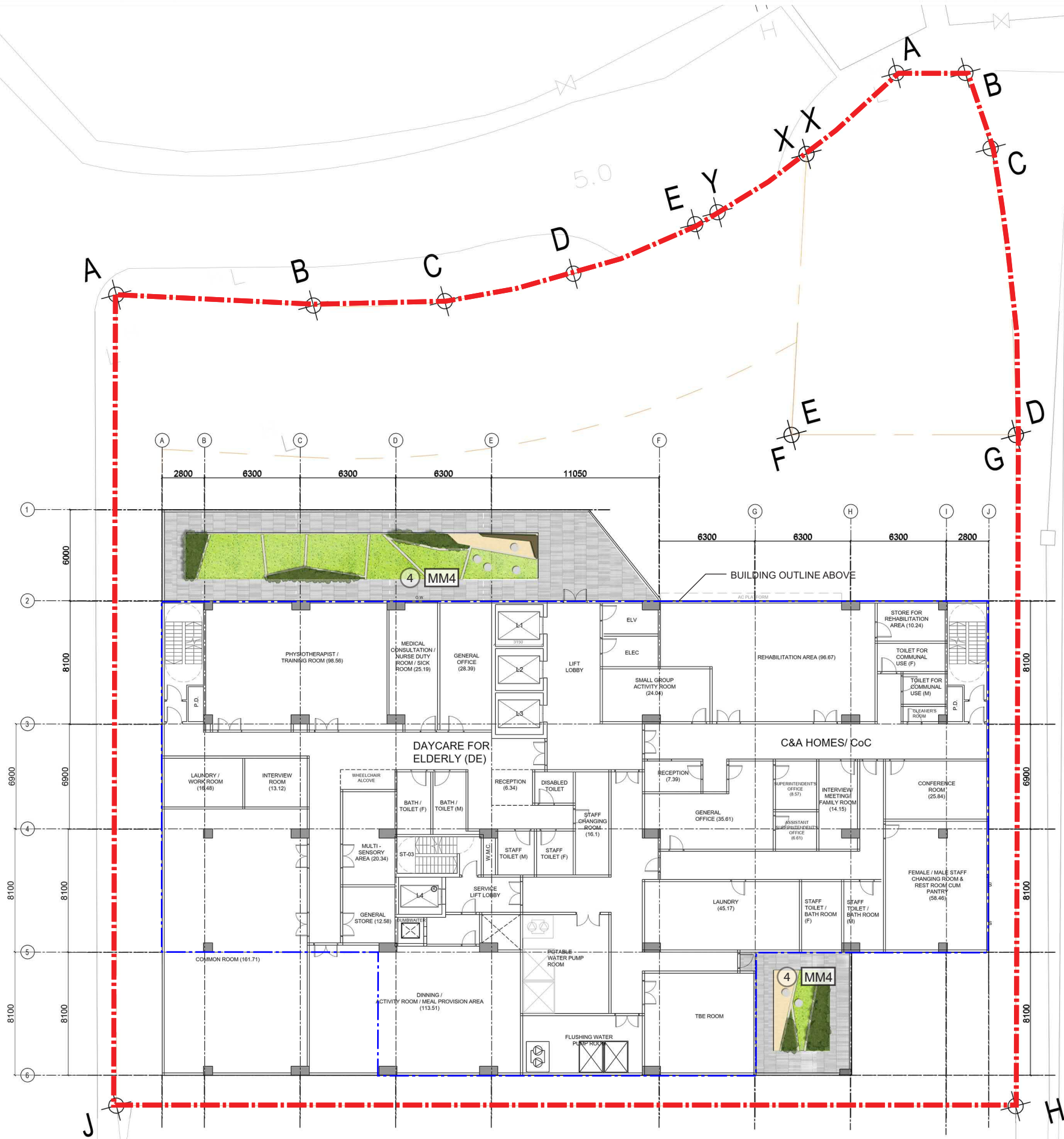
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LANDSCAPE PROPOSAL &
PROPOSED MITIGATION MEASURE
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Figure 5.1.1



SHA CHAU LEI ROAD

LEGEND

- Application Boundary
- Building Outline Above

- Existing Trees to be Retained
- Proposed Tree Planting
- Proposed Shrub Planting

- 1 Sitting Out Area
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PROJECT
PROPOSED DEVELOPMENT OF
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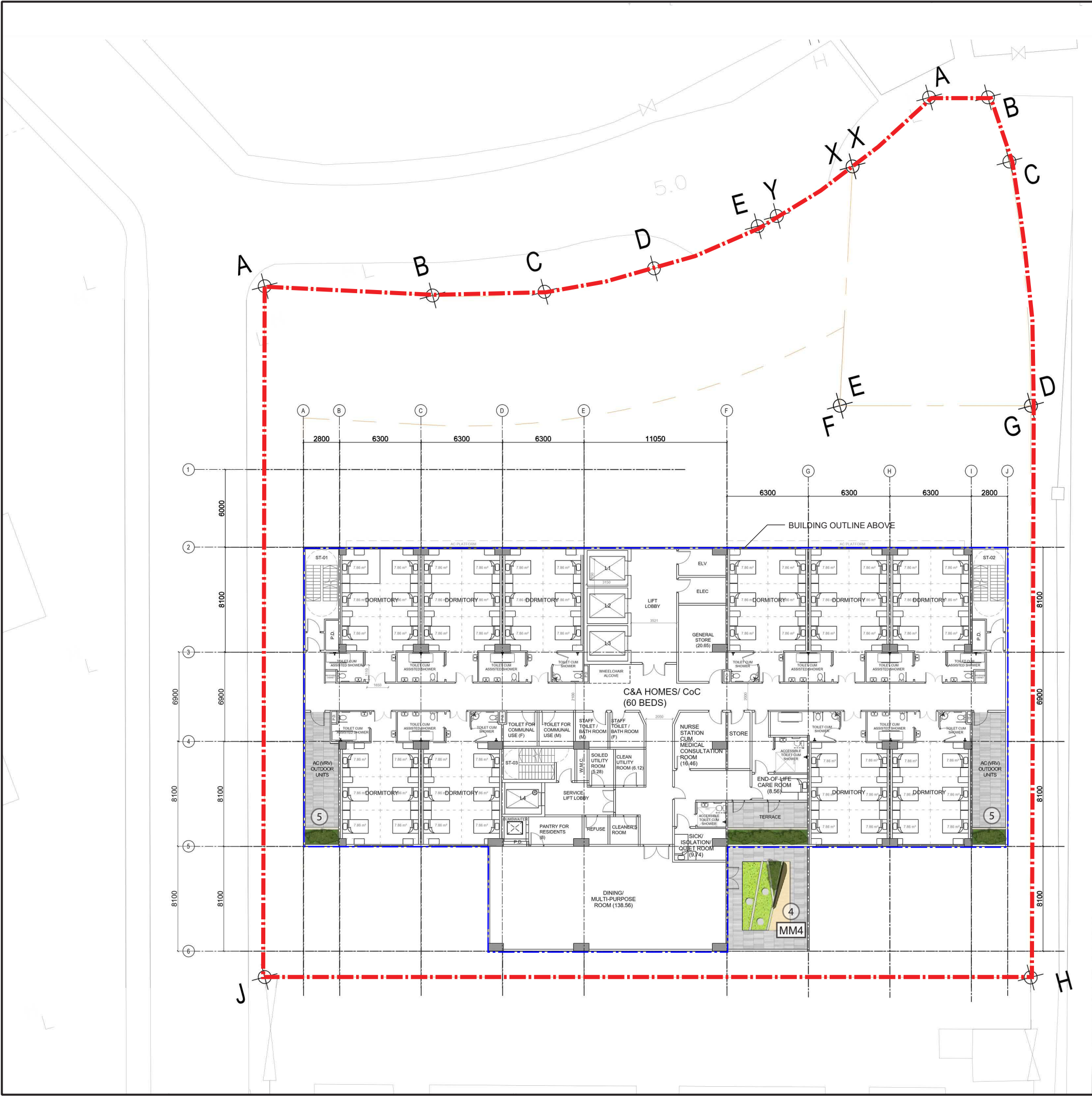
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LANDSCAPE PROPOSAL &
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Figure 5.1.2



SHA CHAU LEI ROAD

LEGEND

- Application Boundary
- Buidling Outline Above

- Existing Trees to be Retained
- Proposed Tree Planting
- Proposed Shrub Planting

- 1 Sitting Out Area
- 2 Amenity Area
- 3 Buffer Planting
- 4 Terrace Planting with Shrubs and Lawn
- 5 Planter at Balcony

- MM1 Preservation of existing vegetation
- MM2 Reinstatement of affected landscape areas
- MM3 Provision of buffer planting
- MM4 Maximizing greenery opportunities



PROJECT

PROPOSED DEVELOPMENT OF
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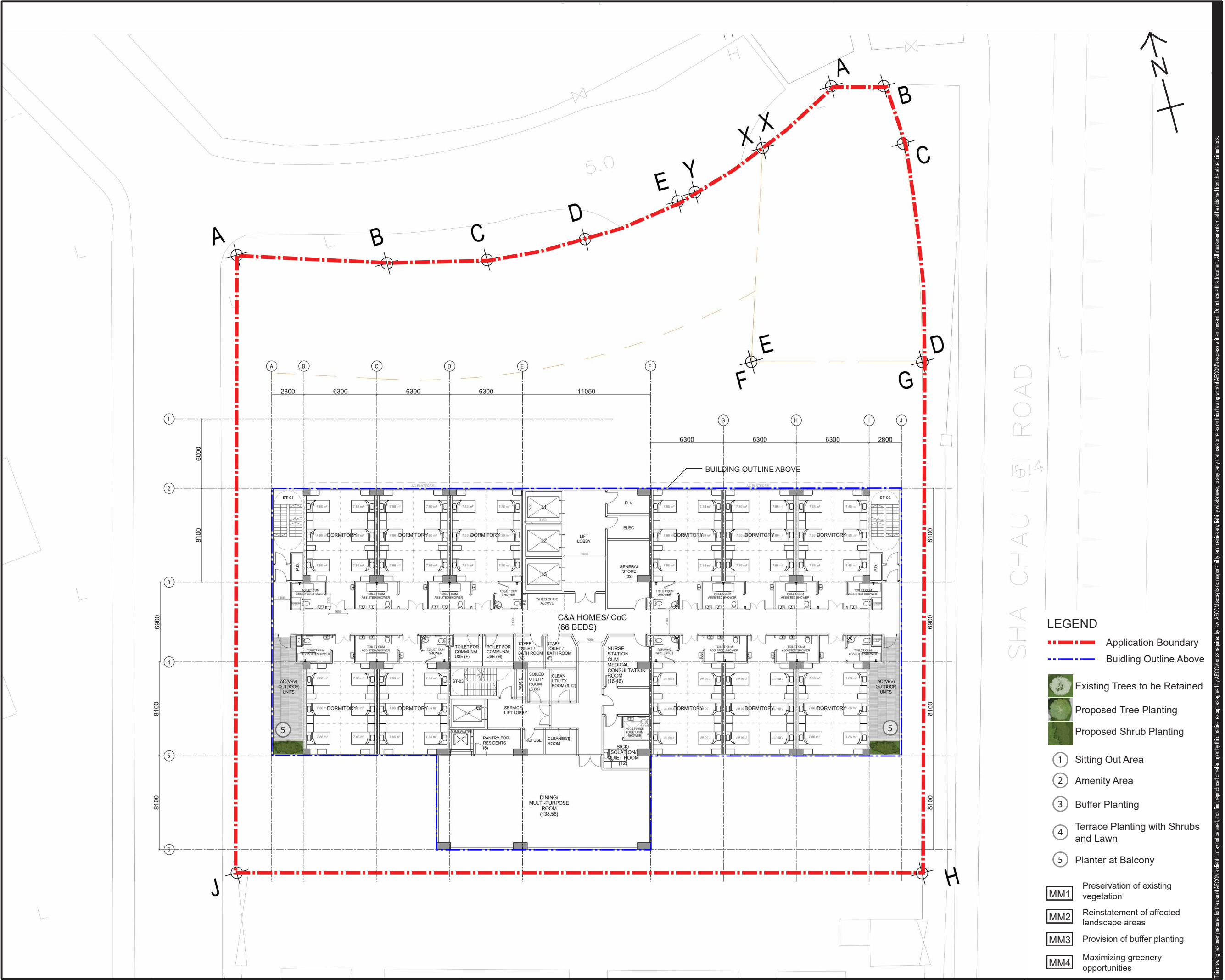
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LANDSCAPE PROPOSAL &
PROPOSED MITIGATION MEASURE
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Figure 5.1.3



PROJECT
PROPOSED DEVELOPMENT OF
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PUI CARE AND ATTENTION HOME
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LANDSCAPE PROPOSAL &
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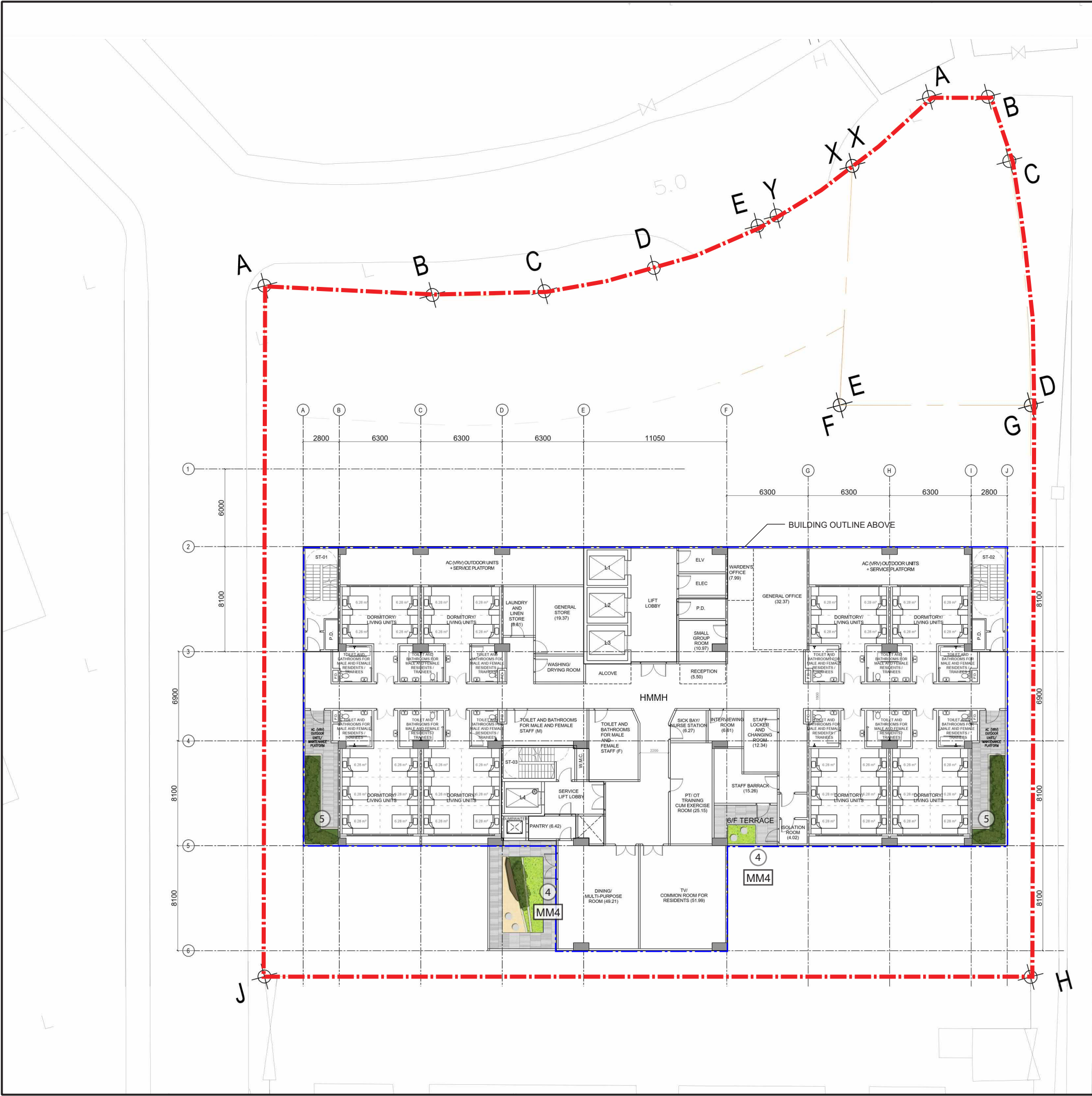
Figure 5.1.4

LEGEND
Application Boundary
Building Outline Above

- Existing Trees to be Retained
- Proposed Tree Planting
- Proposed Shrub Planting

- 1 Sitting Out Area
- 2 Amenity Area
- 3 Buffer Planting
- 4 Terrace Planting with Shrubs and Lawn
- 5 Planter at Balcony

- MM1 Preservation of existing vegetation
- MM2 Reinstatement of affected landscape areas
- MM3 Provision of buffer planting
- MM4 Maximizing greenery opportunities



SHA CHAU LEI ROAD



LEGEND

--- Application Boundary
--- Building Outline Above

Existing Trees to be Retained
 Proposed Tree Planting
 Proposed Shrub Planting

① Sitting Out Area
② Amenity Area
③ Buffer Planting
④ Terrace Planting with Shrubs and Lawn
⑤ Planter at Balcony

MM1 Preservation of existing vegetation
MM2 Reinstatement of affected landscape areas
MM3 Provision of buffer planting
MM4 Maximizing greenery opportunities



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比例	尺寸單位
A3 1:300	METRES

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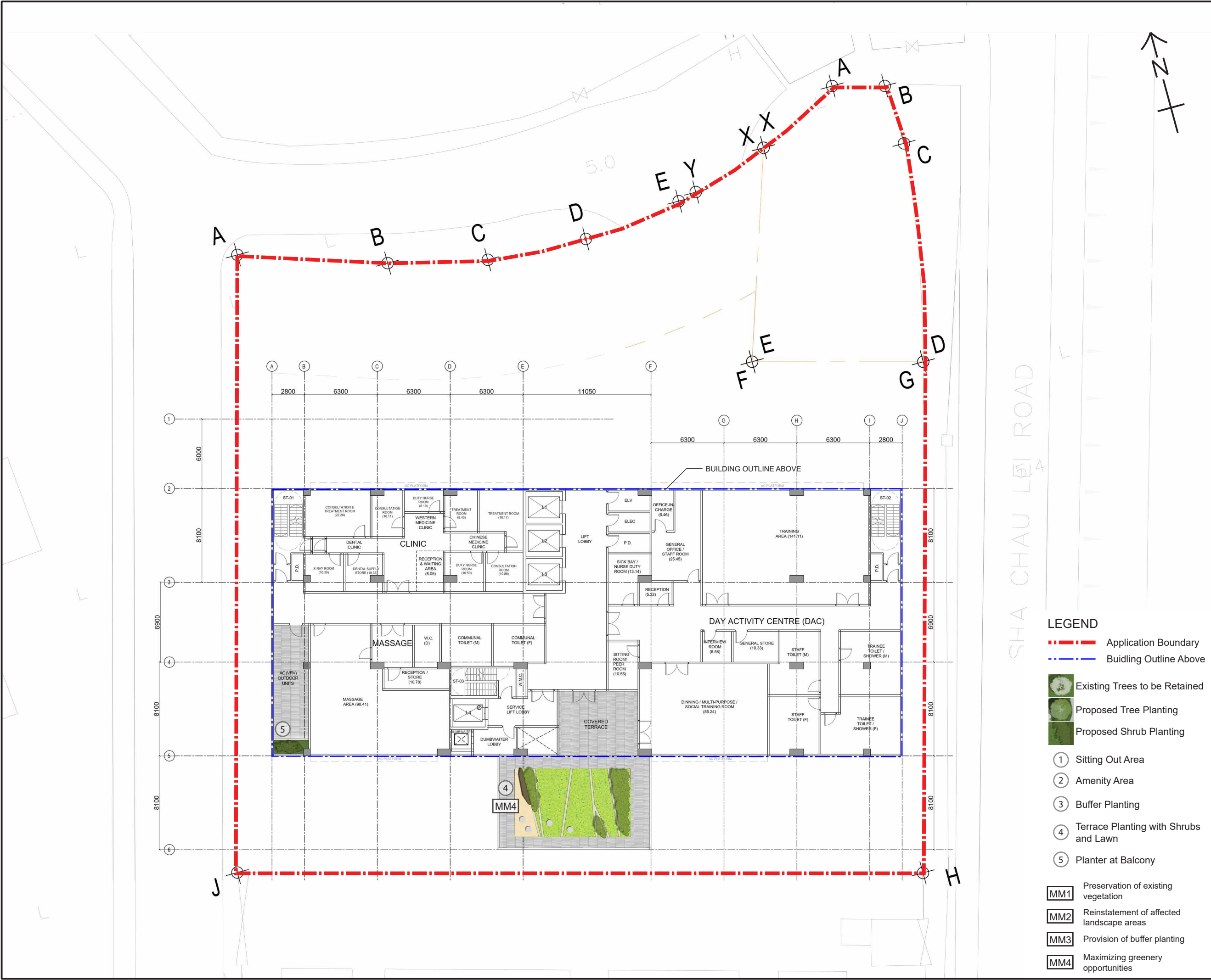
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圖紙名稱

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PROPOSED MITIGATION MEASURE
6/F

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03	11/08	Revised Design	03
04	11/08	Revised Design	04
05	11/08	Revised Design	05
06	11/08	Revised Design	06
07	11/08	Revised Design	07
08	11/08	Revised Design	08
09	11/08	Revised Design	09
10	11/08	Revised Design	10

STATUS
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SCALE
A3 1:300
DIMENSION UNIT
METRES

PROJECT NO.
土利編號
CONTRACT NO.
合約編號

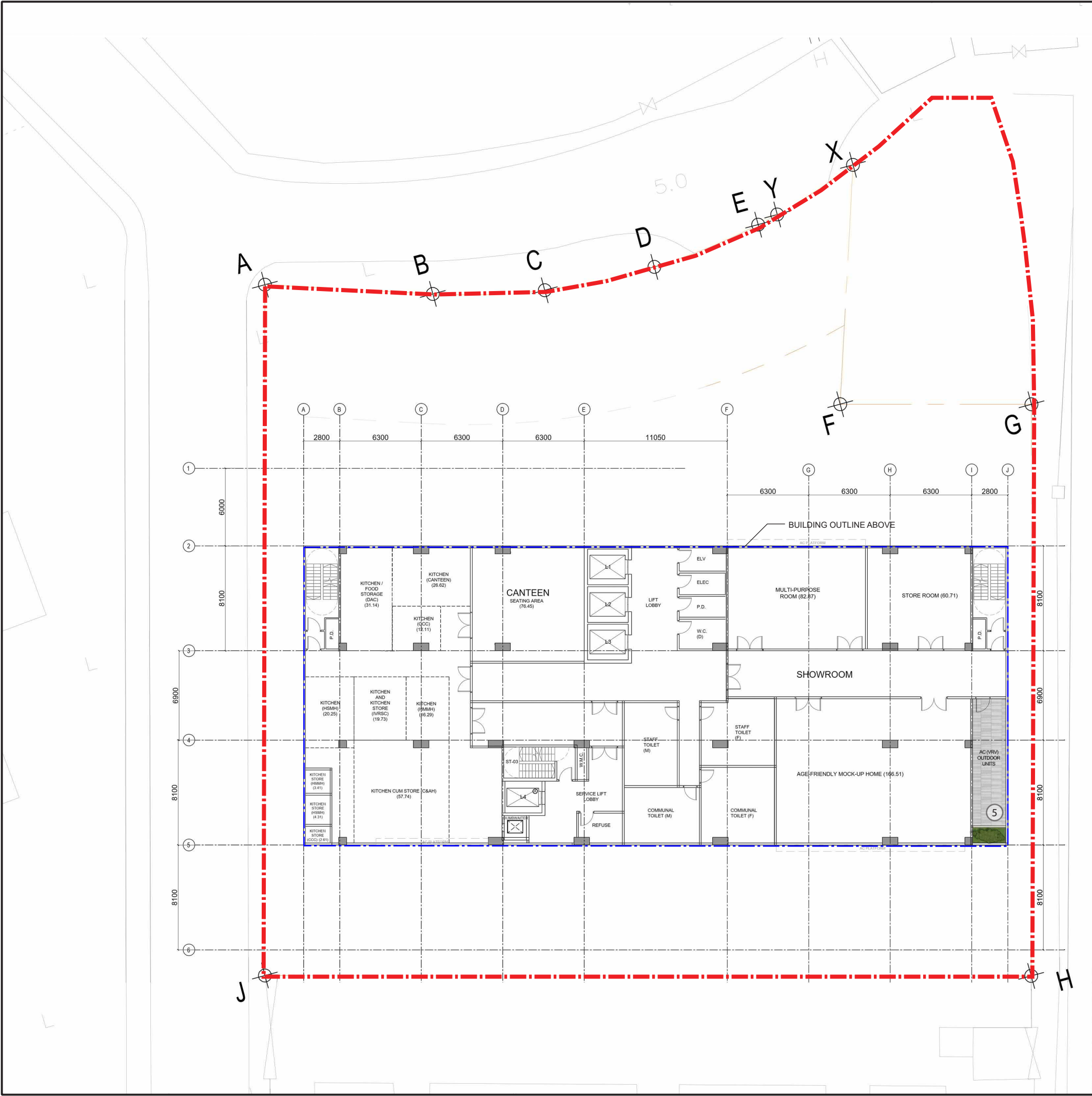
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圖紙名稱

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SHA CHAU LEI ROAD

LEGEND

--- Application Boundary
--- Building Outline Above

Existing Trees to be Retained
 Proposed Tree Planting
 Proposed Shrub Planting

① Sitting Out Area
② Amenity Area
③ Buffer Planting
④ Terrace Planting with Shrubs and Lawn
⑤ Planter at Balcony

MM1 Preservation of existing vegetation
MM2 Reinstatement of affected landscape areas
MM3 Provision of buffer planting
MM4 Maximizing greenery opportunities



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CONTRACT NO.
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SHEET TITLE
圖紙名稱
LANDSCAPE PROPOSAL &
PROPOSED MITIGATION MEASURE
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SHEET NUMBER
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Figure 5.1.7



■ ■ ■ ■ Application Boundary

Figure 5.2

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- LEGEND
- Application Boundary
 - Building Outline Above
 - Greenery Area

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STATUS

SCALE

A3 1:300

DIMENSION UNIT

METRES

PROJECT NO.

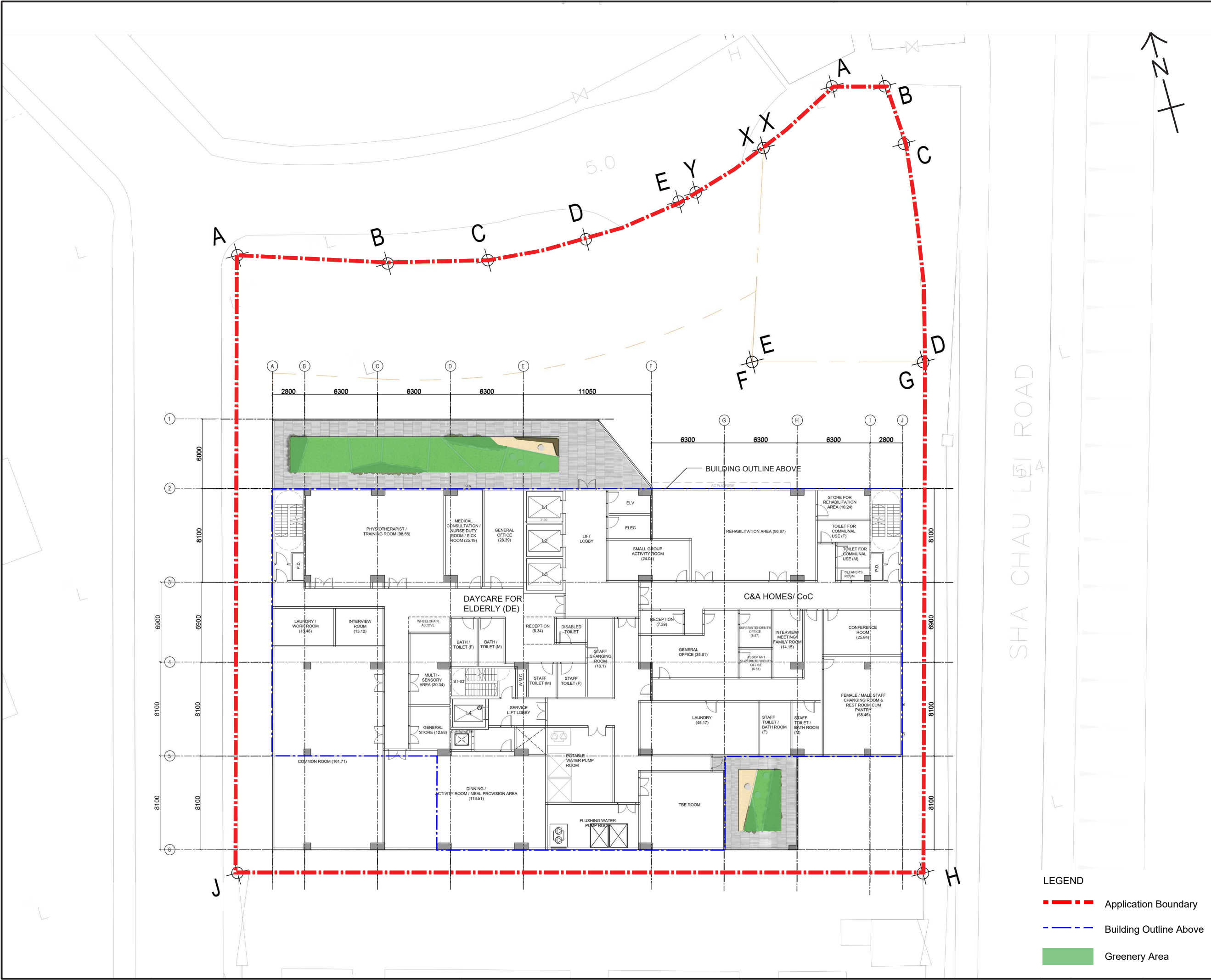
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SHEET TITLE

GREENERY AREA
G/F

SHEET NUMBER

Figure 5.2.1



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A3 1:300

DIMENSION UNIT
尺寸單位
METRES

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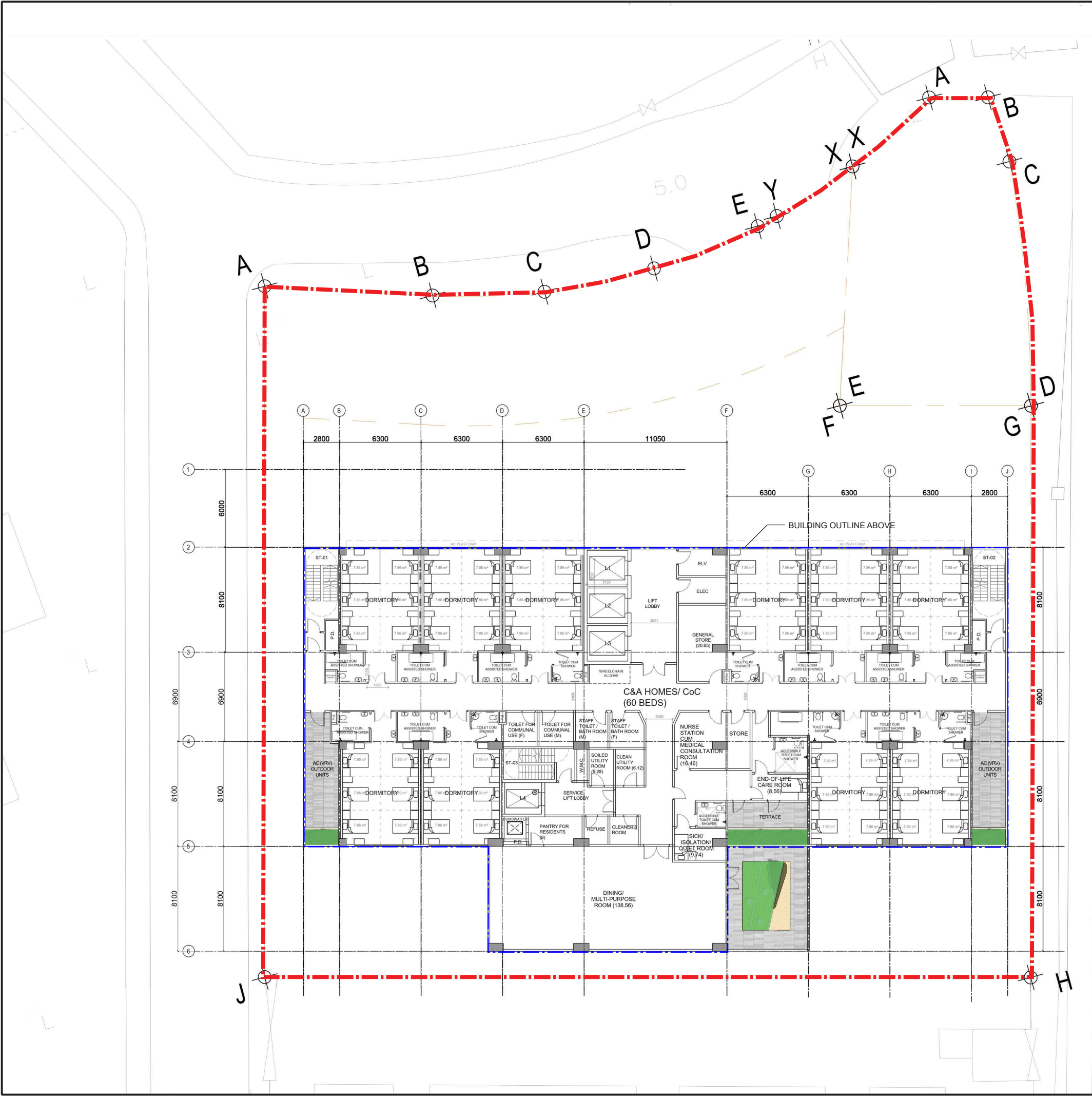
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1/F

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LEGEND

- Application Boundary
- Building Outline Above
- Greenery Area

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METRES

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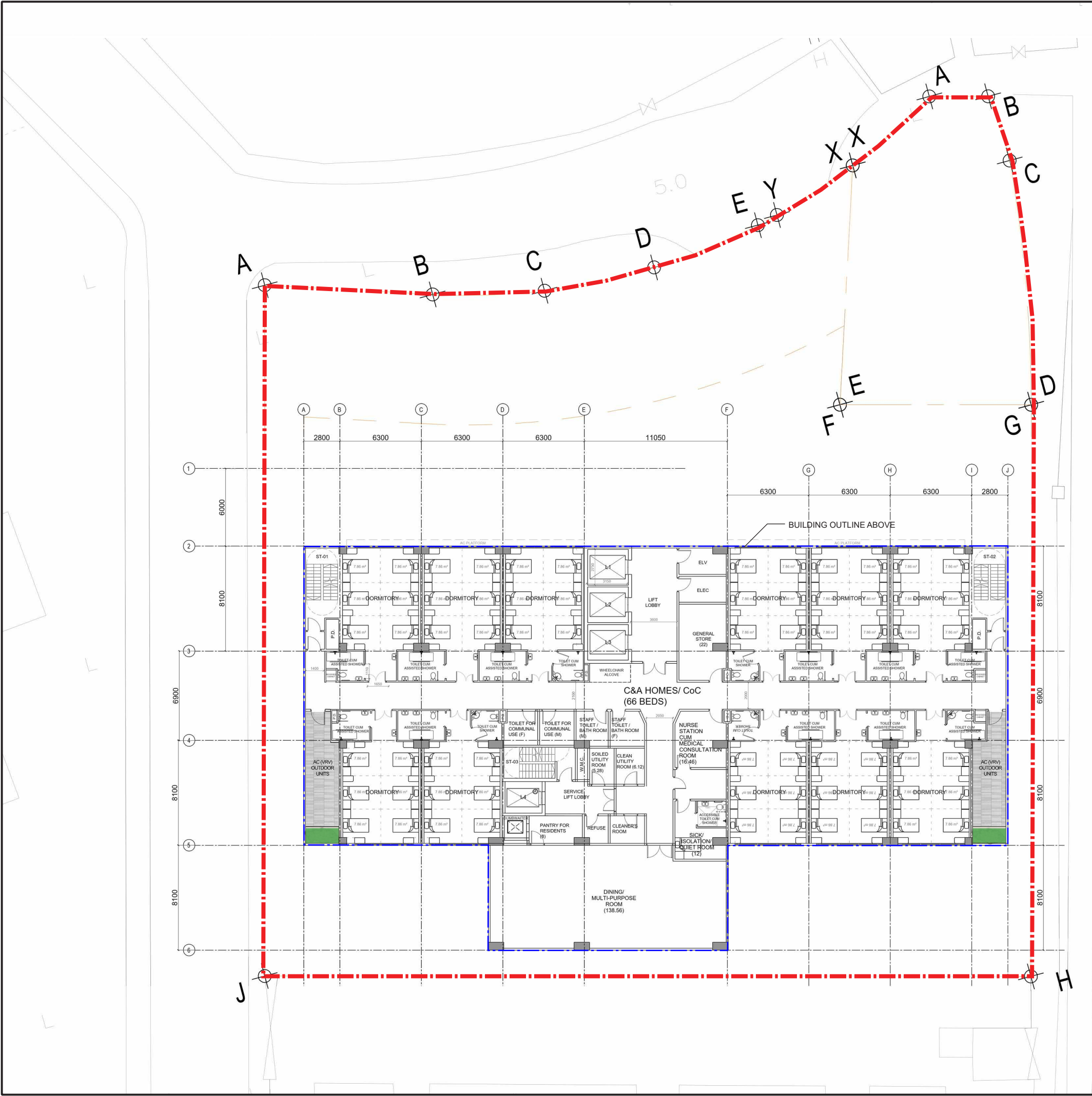
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2/F

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SHA CHAU LEI ROAD

- LEGEND
- Application Boundary
 - Building Outline Above
 - Greenery Area



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06	11/08	Final Design	06

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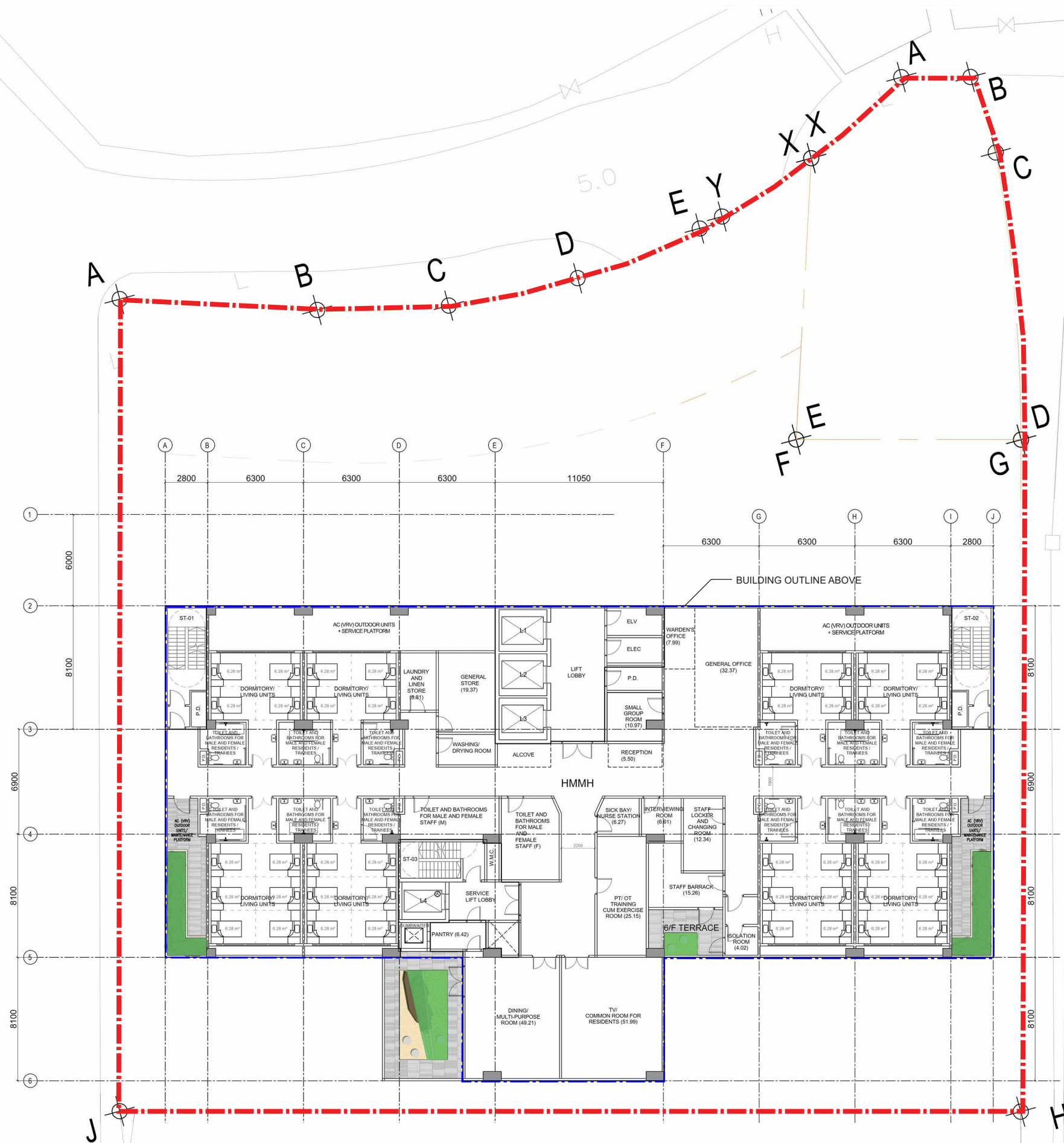
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METRES

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CONTRACT NO.
合約編號

SHEET TITLE
圖紙名稱
GREENERY AREA
3-4/F

SHEET NUMBER
圖紙編號

Figure 5.2.4



LEGEND

- Application Boundary
- Building Outline Above
-  Greenery Area

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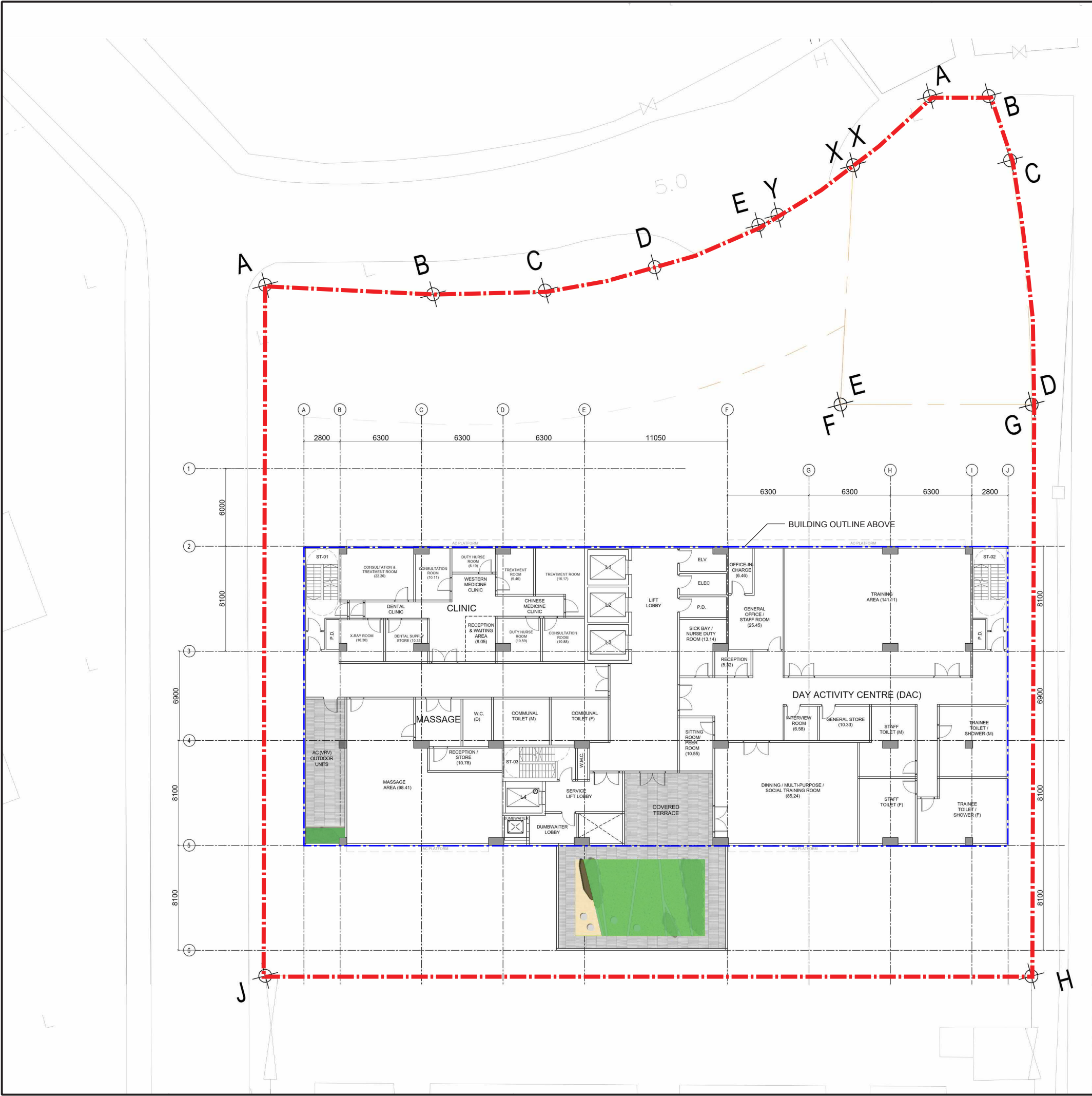
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SHA CHAU LEI ROAD

- LEGEND
- Application Boundary
 - Building Outline Above
 - Greenery Area



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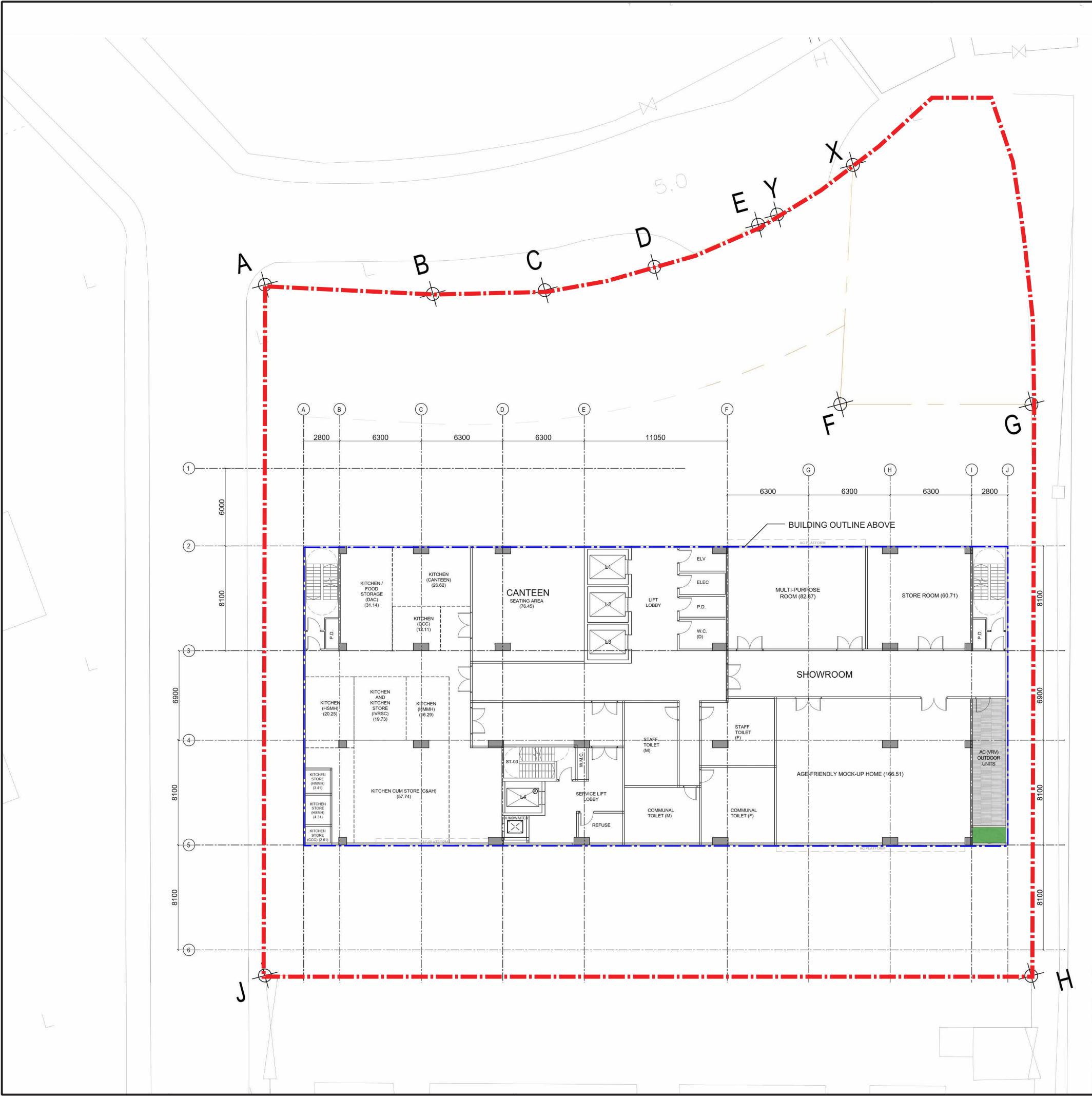
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SHA CHAU LEI ROAD

- LEGEND
- Application Boundary
 - Building Outline Above
 - Greenery Area



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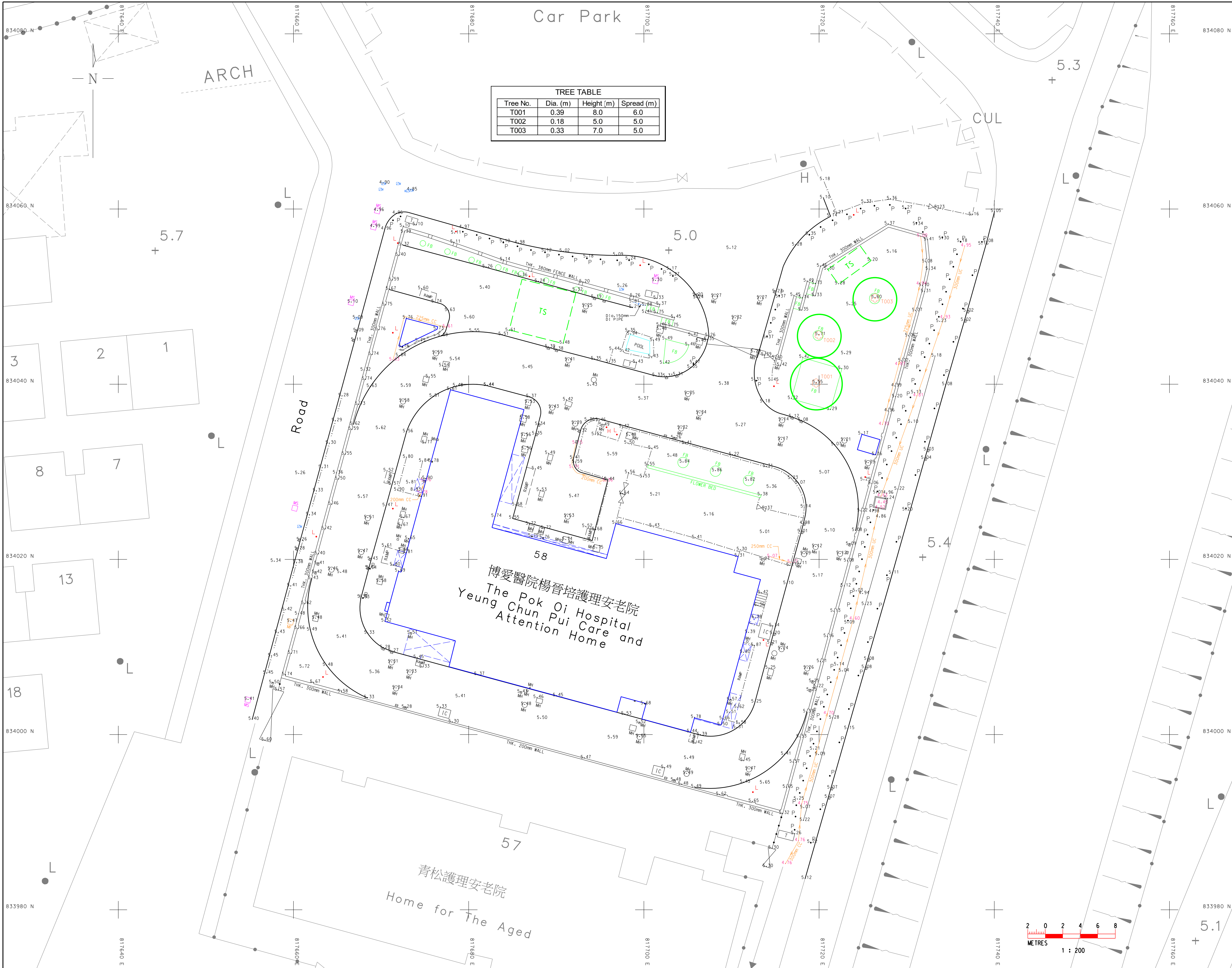
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Figure 5.2.7

Appendix A

Preliminary Tree Survey Findings



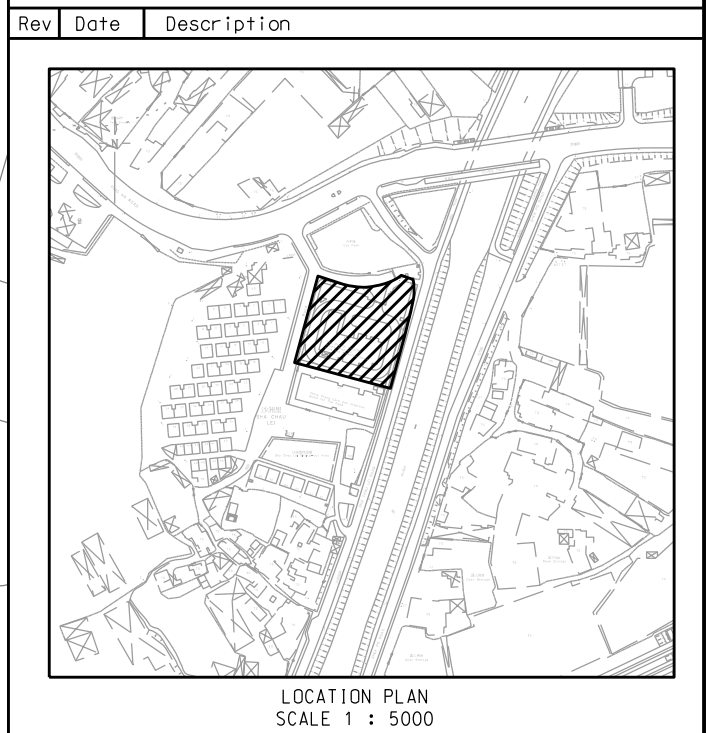
TREE TABLE			
Tree No.	Dia. (m)	Height (m)	Spread (m)
T001	0.39	8.0	6.0
T002	0.18	5.0	5.0
T003	0.33	7.0	5.0

NOTES :

1. CO-ORDINATES ARE OF THE HONG KONG 1980 COORDINATE SYSTEM.
2. ALL LEVELS ARE IN METERS REFERRED TO HONG KONG PRINCIPAL DATUM.
3. ALL SPOT LEVELS ARE SURVEYED AT THE DECIMAL POINTS OF THE LEVEL TEXTS.

LEGEND

—	Balcony	—	Building Line
—	Canopy	—	Contour Line
---	Fence/Railing	---	Elevated Walkway
---	Kerb Line	---	Survey Boundary
---	Retaining wall	---	Slope Top/Toe
---	Step Channel	---	U-Channel/Cover channel
---	Standing Wall	---	Temporary Structure
---	Bench	---	Catch pit
---	Flower Bed	---	Inspection chamber
---	Manhole	---	Manhole foul water
---	Manhole storm water	---	Manhole telephone
---	Big sign board	---	Boulder
---	Gate	---	Grave
---	Slope symbol	---	Bollard at road
---	Electric pole	---	Bollard at quay
---	Lamp post	---	Fire hydrant
---	SP Sign pole	---	Pillar
---	Traffic light	---	Telephone pole
---	Valve fire	---	Gully
---	Valve waterworks	---	Valve gas
---	Spot Level	---	Tree & Tree No.
---	Invert Level		



CONTRACT:
TOPOGRAPHIC SURVEY FOR
POK OI HOSPITAL YEUNG CHUN PUI
CARE AND ATTENTION HOME IN YUEN LONG

DRAWING TITLE:
TOPOGRAPHIC SURVEY FOR
POK OI HOSPITAL YEUNG CHUN PUI
CARE AND ATTENTION HOME IN YUEN LONG

CLIENT:
P&T GROUP

Locality
YUEN LONG

Reference drawing

Declaration
I hereby certify that this Survey has been executed by me or under my direct personal supervision and has been surveyed to the tolerances as specified in the Contract.

Signatures
ERIC TANG
PHKIS.MRCS.SPLS.SIALS

Date
11 AUG 2022

Surveyed	Date	Drawn	Checked
KH TSUI	08/2023	A CHONG	SK WONG

Scale	Original Size
1 : 200	A1

Drawing No.	Rev.
ETA-TP-1945-01	--

ERIC TANG & ASSOCIATES LTD
鄧氏測量師行有限公司

Tree No.	Species		Measurements			Amenity value	Form	Health condition	Structural condition	Suitability for transplanting		Conservation status	Additional Remarks
	Scientific name	Chinese name	Height (m)	DBH (mm)	Crown Spread (m)	(High/ Medium /Low)	(Good /Average /Poor)	(Good /Average /Poor)	(Good /Average /Poor)	(High/ Medium /Low)	Remarks		
T001	Dimocarpus longan	龍眼	8.0	390	6.0	Medium	Average	Average	Average	Low	c	Nil	Co-dominant trunks, dieback
T002	Artocarpus heterophyllus	菠蘿蜜	5.0	180	5.0	Medium	Poor	Average	Average	Low	c,f,h	Nil	Dieback twigs, low branching, restricted root, imbalanced crown
T003	Manilkara zapota	人心果	7.0	330	5.0	Medium	Average	Average	Average	Low	c,h	Nil	Co-dominant trunks, restricted roots, topped, epicormics, dieback twigs

Remarks for Suitability for Transplanting:

(a) Low amenity value;

(b) Irrecoverable form after transplanting (e.g. if substantial crown and root pruning are necessary to facilitate the transplanting);

(c) Low chance of survival upon transplanting;

(d) Very large size (unless the feasibility to transplant has been considered financially reasonable and technically feasible during the feasibility stage);

(e) With evidence of over-maturity and onset of senescence;

(f) With poor health, structure or form (e.g. imbalanced form, leaning, with major cavity/cracks/splits); or cavity/cracks/splits); or

(g) Undesirable species (e.g. *Leucaena leucocephala* which is an invasive exotic tree).

(h) Trees grown under poor conditions which have limited the formation of proper root ball necessary for transplanting (e.g. on steep slope conflict with structure).

(i) Not cost -effectiveness



T001_Dimocarpus longan_Overview



T001_Dimocarpus longan_Crown



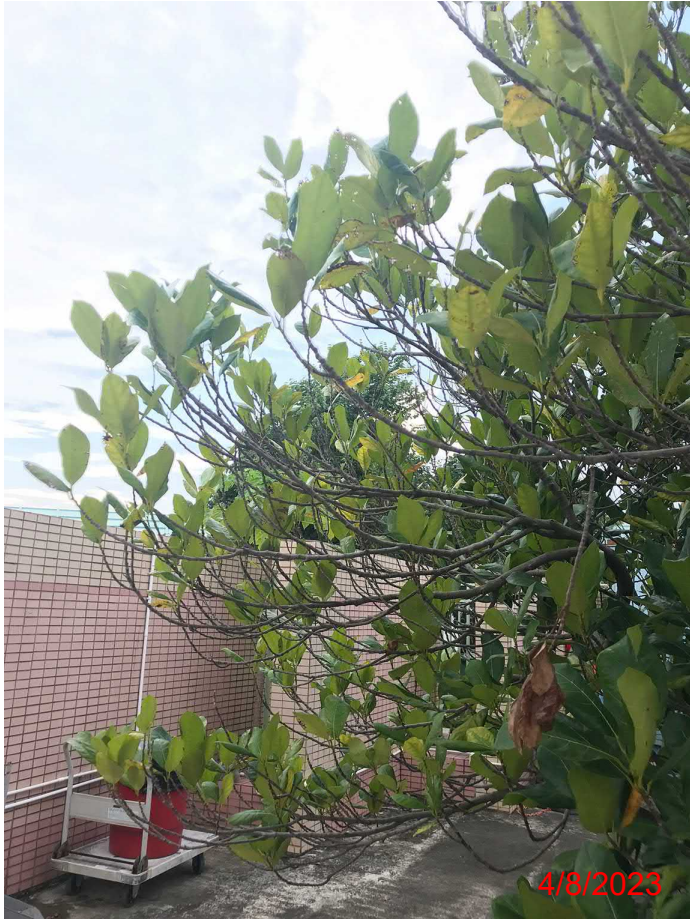
T001_Dimocarpus longan_Trunk



T001_Dimocarpus longan_Base



T002_Artocarpus heterophyllus_Overview



T002_Artocarpus heterophyllus_Crown



T002_Artocarpus heterophyllus_Trunk



T002_Artocarpus heterophyllus_Base



T003_Manilkara zapota_Overview



T003_Manilkara zapota_Crown



T003_Manilkara zapota_Trunk



T003_Manilkara zapota_Base

Appendix 3

Traffic Impact Assessment

Reference number: CHK50749070

**THE PROPOSED REDEVELOPMENT OF POK OI HOSPITAL
YEUNG CHUN PUI CARE AND ATTENTION HOME IN YUEN
LONG BY POK OI HOSPITAL**

TRAFFIC IMPACT ASSESSMENT



IDENTIFICATION TABLE	
Client/Project owner	Pok Oi Hospital
Project	The Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital
Study	Traffic Impact Assessment
Type of document	Draft Report
Date	22/10/2024
Reference number	CHK50749010

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1. INTRODUCTION

1.1 Background

- 1.1.1 The Application Site is a proposed redevelopment of existing 3-storey care and attention home for the elderly into new block for the Pok Oi Hospital Yeung Chun Pui Care and Attention Home at 58 Sha Chau Lei Tsuen, Ha Tsuen, Ping Ha Road, Yuen Long at Lot No. 2273 and the Extension thereto in Demarcation District 125, bounded by Sha Chau Lei Road in the east, and a nullah running adjacent to Sha Chau Lei Road with a rezoning site area of about 3,388.7 m² and a development site area (for calculation of plot ratio and site coverage) of about 3,090 m² as shown in **Drawing No. 1.1**.
- 1.1.2 The Proposed redevelopment includes social welfare facilities to cater for the increasing demand for elderly, rehabilitation and childcare services, by providing more floor area and better and updated facilities, under The Special Scheme on Privately Owned Sites for Welfare Uses, administrated by the Social Welfare Department (SWD) and self-financing welfare related ancillary facilities.
- 1.1.3 MVA Hong Kong Limited is commissioned by P&T Architects Limited, as the traffic consultant to carry out a feasibility study for the proposed redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long. The primary objective of this TIA is to study the technical feasibility of the proposed redevelopment of a care and attention home into an 11-storey building with various welfare activities.

1.2 Study Scope

- 1.2.1 The main objectives of this study are as follows:
- Transport and Traffic Impact Assessment (TTIA) Assessment for Operation stage. To assess and evaluate the nature and extent of the potential traffic impacts arising from the Project, and propose necessary traffic improvement measures;
 - To study and assess the existing travel patterns, road and junction capacities in the local area adjacent to the Application Site ;
 - To identify the traffic generations from the Application Site under the Development Proposal and carry out distribution and assignment of the generated traffic;
 - To estimate the future traffic flows for the design year on the surrounding local road network;
 - To recommend traffic improvement measures to alleviate the foreseeable traffic problems on the surrounding local road network, if necessary; and
 - To propose parking and servicing provisions for required space for cars, trucks, non-emergency ambulance transfer (NEATs) vehicles and refuse collection vehicles.

1.3 Report Structure

1.3.1 Following this introductory chapter, there are five further chapters:

- **Chapter 2 – Proposed Development**, which describes and presents the Proposed Development schedule.
- **Chapter 3 - Existing Conditions**, which describes the existing traffic context in the vicinity of the Application Site, including the current local road network, a summary of the vehicular survey and an assessment of the existing traffic conditions.
- **Chapter 4 - Traffic Forecast**, which presents the estimation of traffic trip generations and distribution for the Application Site.
- **Chapter 5 - Traffic Impact Assessment**, which presents the traffic forecasting methodology and estimates the future vehicular. The traffic impact assessment will also be included in this chapter.
- **Chapter 6 - Summary and Conclusion**, which presents key findings from the study.

2. PROPOSED DEVELOPMENT

2.1 Existing Site Conditions

2.1.1 There is an existing 3-storey high building providing 143 subvented places of Care and Attention Home, located at 58 Sha Chau Lei Tsuen, Ha Tsuen, Ping Ha Road, and Yuen Long at Lot No. 2273 in DD125 and the Extension thereto accessible via Ping Ha Road. The site plan is shown in **Drawing No. 1.1**. According to the approved Hung Shui Kiu and Ha Tsuen Outline Zoning Plan No. S/HSK/2, the existing site is zoned as "Government, Institution or Community" (G/IC).

2.1.2 The Proposed redevelopment includes social welfare facilities, namely elderly centre, rehabilitation services, childcare services and other welfare facilities. It is scheduled to be completed by the year 2032 tentatively. The details are summarised in **Table 2.1**.

Table 2.1 Application Site Details

Component	Existing Scheme of the Development Site	Proposed Scheme for the Redevelopment	
Site Area	Rezoning Site Area of about 3,388.7 m ² and Development Site Area of about 3,090 m ²		
Class of Site	Class A Site		
Facility	143 Places of Care and Attention Home	1. Care and Attention Home for the Elderly providing a Continuum of Care (C&A Home/CoC)	192 places
		2. Day Care Centre for the Elderly (DE)	80 places
		3. Day Activity Centre (DAC)	50 places
		4. Hostel for Severely Mentally Handicapped Persons (HSMH)	50 places
		5. Hostel for Moderately Mentally Handicapped Persons (HMMH)	40 places
		6. Integrated Vocational Rehabilitation Services Centre (IVRSC)	80 places
		7. Child Care Centre (CCC)	59 places
		8. Welfare-related Ancillary Facilities <ul style="list-style-type: none">Showroom for Innovative and Gerontechnology ProductsClinics - Chinese medicine, Western medicine and Dental serviceMassage Service CentreCanteen	300 m ² 110 m ² 100 m ² 100 m ²
GFA	2,351 m ²	17,922 m ²	

Component	Existing Scheme of the Development Site	Proposed Scheme for the Redevelopment
Plot Ratio	0.761	5.8 ⁽¹⁾
Site Coverage	25 %	58% ⁽¹⁾
Building Height	10.25 mPD	47.9 mPD
Number of Storeys	3 storeys	11 storeys

Remarks: (1) Calculated based on the Development Site Area of about 3,090m²

2.2 Internal Transport Provisions

2.2.1 There are currently no related standards in HKPSG parking and loading/unloading provisions for the Application Site. Thus, corresponding provisions are proposed based on the daily operation needs of staff, paramedics, elderly residents, and visitors.

2.2.2 The proposed internal transport provisions for the Application Site are summarized in **Table 2.2**.

Table 2.2 Proposed Internal Transport Provisions

#	Vehicle Type	Required By		Parking Space Dimension
1	Private Car	HKPSG (CLINIC)		5m (L) X 2.5m (W) X 2.4m (H)
2	Private Car	HKPSG (CLINIC)		5m (L) X 2.5m (W) X 2.4m (H)
3	Private Car	HKPSG (CLINIC)		5m (L) X 2.5m (W) X 2.4m (H)
4	Private Car (Disabled)	HKPSG (CLINIC)		5m (L) X 3.5m (W) X 2.4m (H)
5	16-Seater Light Bus	C&AH		8m (L) X 3m (W) X 3.3m (H)
6	16-Seater Light Bus	DE		8m (L) X 3m (W) X 3.3m (H)
7	16-Seater Light Bus	DE		8m (L) X 3m (W) X 3.3m (H)
8	16-Seater Light Bus	DE		8m (L) X 3m (W) X 3.3m (H)
9	16-Seater Light Bus	DE		8m (L) X 3m (W) X 3.3m (H)
10	16-Seater Light Bus	HSMH		8m (L) X 3m (W) X 3.3m (H)
11	5.5 Tonnes Light Goods Vehicle	IVRSC		7m (L) X 3.5m (W) X 3.6m (H)
12	Refuse Collection Vehicle	FEHB		12m (L) X 5m (W) X 4.5m (H)
13	Ambulance	HKPSG (CLINIC)	C&AH/ DE/ HSMH/ HMMH/ DAC/IVRSC	9m (L) X 3.5m (W) X 3.3m (H)

#	Vehicle Type	Required By		Parking Space Dimension
Lay- by				
1	Private Car / Taxi	HKPSG (CLINIC)		5m (L) X 2.5m (W) X 2.4m (H)
2	Medium Goods Vehicle	HKPSG (CLINIC)	C&AH/ DE/ HSMH/ HMMH/ DAC/IVRSC	11m (L) X 3.5m (W) X 4.7m (H)
3	Heavy Goods Vehicle	HKPSG (CLINIC)	C&AH/ DE/ HSMH/ HMMH/ DAC/IVRSC	11m (L) X 3.5m (W) X 4.7m (H)

Remarks: Parking Provision as per details provided by Client

- 2.2.3 The proposed parking spaces for private cars and the taxi/ private car lay-by will be provided at ground level. The proposed arrangement will ensure no traffic queue (if any) from the lay-by back to the main entrance at a minor access road even though the chance of a traffic queue at the elderly centre is very low.
- 2.2.4 The proposed loading/unloading bay for goods vehicles and ambulance lay-by will also be provided at ground level. The ground floor layout plan of the Application Site is shown in **Drawing No. 2.1**.
- 2.2.5 Given TPDM guidelines and recommendations from the Transport Department, it is advisable to have a 2m wide footpath in rural areas. Hence, a local setback from the site boundary is proposed for the narrower section of the northern footpath as illustrated in **Drawing No. 2.2**. The footpath will be accessible to the public after commencement of the application site. The implementation of a local setback is, however, subjected to a detailed design stage.

2.3 Development Access

- 2.3.1 The proposed run-in/out of the Application Site is at the Minor Access Road (Sha Chau Lei Tsuen). The existing major vehicular ingress/egress routings accessing the Application Site are shown in **Drawing Nos. 2.3** and **2.4** respectively.
- 2.3.2 As shown in **Drawing Nos. 2.3** and **2.4**, vehicles from the surrounding area will mainly travel via Ping Ha Road and Minor Access Road (Sha Chau Lei Tsuen) and leave the development before scattering into the surrounding area.

3. EXISTING TRAFFIC AND TRANSPORT CONTEXT

3.1 Existing Road Network

3.1.1 The existing road network in the vicinity of the Application Site is as shown in **Drawing No. 3.1**.

- Ping Ha Road
- Hung Tin Road (at grade)
- Tin Ying Road
- Shek Po Road
- Sha Chau Lei Road
- Tin Ha Road
- Minor Access Road (Sha Chau Lei Tsuen)

3.1.2 Ping Ha Road is a 4-lane single-carriageway, rural road running in an east-west direction. It is the main road linking the Ha Tsuen area to Yuen Long and other neighbouring towns.

3.1.3 Hung Tin Road (at grade) is a 4 lanes dual carriageway and local distributor road running in a north-south direction connecting Hung Shui Kiu to neighbouring towns.

3.1.4 Tin Ying Road is a 4 lanes dual carriageway and district distributor road running in a north-south direction connecting Tin Shui Wai to neighbouring towns.

3.1.5 Shek Po Road is a 2-lane single-carriageway road running in the north-south direction.

3.1.6 Sha Chau Lei Road is a 2-lane single-carriageway running in the north-south direction.

3.1.7 Tin Ha Road is a 2-lane single-carriageway, rural road running in the northeast-southwest direction linking the Ha Tsuen area to Hung Shui Kiu.

3.1.8 Minor Access Road (Sha Chau Lei Tsuen) is a 2-lane single-carriageway road running in the north-south direction connecting the Application Site to Ping Ha Road.

3.2 Traffic Survey

3.2.1 In order to investigate the traffic impact on the surrounding road network of the Application Site, the adjacent five key junctions are identified for traffic survey and assessment as listed in **Table 3.1**. These key junctions are selected according to the future ingress and egress routings of the subject site. The locations of the key junctions are indicated in **Drawing No. 3.1**, and the existing junction layout of the surveyed junctions is shown in **Drawing Nos. 3.2 to 3.6** respectively.

Table 3.1 Identified Key Junctions

Ref. ⁽¹⁾	Junction	Type	Drawing No.
J1	Ping Ha Road/ Tin Ha Road	Signal	3.2
J2	Ping Ha Road/ Minor Access Road (Sha Chau Lei Tsuen)	Priority	3.3
J3	Ping Ha Road/ Sha Chau Lei Road	Priority	3.4
J4	Ping Ha Road/ Shek Po Road	Priority	3.5
J5	Ping Ha Road/ Tin Ying Road/Hung Tin Road (at grade)	Signal	3.6

Remarks: (1) Junction locations refer to **Drawing No. 3.1**.

- 3.2.2 To establish the current traffic conditions at the identified key junctions, a manual classified traffic count survey was conducted in October 2023 from 07:30 to 09:30 and 17:00 to 19:00 during the morning and evening peak periods. The observed peak-hour traffic flows in the year 2023 are shown in **Drawing No. 3.7**.

Existing Junction Condition

- 3.2.3 Junction capacity assessments have been conducted at the identified key junctions to observe the current operational performances based on the existing junction layouts and observed traffic flows. The results are summarised in **Table 3.2**.

Table 3.2 Current Operational Performance at Identified Key Junctions

Ref. ⁽¹⁾	Junctions	Type	(DFC ⁽²⁾ or RC ⁽³⁾)	
			AM Peak	PM Peak
J1	Ping Ha Road/ Tin Ha Road	Signal	36%	34%
J2	Ping Ha Road/ Minor Access Road (Sha Chau Lei Tsuen)	Priority	0.08	0.05
J3	Ping Ha Road/ Sha Chau Lei Road	Priority	0.12	0.10
J4	Ping Ha Road/ Shek Po Road	Priority	0.17	0.28
J5	Ping Ha Road/ Tin Ying Road/Hung Tin Road (at grade)	Signal	55%	50%

Remarks: (1) Junction locations refer to **Drawing No. 3.1**.

(2) For priority junctions and roundabouts, the performance of a priority junction or roundabout is measured in the design flow/capacity ratio (DFC). DFC ≤ 0.85 is the acceptance criteria; DFC over 1.00 indicates overloaded conditions.

(3) Reserve Capacity (R.C.) indicated in %, provides an indication of signal junction performance. R.C. ≥ 15% implies that it is operating satisfactorily, while a negative R.C. suggests that it is overloaded.

- 3.2.4 Referring to the assessment results in **Table 3.2**, all key junctions are currently operating with adequate capacities during both morning and evening peak periods.

3.3 Public Transport Services

- 3.3.1 There are frequent franchised bus services currently operating along Ping Ha Road. Details of the public transport services within 150m walking distance of the Application Site are listed in **Table 3.3** and the bus stop locations are illustrated in **Drawing No. 3.8**. There is also a MTR station within 1km walking distance from the Application Site.

Table 3.3 Existing Public Transport Services

Route No.	Origin and Destination	Frequency (mins)	Service
<u>Franchised Bus (KMB)</u>			
53	Yoho Mall (Yuen Long) <-> Tsuen Wan (Nina Tower)	25 - 35	Daily
<u>Franchised Bus (MTR)</u>			
K65	Yuen Long Station <-> Lau Fau Shan	9 - 16	Daily
K65A	Tin Shui Wai Station <-> Lau Fau Shan	12 - 15	Mon - Fri
K75A	Tin Shui Wai Station <-> Hung Shui Kiu (Circular)	30	Daily
K75P	Tin Shui <-> Hung Shui Kiu (Circular)	10 - 15	Daily
<u>GMB</u>			
33	Ha Pak Nai To <-> Yuen Long (Tai Fung Street)	25 - 35	Daily
34A	Ha Tsuen (San Sik Road) Minibus Terminus <-> Lau Fau Shan Minibus Terminus	15 - 30	Daily
35	Sha Kiu <-> Yuen Long (Tai Fung Street)	18 - 23	Daily

Remark: Service details as of February 2024.

3.4 Pedestrian Access Arrangement

- 3.4.1 The pedestrian access of the proposed development is located on the left side of the proposed site by connecting it to the existing pedestrian walkway on the Minor Access Road (Sha Chau Lei Tsuen). The pedestrian access routings between the proposed development and the nearby bus stop along Ping Ha Road are shown in **Drawing No. 3.8**.

Existing Pedestrian Flow Condition

- 3.4.2 Pedestrian headcount surveys at the proposed redevelopment site were conducted on a normal day in 2024 from 07:30 to 09:30 and 17:00 to 19:00 during the morning and evening peak periods.
- 3.4.5 To evaluate the existing adjacent pedestrian footpath, the operational performance has been assessed based on the Level-of-Service (LOS) criteria adopted as an indicator in the assessment of pedestrian walkway capacity performance. According to the “Highway Capacity Manual 2000” by the Transportation Research Board of National Research Council Washington, D.C., the LOS of a footpath or walkway is classified into 6 levels (i.e. A to F) as described in **Appendix B**.
- 3.4.6 The observed peak of our pedestrian flows in 2024 at the footpaths in ped/min/m and the corresponding LOS are summarised in **Table 3.4** and indicated in **Drawing No. 3.9**

Table 3.4 Peak Hour Identified for Pedestrian Flows (2-way)

Index	Pedestrian Location	Actual Width (m)	Effective Width ⁽¹⁾ (m)	Peak Hourly Flow (ped/hr)		Peak Flow Rate (Ped/m/min)		LOS ⁽²⁾	
				AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK
P1	Minor access road	2.00	1.00	51	32	0.85	0.53	A	A

Note: (1) Effective width of footpath = Actual width – 1.0m dead width (0.5m dead width on one side of footpath)

(2) Referring to TPDM Volume 6 Section 10.4.2, the LOS of a footpath is classified into 6 levels (i.e. A to F).

- 3.4.7 As shown in **Table 3.4**, all the assessed footpaths would operate at LOS A or better, which is a satisfactory walking environment, in the Year 2024.

4. TRAFFIC FORECAST

4.1 Methodology of Traffic Forecast

- 4.1.1 The Application Site is anticipated to be commissioned by the year 2032. As per the guidelines and requirements of TIA published by the Transport Department, the design year of the year 2035 (i.e. 3 years upon completion year) is adopted for traffic forecast purposes.
- 4.1.2 To estimate the year 2035 reference traffic flows (without Application Site) in the local road network, an appropriate growth factor was identified for the area. The derivation of this growth rate is determined with reference to historical growth trends and area planning data, which are summarised below.

4.2 Traffic Forecast Assumptions

Traffic growth trend from the Annual Traffic Census

- 4.2.1 To estimate the background traffic growth for the area, reference has been made to the historical growth trend of the Annual Traffic Census (ATC) report published annually by the Transport Department and the planning data based on the latest Territorial Population and Employment Data Matrix (TPEDM) published by Planning Department.
- 4.2.2 Based on the ATC report, the traffic count stations located within the study area have been selected for review. The record of traffic flows and the percentage change per annum, between 2016 and 2022, at these locations have been extracted from the ATC to establish the historical growth trend as summarized in **Table 4.1**.

Table 4.1 ATC Traffic Counts at Local Area from Years 2016 to 2022

Stn. No.	Station Location	Road Characteristics	Annual Average Daily Traffic (AADT) (veh/day)						
			2016	2017	2018	2019	2020	2021	2022
5689	Ping Ha Rd	Rural Road	17,060	16,800	17,210	17,090	19,360	20,320	19,710
5284	Tin Ying Rd	District Distributor	27,040	26,610	32,180	31,060	29,780	30,970	30,030
5277	Ping Ha Rd	District Distributor	15,360	15,120	19,580	19,260	18,460	19,200	18,460
5880	Tin Yiu Rd	Local Distributor	16,930	16,960	17,380	17,250	16,540	17,460	18,690
5858	Ping Ha Rd & Lau Fau Shan Rd	Rural Road	14,580	12,370	12,680	12,590	12,070	10,310	8390
Total			90,970	87,860	99,030	97,250	96,210	98,260	95,280
Annual Growth Rate = 0.77%									

Remarks: AADT estimated by growth factor

- 4.2.3 The records of average annual daily traffic (AADT) from ATC have indicated that overall growth is strengthening at the rate of 0.77% per annum from the year 2016 to 2022 in the local area despite the effects the COVID-19 impacts on the economy and general travel characteristics.

Planning Data from 2019 - Based TPEDM

- 4.2.4 Reference has also been made to the 2019-Based Territorial Population and Employment Data Matrix (TPEDM) planning data published by the Planning Department for years 2019, 2026 and 2031 in the relevant Planning Data District (i.e Tin Shui Wai and Northwest New Territories (Other Area)). The estimated/projected distributions of population data in the local area in the years 2019 and 2031 are listed in **Table 4.2** and **Table 4.3**.

Table 4.2 2019-based Territorial Population and Employment Data Matrix Distributions of Population and Employment in 2019, 2026 and 2031

PDZ	2019		2026		2031	
	Population	Employment	Population	Employment	Population	Employment
Tin Shui Wai	279,950	35,050	283,250	33,100	276,050	31,950
Northwest New Territories (Other Area)	222,800	58,400	239,250	76,850	353,900	140,150
Total	502,750	93,450	522,500	109,950	629,950	172,100

Remark: Referring to 2019 – based Territorial Population and Employment Data Matrix Planning Data

Table 4.3 Population and Employment Growth Rate Based on 2019- TPEDM

PDZ	2019/2026		2019/2031	
	Population	Employment	Population	Employment
Tin Shui Wai + Northwest New Territories (Other Area)	0.55%	2.35%	1.90%	5.22%

- 4.2.5 It is assumed that the Hung Shui Kiu/ Ha Tsuen New Development Area is considered in the Northwest New Territories Area, hence, the growth rate of **1.90% p.a** is assumed for the projection of background traffic growth for the conservative approach.

4.3 Future Road Network

- 4.3.1 As per Approved Hung Shui Kiu and Ha Tsuen Outline Zoning Plan No. S/HSK/2, there are major planned road infrastructure improvement projects in the vicinity of the site assumed to be done at the start of stage 3, which is around the year 2031. The Application Site phasing plan of Hung Shui Kiu/ Ha Tsuen New Development Area is shown in **Drawing No. 4.1**.

4.4 Planned and Committed Developments

- 4.4.1 The future planned and committed developments surrounding the Application Site, which would contribute to the road network in the vicinity have been considered and shown in **Drawing No. 4.1** and listed in **Table 4.4**.

Table 4.4 Planned and Committed Developments

Planning Area No.	Zone	Site Area (m2)	Development Use	Maximum Plot Ratio	Domestic/ Non-Domestic Plot Ratio (DPR/NDPR)	Total GFA (m2)
15	G/IC	15,439	Government, Institution or Community	-	-	-
16A	R(A)3	15,850	Residential	6.5	DPR	79,250
			Retail	0.3	NDPR	7,925
16B	R(A)2	20,699	Residential	6.5	DPR	113,845
			Retail	0.3	NDPR	800
			Kindergartens			1,732
16C	C(3)	17,923	Retail (20%)	5	NDPR	17,923
			Hotel (80%)			71,692
49	O	135,342	Open Space	-	-	-
56	OU	13,070	Other Specified Uses (Sewage Pumping Station)	-	-	-
57B	O	161,795	Open Space	-	-	-
58A	R(A)3	35,824	Residential	5	DPR	179,120
			Retail	0.5	NDPR	17,912
58B	R(A)4	16,304	Residential	5	DPR	81,520
58C	G/IC	18,940	Government, Institution or Community	-	-	-
59A	R(A)3	20,414	Residential	5	DPR	102,070
			Retail	0.5	NDPR	10,207
59B	R(A)4	14,343	Residential	5	DPR	71,715
59C	G/IC	18,801	Government, Institution or Community	-	-	-
59D	R(A)4	13,518	Residential	5	DPR	67,590

Remarks: Approved Hung Shui Kiu and Ha Tsuen Outline Zoning Plan No. S/HSK/2 from Planning Department

4.5 Development Traffic Generations

- 4.5.1 Currently, there is no standard trip generation rate for elderly centres provided in “Traffic Generation and Attraction Rates” as stated in Annex D of Volume 1 - Chapter 3 in the Transport Planning and Design Manual (TPDM) published by the Transport Department, the estimated trip generation rates for vehicular traffic for the Application Site will be derived based on the following assumptions.
- 4.5.2 The staff’s working duties at the care and attention home for the Elderly are 24 hours, divided into AM Shift (7 am- 3 pm), PM Shift (1 pm - 9 pm) and Overnight Shift (9 pm – 7 am). It is anticipated that they will take public transport for their daily commute. Hence, the peak hour of the staff is expected around 7 am, 9 am, 1 pm, and 9 pm on weekdays and weekends. In operation, the visiting hours of the elderly centre are between 9 am and 6 pm during weekdays and weekends. Hence, the peak hour of the traffic is assumed between 7.30-8.30 am and 5.00-7.00 pm to analyse the worst-case scenario.
- 4.5.3 Taking consideration of the above and to calculate peak traffic for elderly homes, a traffic trip generation/attraction survey has been carried out at similar sites in development nature, size and services offered by public transportation to obtain a reference trip generation/attraction for the proposed Elderly home from 07:30 to 09:30 and 5:00 to 7:00 as explained in **Section 3.2**. The traffic generation and attraction at the referenced elderly centre is counted and then based on its traffic trip rates during the peak hours were derived shown in **Table 4.5** below.

4.5.4 There are 3 sites surveyed:

1. Existing Pok Oi Hospital Yeung Chun Pui Care and Attention Home
2. Jockey Club Rehabilitation Complex, Aberdeen, Hong Kong
3. On Tai Estate Ancillary Facilities Block, On Sau Road, Kwun Tong

4.5.5 As shown in **Table 4.5**, it is observed that the trip rates for various facilities are different. Hence, to take the conservative approach trip rate of an existing Pok Oi Hospital Yeung Chun Pui Care and Attention Home is used to interpolate the trip rate for the additional proposed elderly centre places. It is calculated by deducting existing places (143) from the proposed elderly places (192).

4.5.6 Jockey Club Rehabilitation Complex, Aberdeen and On Tai Estate Ancillary Facilities Block, On Sau Road, Kwun Tong are selected based on their similarity in nature as complex buildings, number of ancillary facilities, car parking provision, location, and presence of public transport. Furthermore, a site with a higher trip rate, Jockey Club Rehabilitation Complex, Aberdeen, was selected for further traffic generation analysis as a conservative approach.

4.5.7 Whereas, the trip rate of the Jockey Club Rehabilitation Complex in Aberdeen is used to interpolate the trip rate of other facilities such as the Day Activity Centre (DAC), Day Care Centre for the Elderly (DE), Hostel for Severely Mentally Handicapped Persons (HSMH), Hostel for Moderately Mentally Handicapped Persons (HMMH), Integrated Vocational Rehabilitation Services Centre (IVRSC), Child Care Centre (CCC) and Welfare-related Ancillary Facilities.

Table 4.5 Observed Trip Rates at Surveyed Reference Site

Referenced Elderly Centre	Total Places	Observed Trip rate (pcu/hr/places)			
		AM		PM	
		Generation (Out)	Attraction (In)	Generation (Out)	Attraction (In)
Existing Pok Oi Hospital Yeung Chun Pui Care and Attention Home	143	0.26	0.29	0.19	0.17
Jockey Club Rehabilitation Complex, Aberdeen, Hong Kong	1,352	0.02	0.03	0.01	0.01
Jockey Club Rehabilitation Complex, Aberdeen, Hong Kong	501	0.02	0.02	0.01	0.01

Remark: Trip rate obtained by interpolation

4.5.8 Therefore, the estimated traffic generation by the Application Site is given in **Table 4.6**, which is 21 pcu/hr and attracts about 25 pcu/hr in the morning peak hour period; and generates about 13 pcu/hr and attracts about 12 pcu/hr in the evening peak hour period. This estimated traffic generation of the Application Site would be then distributed in the surrounding road network. The predicted ingress and egress routes are shown in **Drawing Nos 4.2 and 4.3**, respectively.

Table 4.6 Vehicular Traffic Generation and Attraction of the Application Site

Application Site Facilities	Total Places	AM		PM	
		Generation (Out)	Attraction (In)	Generation (Out)	Attraction (In)
Adopted Trip Rate (pcu/hr/places)					
Elderly Centre (Additional new places)	-	0.26	0.29	0.19	0.17
Other Facilities	-	0.02	0.03	0.01	0.01
Estimated Trips (pcu/hr)					
Elderly Centre (Additional new places)	49 ⁽¹⁾	13	14	9	8
Other Facilities	359	8	11	4	4
Total		21	25	13	12

Remark: (1) Additional Places of Elderly Centre (49) = Proposed Places (192) – Existing Places (143)

4.6 Design Traffic Forecasts

- 4.6.1 The estimated trip generations for the Application Site (i.e. Application Site and potential planned and committed development) would be superimposed onto the year 2035 reference traffic flows to produce the year 2035 design traffic flows.
- 4.6.2 There are two scenarios considered to analyse the traffic impact which are derived by the equation below and are presented in **Drawing Nos. 4.4 to 4.6**, respectively:

Scenario 1- Without Future Road Network

$$\begin{aligned}
 \text{2035 Reference Flows} &= \text{2023 Observed Flows} \\
 &+ \text{2023 - 2035 background traffic growth (1.90\%)} \\
 &\text{(Without Future Road Network)}
 \end{aligned}$$

Scenario 2- With Future Road Network

$$\begin{aligned}
 \text{2035 Reference Flows} &= \text{2023 Observed Flows} \\
 &+ \text{2023 - 2035 background traffic growth (1.90\%)} \\
 &\text{(With Future Road Network)}
 \end{aligned}$$

$$\begin{aligned}
 \text{2035 Design Flows} &= \text{2035 Reference Flows (With Future Road Network)} \\
 &+ \text{Traffic Generation}
 \end{aligned}$$

5. TRAFFIC IMPACT ASSESSMENT

5.1 Future Road Network

Planned New Junction

- 5.1.1 According to the “PWP Item No. 7787CL (Part) and 7829CL Hung Shui Kiu/Ha Tsuen New Development Area Advance works Phase 3 and Stage 2 works- Site Formation and Engineering Infrastructure” from the Civil Engineering Development Department (CEDD), there is a new roundabout (J6) along Ping Ha Road to planned to be constructed and operational at the start of stage 3, which is around the year 2031. It is anticipated that the majority of traffic load from Tin Ha Road will shift to Road L1 of a new roundabout. It is also assumed that existing Junction J2 will be merged into the roundabout changing the junction layout to a left-in, left-out priority junction. The Junction details are listed in **Table 5.1.** and illustrated in **Drawing No. 5.1.**

Table 5.1 Planned New Junction

Ref.	Junction	Type	Drawing No.	Anticipated Completion Year
Planned new junction by the year 2031				
J2 and J6	Planned New Roundabout ⁽¹⁾	Roundabout	5.1	2031

Remarks: (1) Refer to the PWP Item No. 7787CL (Part) and 7829CL Hung Shui Kiu/Ha Tsuen New Development Area Advance works Phase 3 and Stage 2 works- Site Formation and Engineering Infrastructure

5.2 Junction Capacity Assessment

Scenario 1- Without Future Road Network

- 5.2.1 To evaluate the traffic impact of the subject development on the local road network, junction assessments on the identified local key junctions have been carried out for both the Reference Scenario (without Application Site and future road network) as shown in **Table 5.2.** The detailed calculation is provided in **Appendix A.**

Table 5.2 Operational Performance of Key Junctions for the Year 2035

Ref.	Junction	Type	Year 2035 (DFC ⁽¹⁾ or RC ⁽²⁾)	
			Reference (Without Application Site and Future Road Network)	
			AM	PM
J1	Ping Ha Road/ Tin Ha Road	Signal	7%	4%
J2	Ping Ha Road/ Minor Access Road (Sha Chau Lei Tsuen)	Priority	0.15	0.08
J3	Ping Ha Road/ Sha Chau Lei Road	Priority	0.18	0.16
J4	Ping Ha Road/ Shek Po Road	Priority	0.26	0.45
J5	Ping Ha Road/ Tin Ying Road/Hung Tin Road (at grade)	Signal	23%	19%

Remarks: (1) For priority junctions and roundabouts, the performance of a priority junction or roundabout is measured in the design flow/capacity ratio (DFC). $DFC \leq 0.85$ is the acceptance criteria; DFC over 1.00 indicates overloaded conditions.

(2) Reserve Capacity (R.C.) indicated in %, provides an indication of signal junction performance. R.C. $\geq 15\%$ implies that it is operating satisfactorily, while a negative R.C. suggests that it is overloaded.

- 5.2.2 As indicated in **Table 5.2**, all key junctions would be operating with ample capacities during peak periods under reference scenarios (Scenario 1- Without Future Road Network) in the year 2035 except Junction J1.

Scenario 2- With Future Road Network

- 5.2.3 In Scenario 2, the junction assessments on the identified local key junctions have been carried out for both the Reference Scenario (without the Application Site) and Design Scenario (with the Application Site) including the future road network as shown in **Table 5.3**. The detailed calculation is provided in **Appendix A**.

Table 5.3 Operational Performance of Key Junctions for the Year 2035

Ref.	Junction	Type	Year 2035 (DFC ⁽¹⁾ or RC ⁽²⁾)			
			Reference (With Future Road Network and Without Application Site)		Design (With Future Road Network and Application Site)	
			AM	PM	AM	PM
J1	Ping Ha Road/ Tin Ha Road	Signal	37%	30%	37%	29%
J2	Ping Ha Road/ Minor Access Road (Sha Chau Lei Tsuen)	Priority	0.10	0.06	0.15	0.09
J3	Ping Ha Road/ Sha Chau Lei Road	Priority	0.20	0.17	0.20	0.18
J4	Ping Ha Road/ Shek Po Road	Priority	0.58	0.71	0.60	0.73
J5	Ping Ha Road/ Tin Ying Road/Hung Tin Road (at grade)	Signal	18%	16%	17%	16%
J6	Planned New Roundabout	Roundabout	0.58	0.60	0.59	0.60

Remarks: (1) For priority junctions and roundabouts, the performance of a priority junction or roundabout is measured in the design flow/capacity ratio (DFC). DFC ≤ 0.85 is the acceptance criteria; DFC over 1.00 indicates overloaded conditions.

(2) Reserve Capacity (R.C.) indicated in %, provides an indication of signal junction performance. R.C. $\geq 15\%$ implies that it is operating satisfactorily, while a negative R.C. suggests that it is overloaded.

- 5.2.4 As indicated in **Table 5.3**, all key junctions would operate with ample capacities during peak periods under both reference and design scenarios with future road networks in the year 2035. Hence, no junction improvement is required.

6. PEDESTRIAN IMPACT ASSESSMENT

- 6.1.1 To analyse the pedestrian impact on the immediate surroundings, a pedestrian trip generation/attraction survey has been carried out at similar sites as explained in **Section 4.5** of the TIA report to obtain a reference trip generation/attraction, and then based on its pedestrian trip rates during the peak hours were derived shown in **Table 6.1** below:

Table 6.1 Observed Pedestrian Trip Rates at Reference Sites

Referenced Elderly Centre	Total Places	Observed Trip Rate (ped/hr/places)			
		AM		PM	
		Generation (Out)	Attraction (In)	Generation (Out)	Attraction (In)
Existing Pok Oi Hospital Yeung Chun Pui Care and Attention Home	143	0.14	0.22	0.12	0.10
Jockey Club Rehabilitation Complex, Aberdeen, Hong Kong	1,352	0.04	0.18	0.15	0.01

Remark: Trip rate obtained by interpolation

- 6.1.2 the pedestrian trip rates were also calculated by interpolation method as the same method explained in **section 4.5** and are shown in **Table 6.2**.

Table 6.2 Pedestrian Trip Generation and Attraction of the Application Site

Application Site Facilities	Total Places	AM		PM	
		Generation (Out)	Attraction (In)	Generation (Out)	Attraction (In)
Adopted Trip Rate (ped/hr/places)					
Elderly Centre (Additional new places)	-	0.14	0.22	0.12	0.10
Other Facilities	-	0.04	0.18	0.15	0.01
Estimated Trips (ped/hr)					
Elderly Centre (Additional new places)	49 ⁽¹⁾	7	11	6	5
Other Facilities	359	14	52	50	13
Total		21	62	56	18

Remark: (1) Additional Places of Elderly Centre (49) = Proposed Places (192) – Existing Places (143)

- 6.1.3 Therefore, the estimated pedestrian flow generation by the Application Site is given in **Table 6.2**, which is 21 pcu/hr and attracts about 62 pcu/hr in the morning peak hour period; and generates about 56 pcu/hr and attracts about 18 pcu/hr in the evening peak hour period.

6.1 Pedestrian Impact Assessment

- 6.1.4 A key pedestrian footpath (P1) was assessed for 2035 under the Reference Scenario (without Application Site) and Design Scenarios (with Application Site) are shown in **Tables 6.3** and **6.4** and illustrated in **Drawing No. 6.1** and **Drawing No. 6.2** respectively.

Reference Year- Pedestrian flows Condition

Table 6.3 Peak Hour Identified for Pedestrian Flows

Index	Pedestrian Location	Actual Width (m)	Effective Width ⁽¹⁾ (m)	Peak Hourly Flow (ped/hr)		Peak Flow Rate (Ped/m/min)		LOS ⁽²⁾	
				AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK
P1	Minor access road	2.00	1.00	64	40	1.07	0.67	A	A

Note: (1) Effective width of footpath = Actual width – 1.0m dead width (0.5m dead width on one side of footpath)
 (2) Referring to TPDM Volume 6 Section 10.4.2, the LOS of a footpath is classified into 6 levels (i.e. A to F).

Design Year- Pedestrian Flows Condition

Table 6.4 Peak Hour Identified for Pedestrian Flows

Index	Pedestrian Location	Actual Width (m)	Effective Width ⁽¹⁾ (m)	Peak Hourly Flow (ped/hr)		Peak Flow Rate (Ped/m/min)		LOS ⁽²⁾	
				AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK
P1	Minor access road	2.00	1.00	147	115	2.46	1.91	A	A

Note: (1) Effective width of footpath = Actual width – 1.0m dead width (0.5m dead width on one side of footpath)
 (2) Referring to TPDM Volume 6 Section 10.4.2, the LOS of a footpath is classified into 6 levels (i.e. A to F).

- 6.1.5 As shown in **Tables 6.3** and **6.4**, all the assessed footpaths would operate at LOS A or better, which is a satisfactory walking environment, in the Year 2035, for both reference and design scenarios. Thus, no improvement to this pedestrian footpath is deemed necessary.
- 6.1.6 As explained in **Section 2.2**, as per TPDM guidelines and recommendations from the Transport Department, it is advisable to have a 2m wide footpath in rural areas. Hence, a local setback from the site boundary is proposed for the narrower section of the northern footpath. The footpath will be accessible to the public after the commencement of the application site. The implementation of a local setback is, however, subjected to a detailed design stage.

7. SUMMARY AND CONCLUSION

7.1 Summary

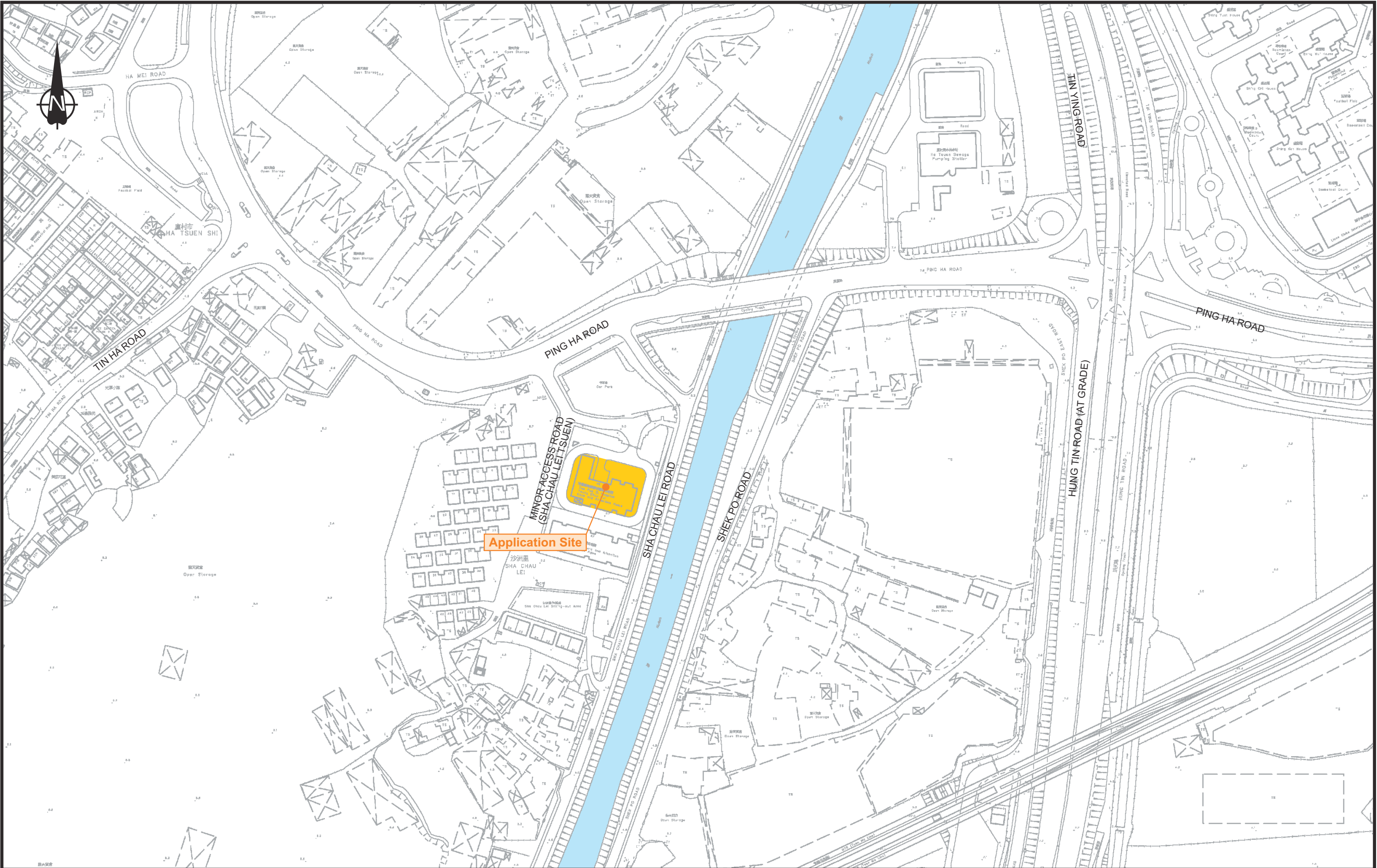
- 7.1.1 The Application Site is a proposed redevelopment of an existing 3-storey care and attention home for the elderly into the new block for the Pok Oi Hospital Yeung Chun Pui Care and Attention Home at 58 Sha Chau Lei Tsuen, Ha Tsuen, Ping Ha Road, Yuen Long at Lot No. 2273 and the Extension thereto in Demarcation District 125, bounded by Sha Chau Lei Road in the east, and a nullah running adjacent to Sha Chau Lei a rezoning site area of about 3,388.7 m² and a development site area (for calculation of plot ratio and site coverage) of about 3,090 m². The location plan is shown in **Drawing No. 2.1**.
- 7.1.2 In view of TPDM guidelines and recommendations from the Transport Department, it is advisable to have a 2m wide footpath in rural areas. Hence, a local setback from the site boundary is proposed for the narrower section of the northern footpath as illustrated in **Drawing No. 2.2**.
- 7.1.3 The Proposed redevelopment includes social welfare facilities, namely an elderly centre, rehabilitation, and childcare services. It is scheduled to be completed by the year 2032 tentatively, according to the approved Hung Shui Kiu and Ha Tsuen Outline Zoning Plan No. S/HSK/2, the existing site is zoned as "Government, Institution or Community" (G/IC).
- 7.1.4 The Application Site is scheduled to be completed by the year 2032 tentatively, and thus year 2035 is adopted as a design year for assessment in this TIA study.
- 7.1.5 The traffic forecast for the design scenario is formulated by taking into consideration the background traffic growth as derived from TPEDM, the future traffic trips induced by the planned developments in the vicinity, as well as the anticipated traffic generations from the Application Site.
- 7.1.6 The vehicular access point of the Application Site will be located at an existing Minor Access Road (Sha Chau Lei Tsuen) and then connect to Ping Ha Road. The provision of the internal transport facilities is reviewed and proposed with reference to HKPSG. Since there is no related standard requirement in HKPSG for the Application Site, the provision of a carpark and L/UL facility is based on the daily operational needs.
- 7.1.7 The operational performance of the identified junctions is assessed based on the derived future traffic flows and the planned future road network in design years 2035. The results of the junction operational assessment indicated that all assessed junctions will be operating within their capacities during the morning and evening peak hour traffic. Therefore, no junction improvement is required.
- 7.1.8 The operational performance of the identified key footpath is assessed based on the derived future pedestrian flow in the design year. The results of the pedestrian assessment indicated that the identified key footpath will be operating within its capacity during the morning and evening peak hours. Therefore, no pedestrian footpath improvement is required.

7.2 Conclusion

- 7.2.1 The traffic impact assessment has demonstrated that the future traffic induced by the proposed redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home would not cause an adverse traffic impact on the surrounding road network.
- 7.2.2 In conclusion, the traffic impact of the proposed redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home is considered acceptable from a traffic engineering point-of-view.

Drawings



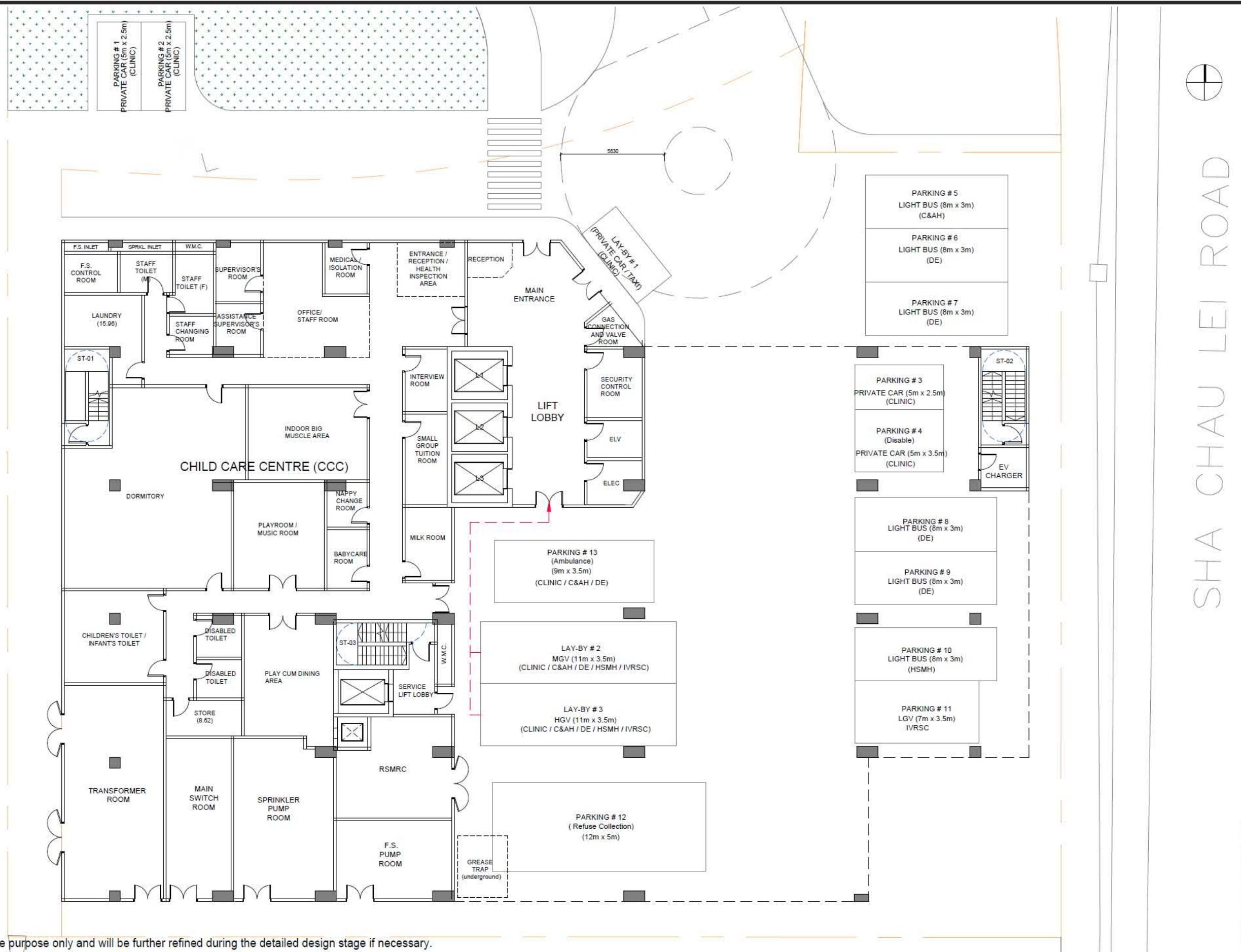


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ARCHITECTURAL AND ASSOCIATED CONSULTANCY SERVICES FOR TECHNICAL FEASIBILITY STUDY FOR PROPOSED REDEVELOPMENT OF POK OI HOSPITAL YEUNG CHUN PUI CARE AND ATTENTION HOME IN YUEN LONG

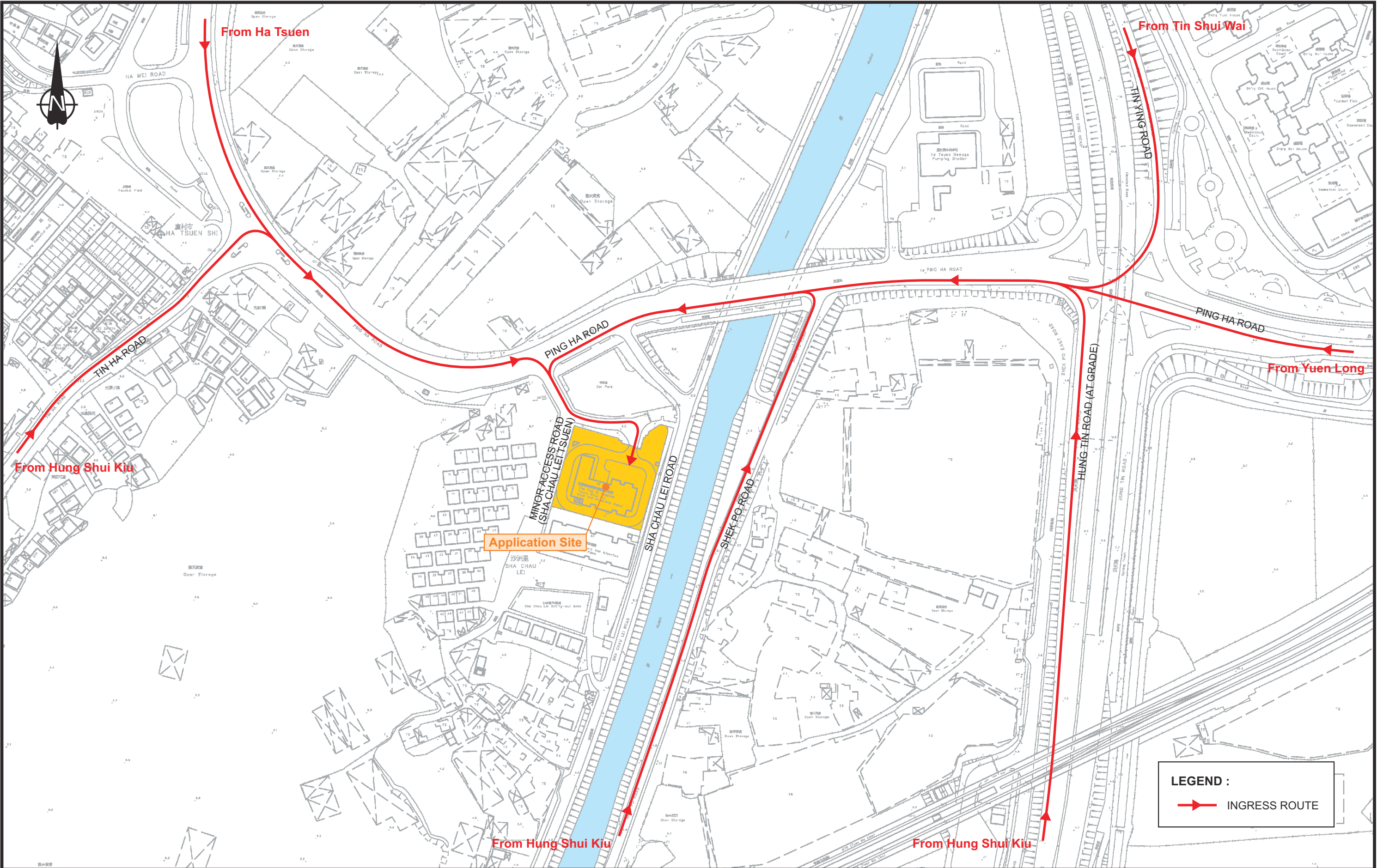
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SITE LOCATION											
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*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.

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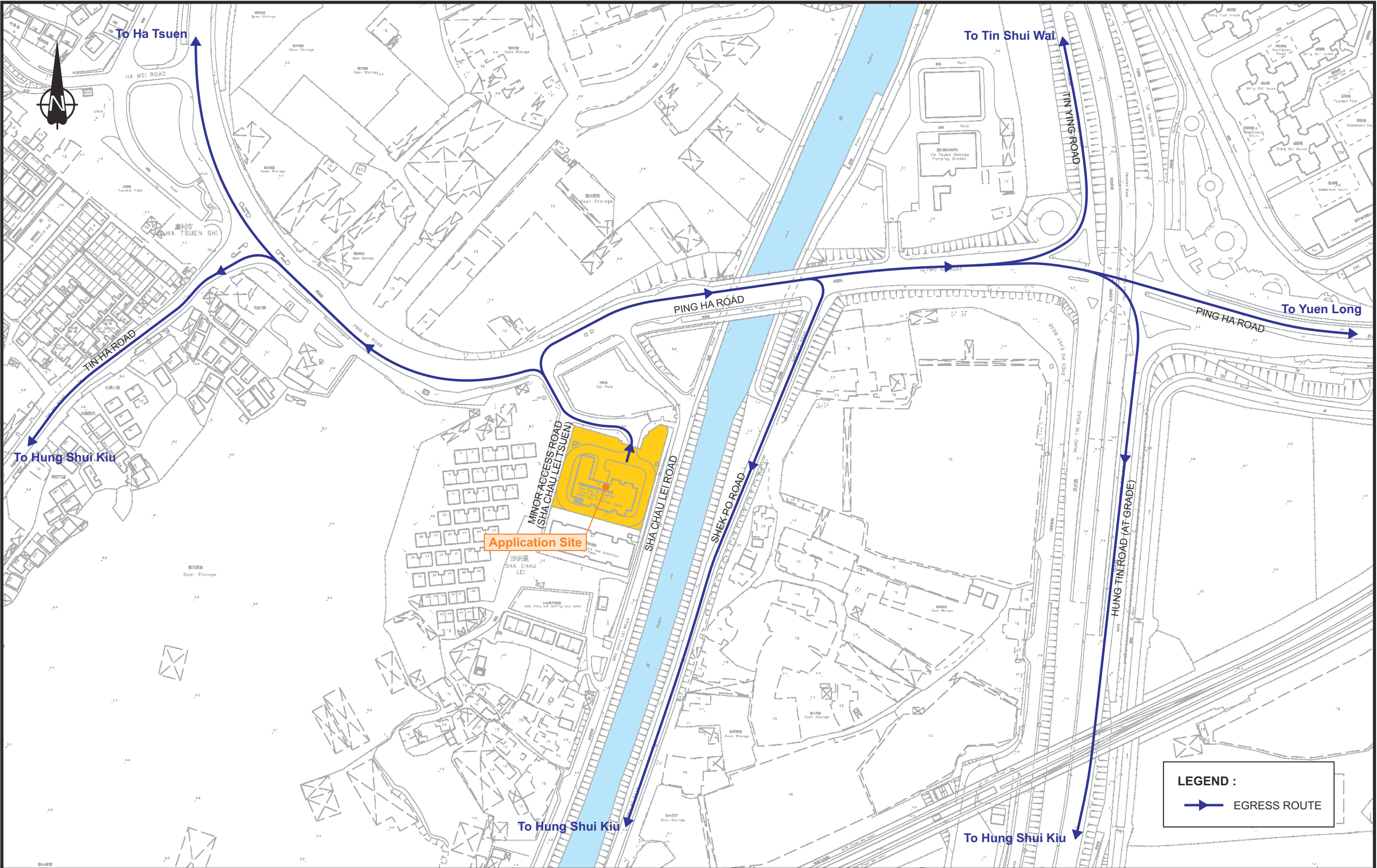


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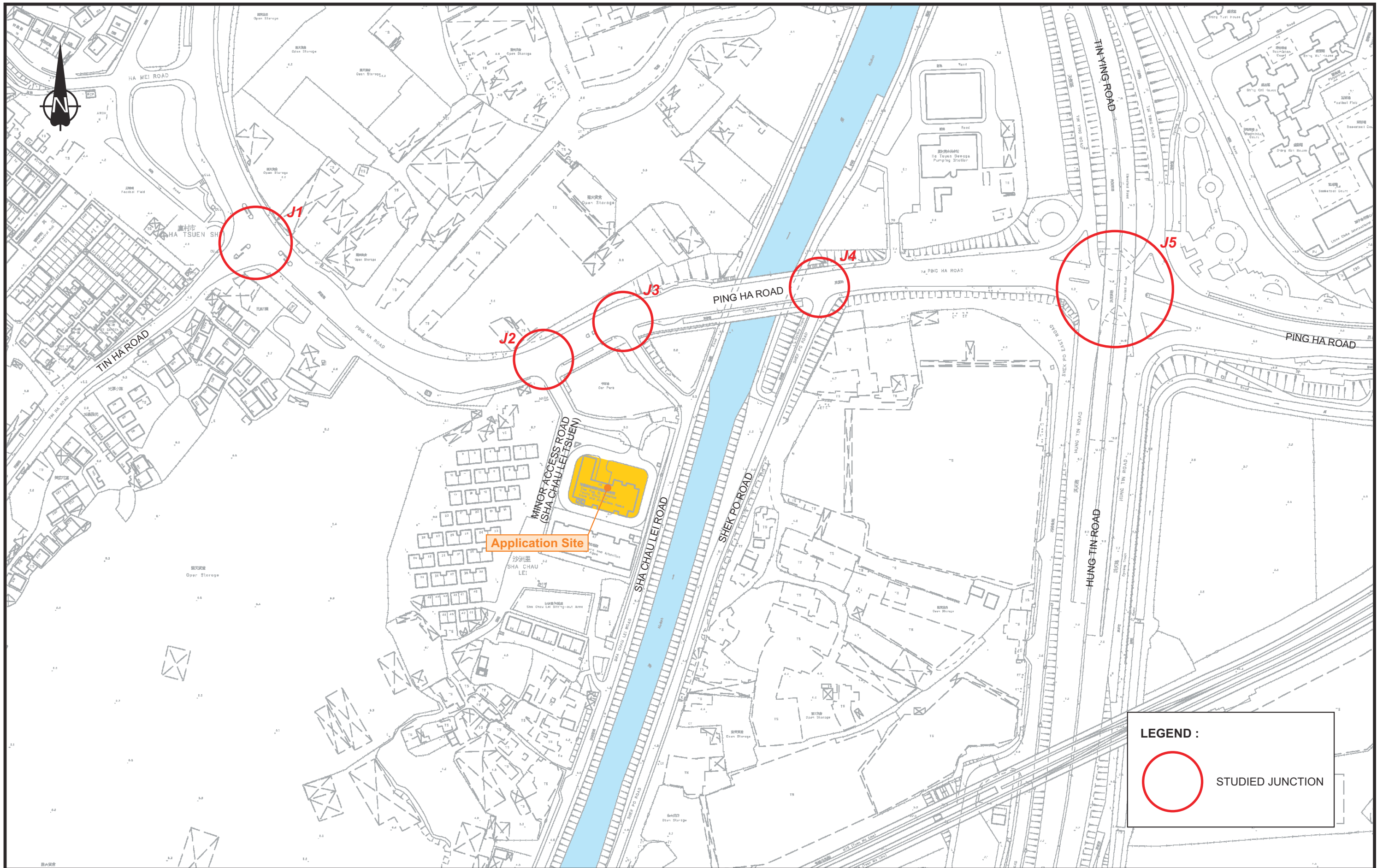
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Drawing Title											
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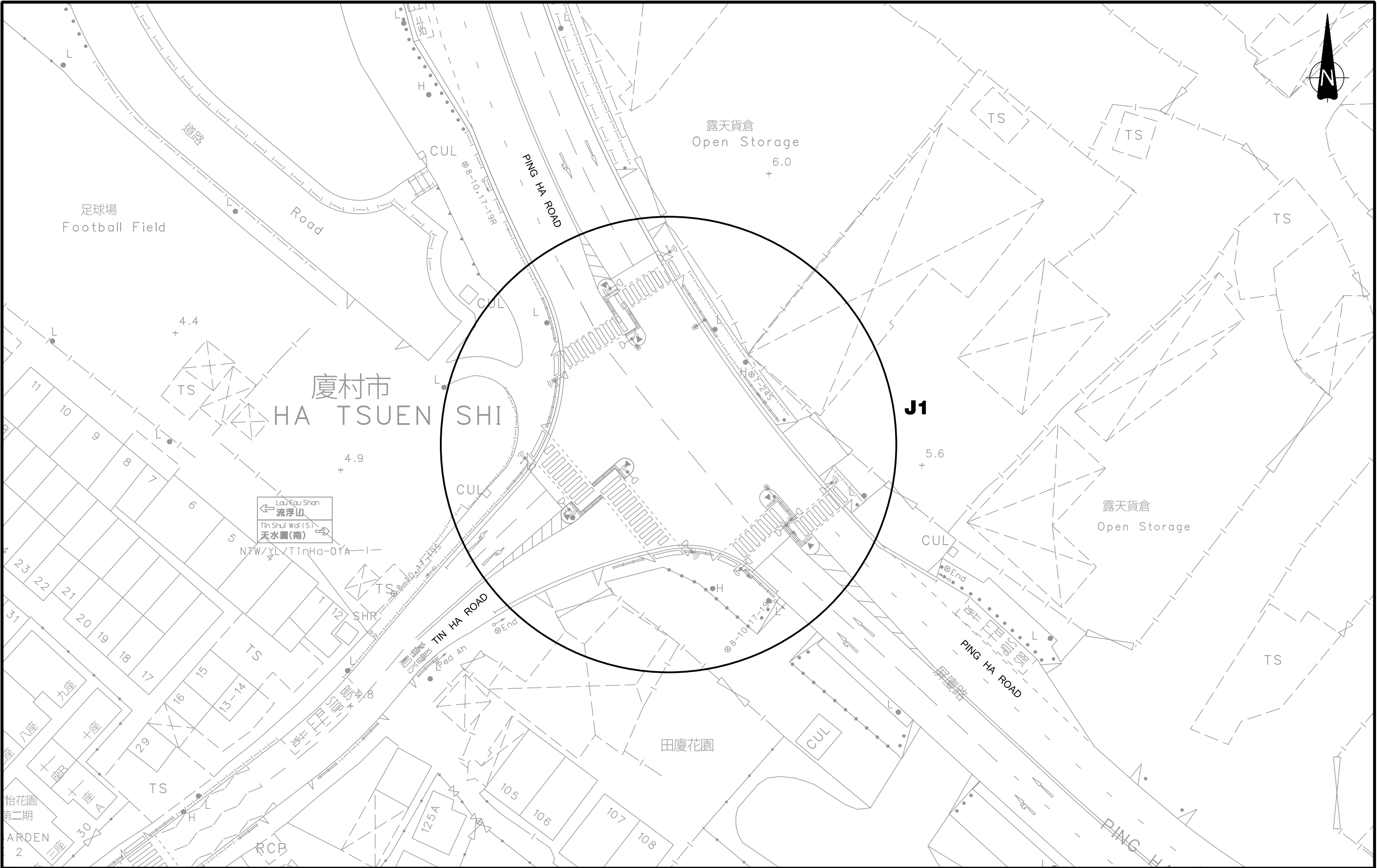
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STUDIED JUNCTION

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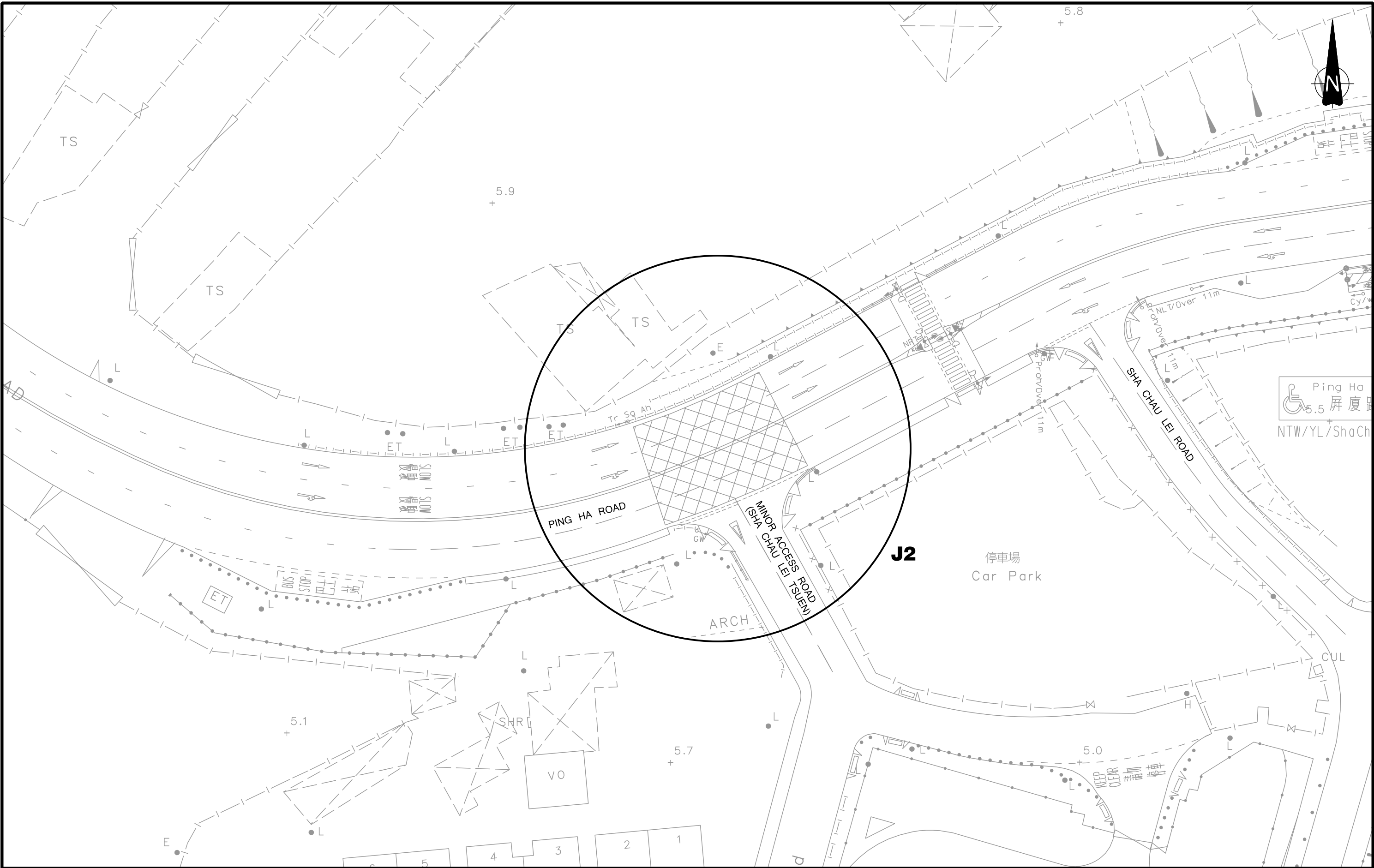



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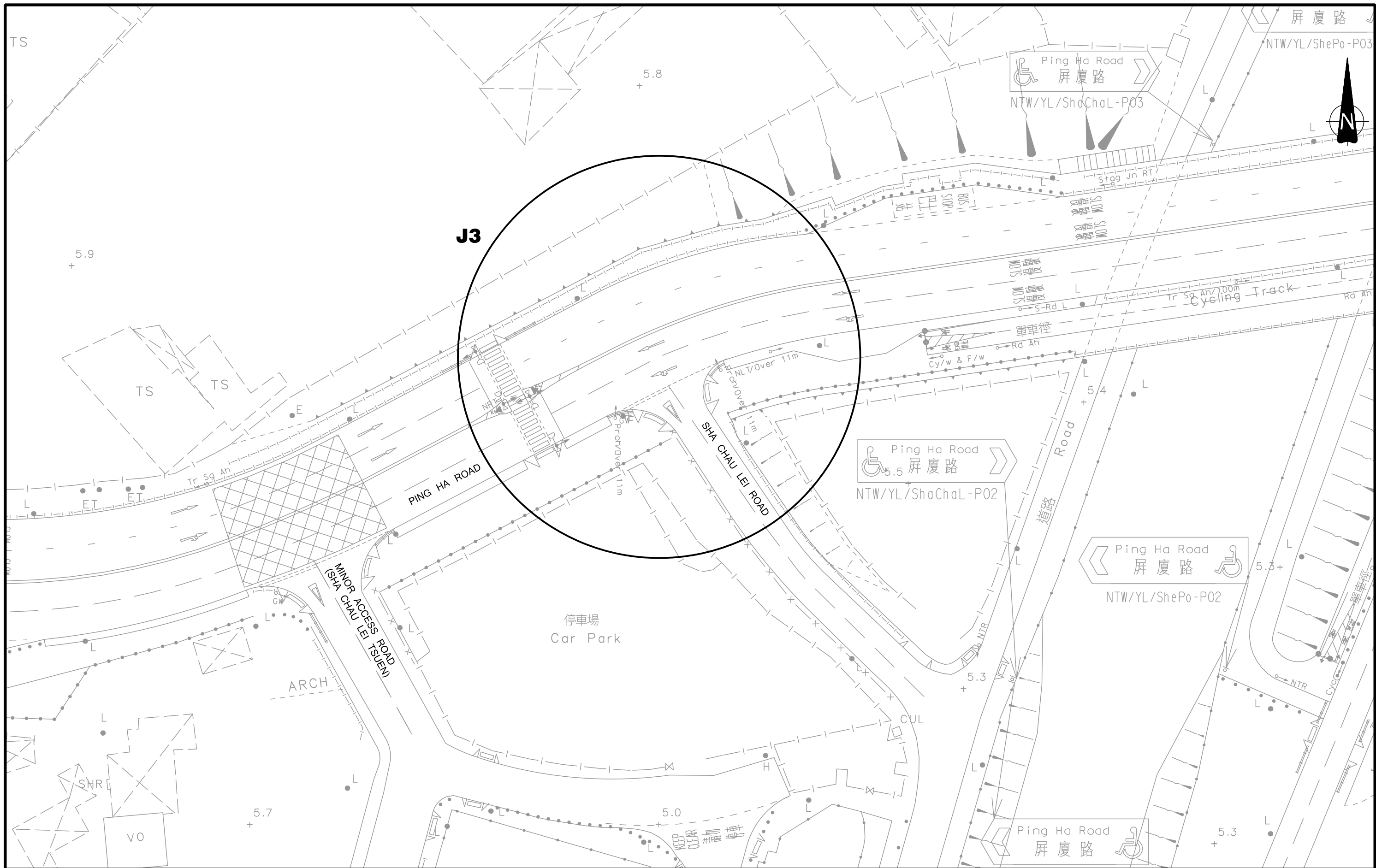
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ARCHITECTURAL AND ASSOCIATED CONSULTANCY SERVICES FOR TECHNICAL FEASIBILITY STUDY FOR PROPOSED REDEVELOPMENT OF POK OI HOSPITAL YEUNG CHUN PUI CARE AND ATTENTION HOME IN YUEN LONG

Drawing Title											
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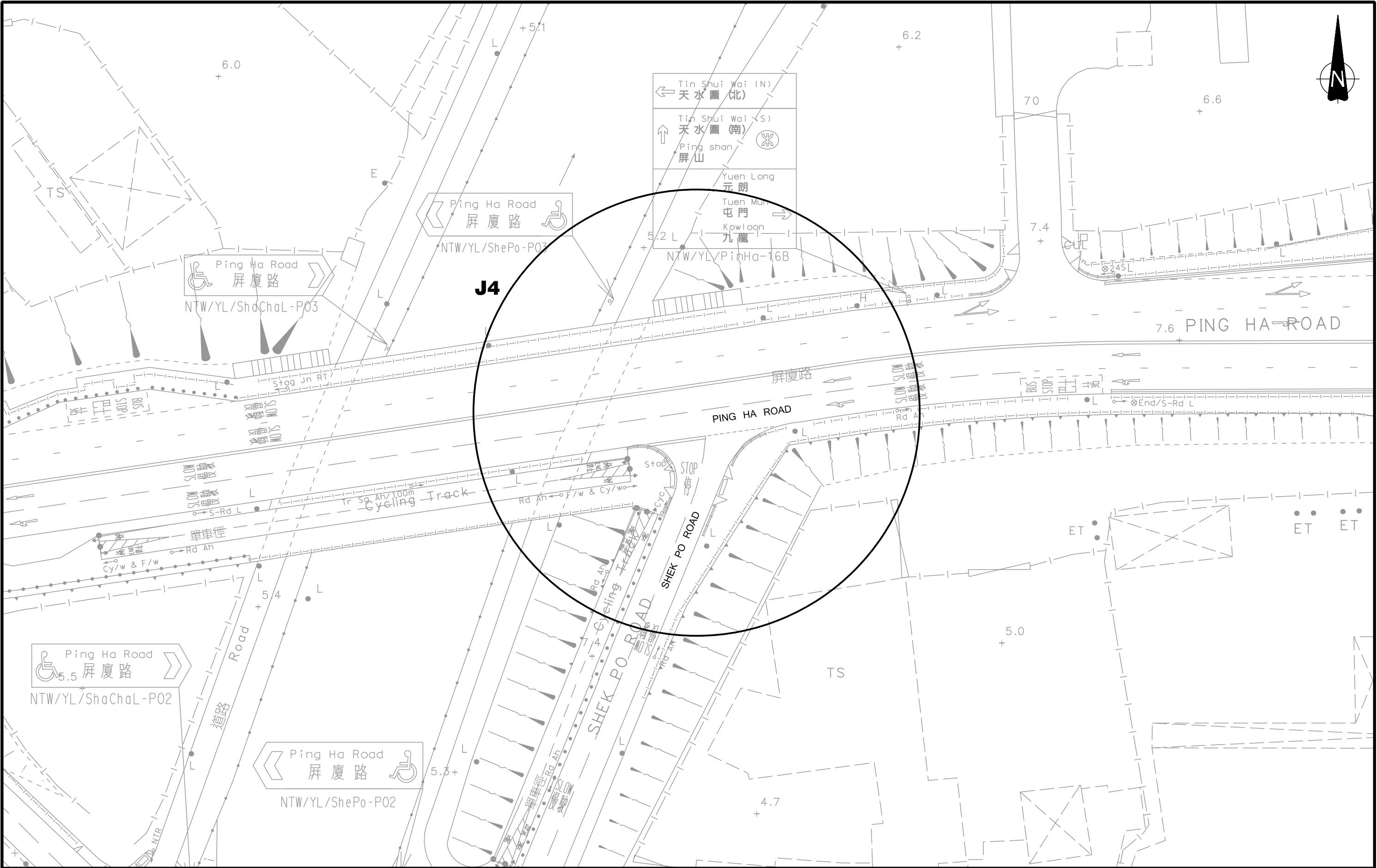
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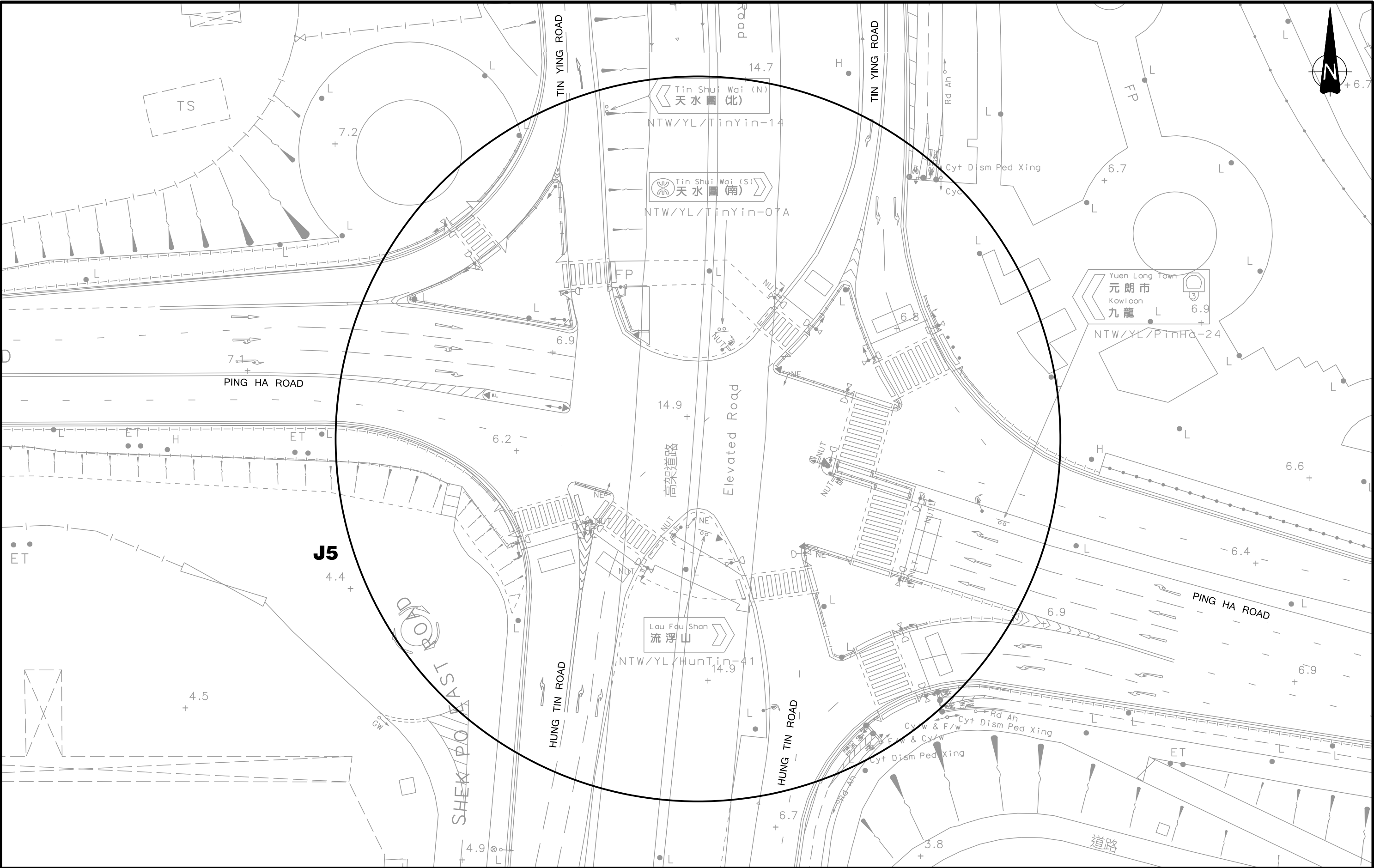
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OF POK OI HOSPITAL YEUNG CHUN PUI CARE
AND ATTENTION HOME IN YUEN LONG

Drawing Title					
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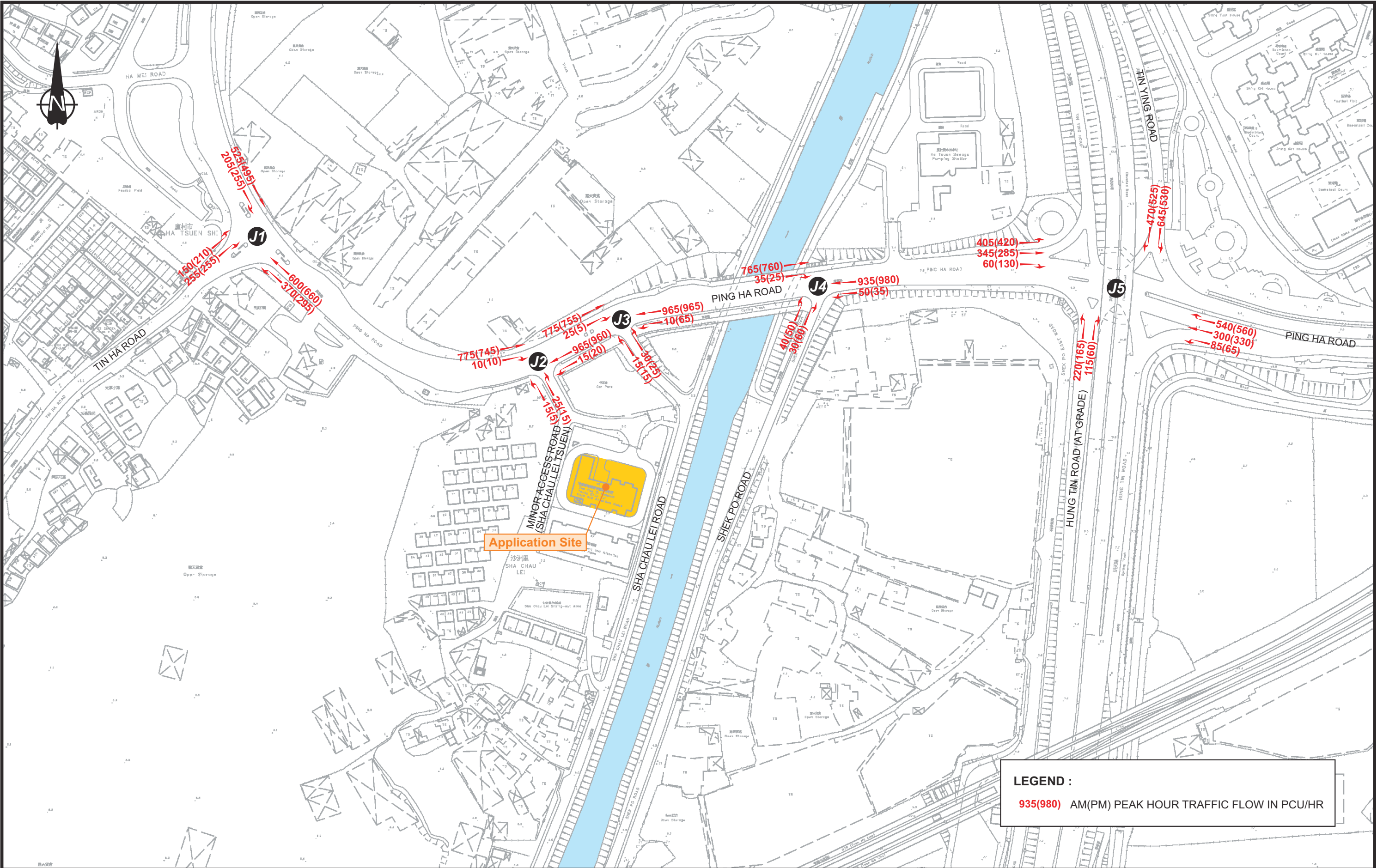
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Project Title

ARCHITECTURAL AND ASSOCIATED CONSULTANCY SERVICES FOR
TECHNICAL FEASIBILITY STUDY FOR PROPOSED REDEVELOPMENT
OF POK OI HOSPITAL YEUNG CHUN PUI CARE
AND ATTENTION HOME IN YUEN LONG

Drawing Title					
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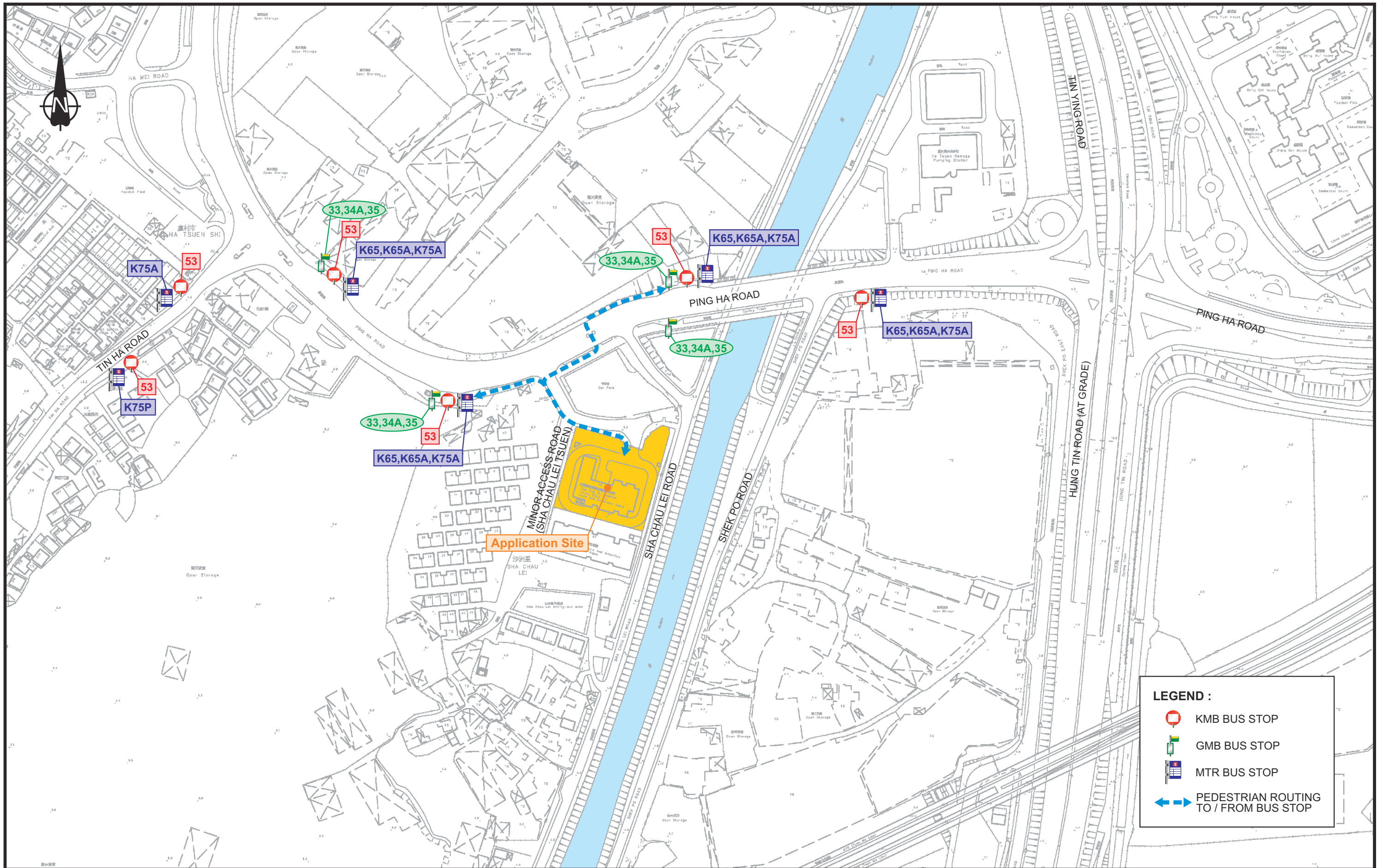
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ARCHITECTURAL AND ASSOCIATED CONSULTANCY SERVICES
FOR TECHNICAL FEASIBILITY STUDY FOR PROPOSED
REDEVELOPMENT OF POK OI HOSPITAL YEUNG CHUN PUI
CARE AND ATTENTION HOME IN YUEN LONG

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KMB BUS STOP

GMB BUS STOP

MTR BUS STOP

PEDESTRIAN ROUTING
TO / FROM BUS STOP

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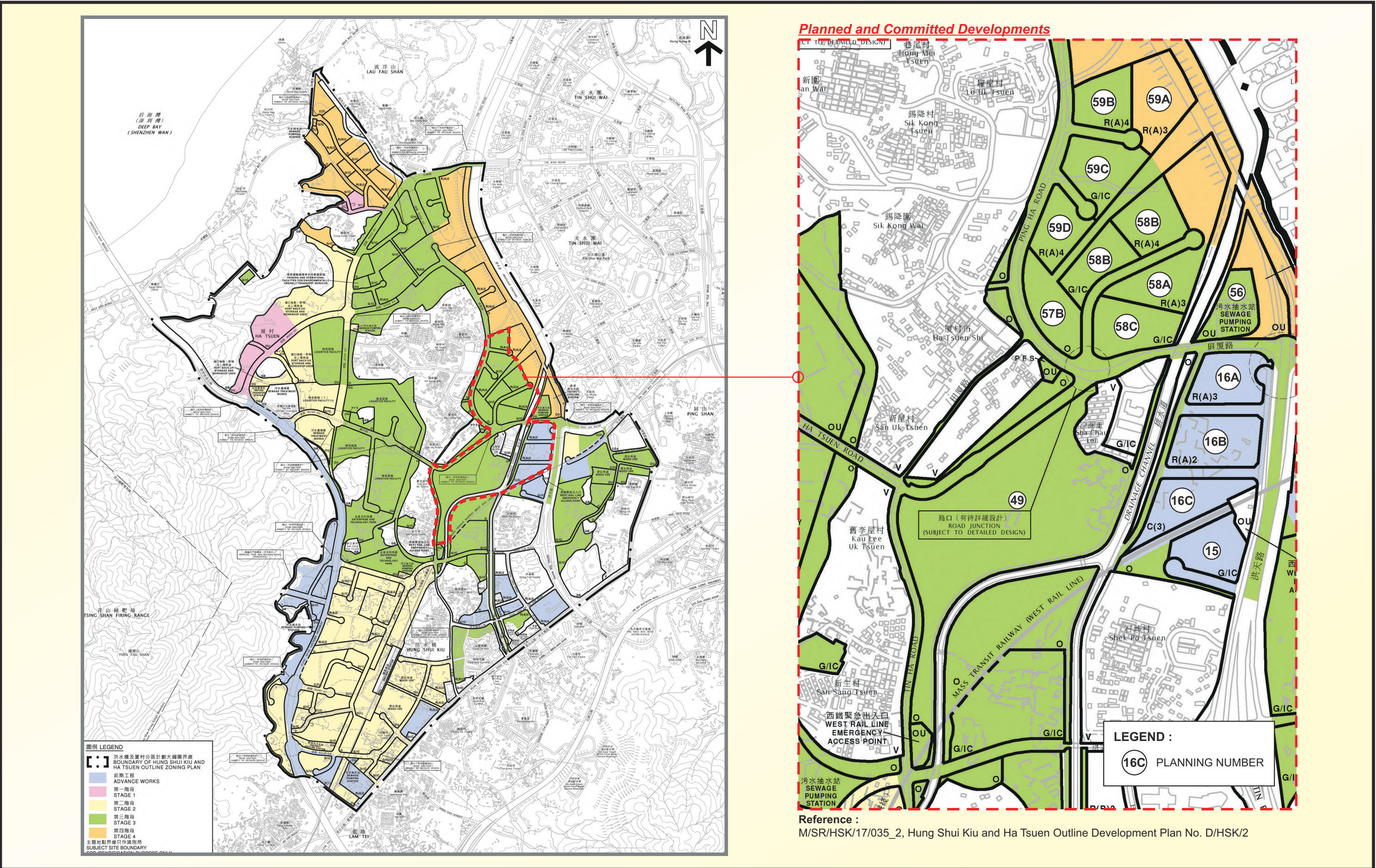
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CARE AND ATTENTION HOME IN YUEN LONG

Drawing Title

EXISTING PUBLIC TRANSPORT SERVICES IN THE VICINITY

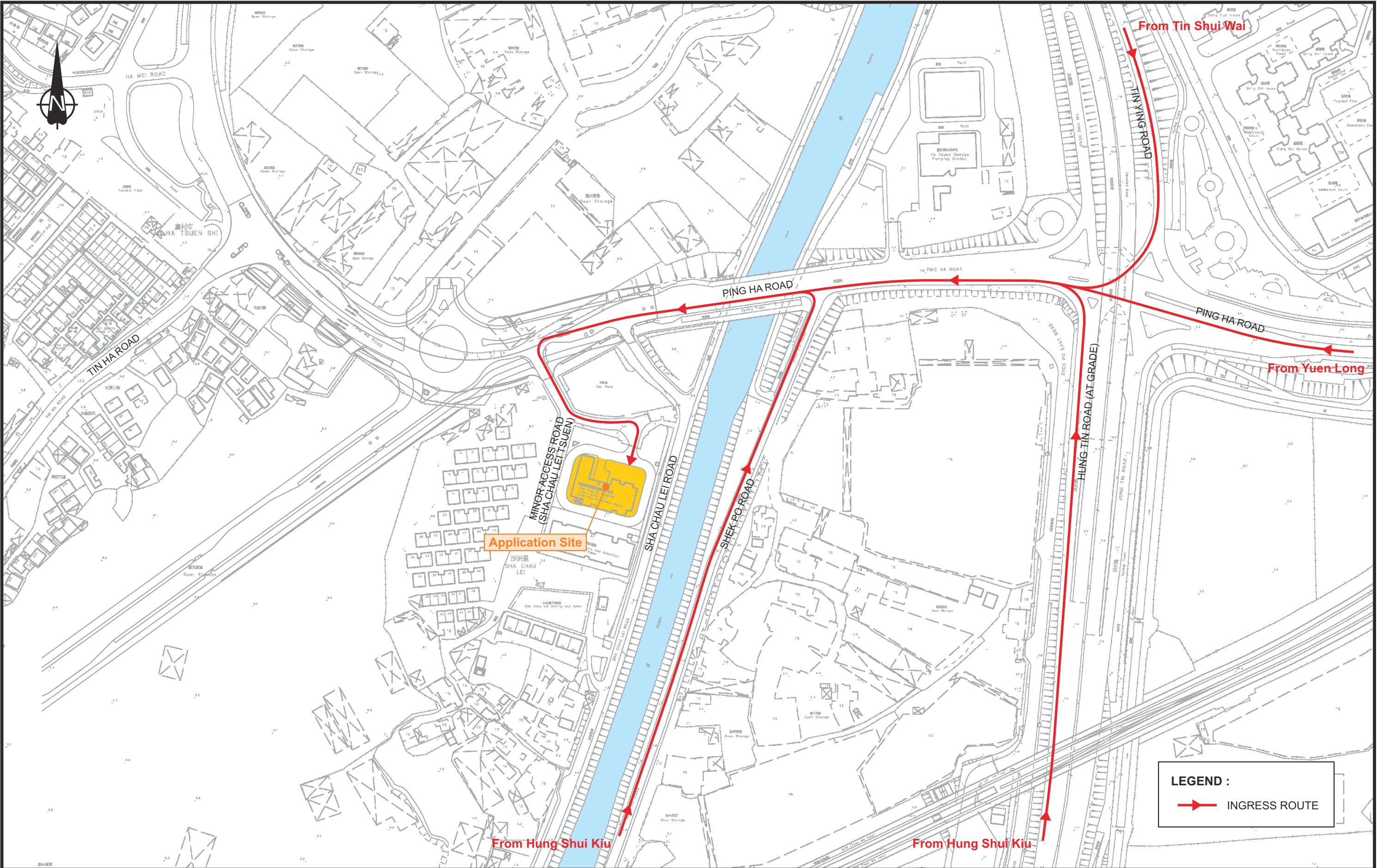
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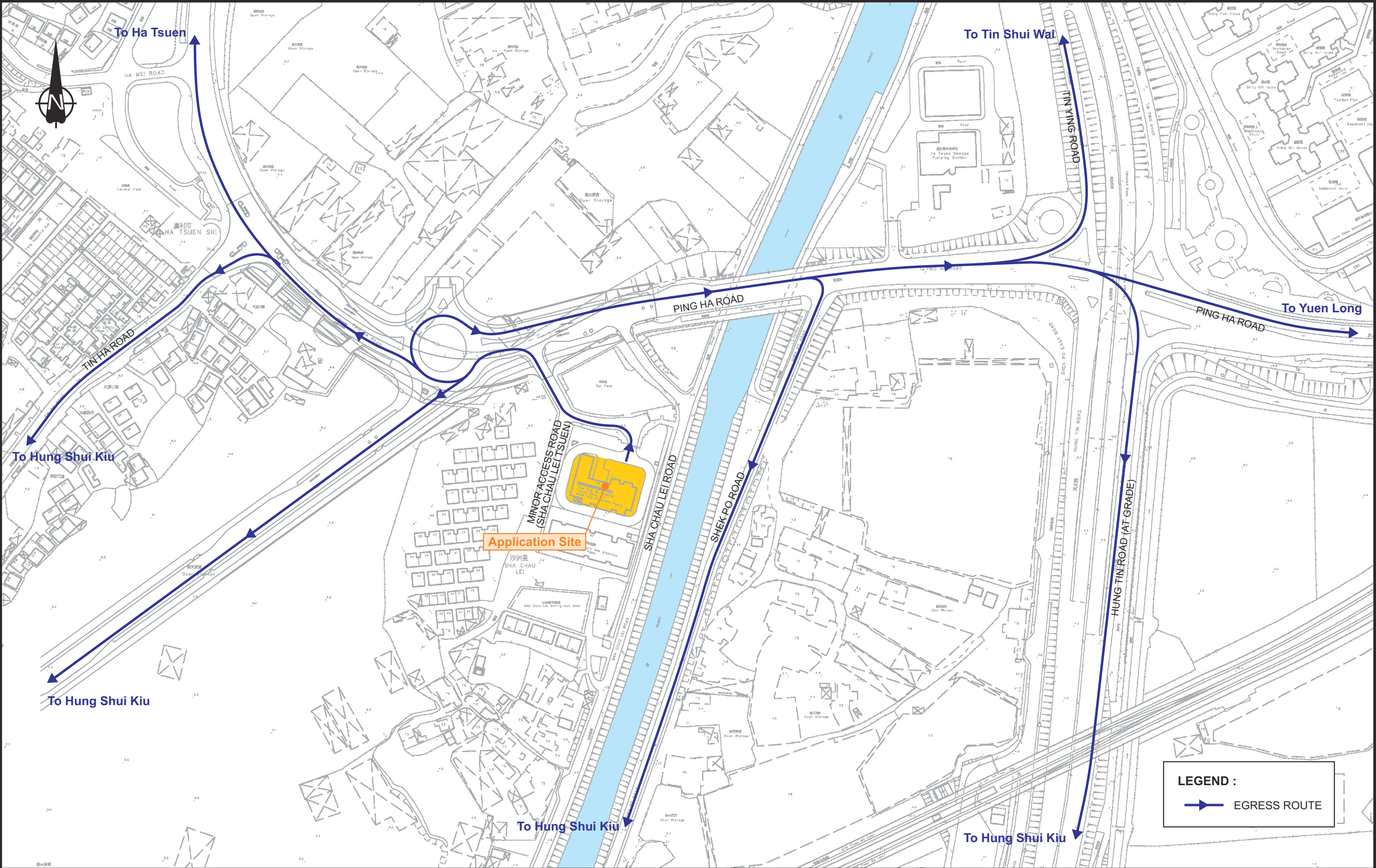


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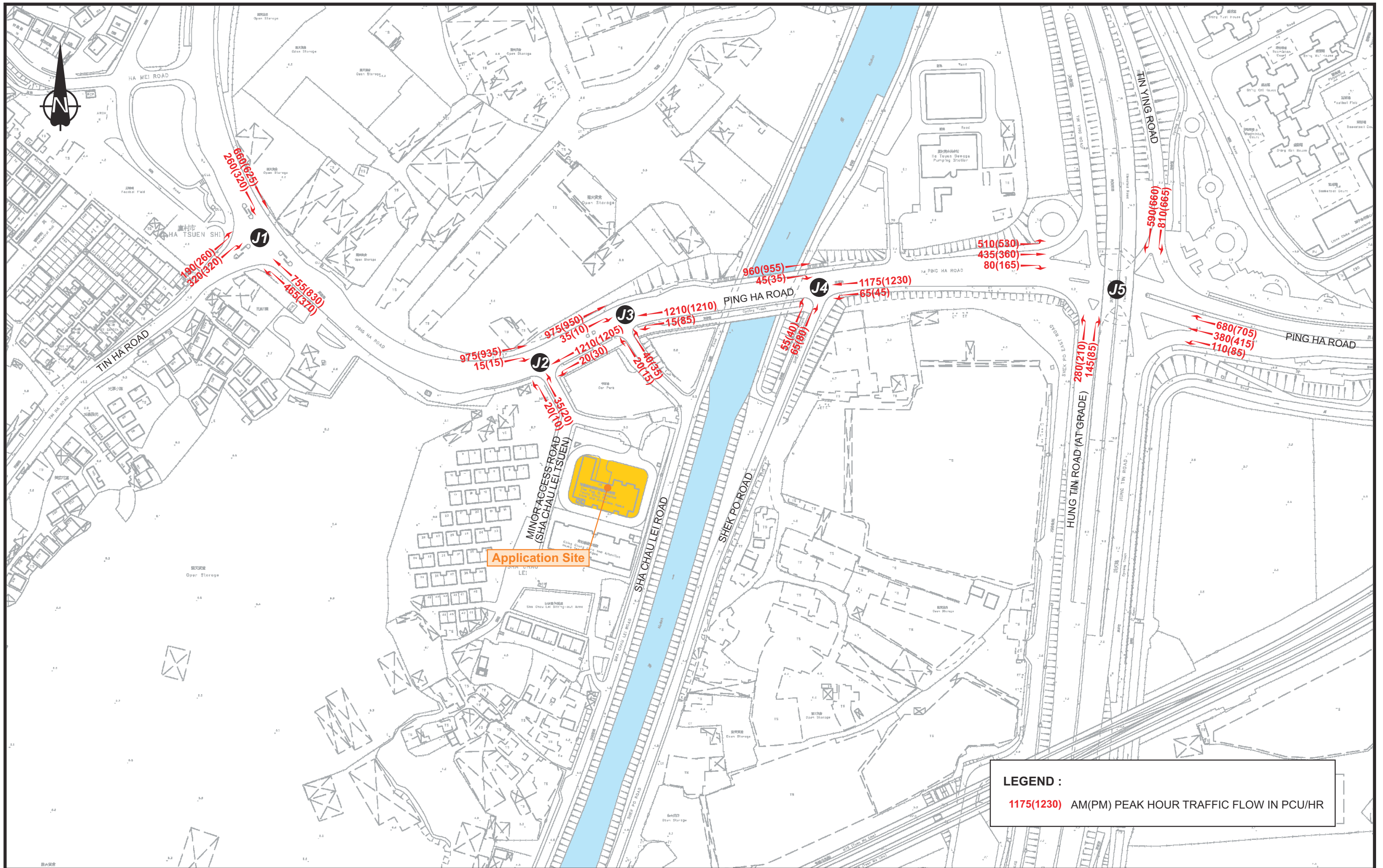
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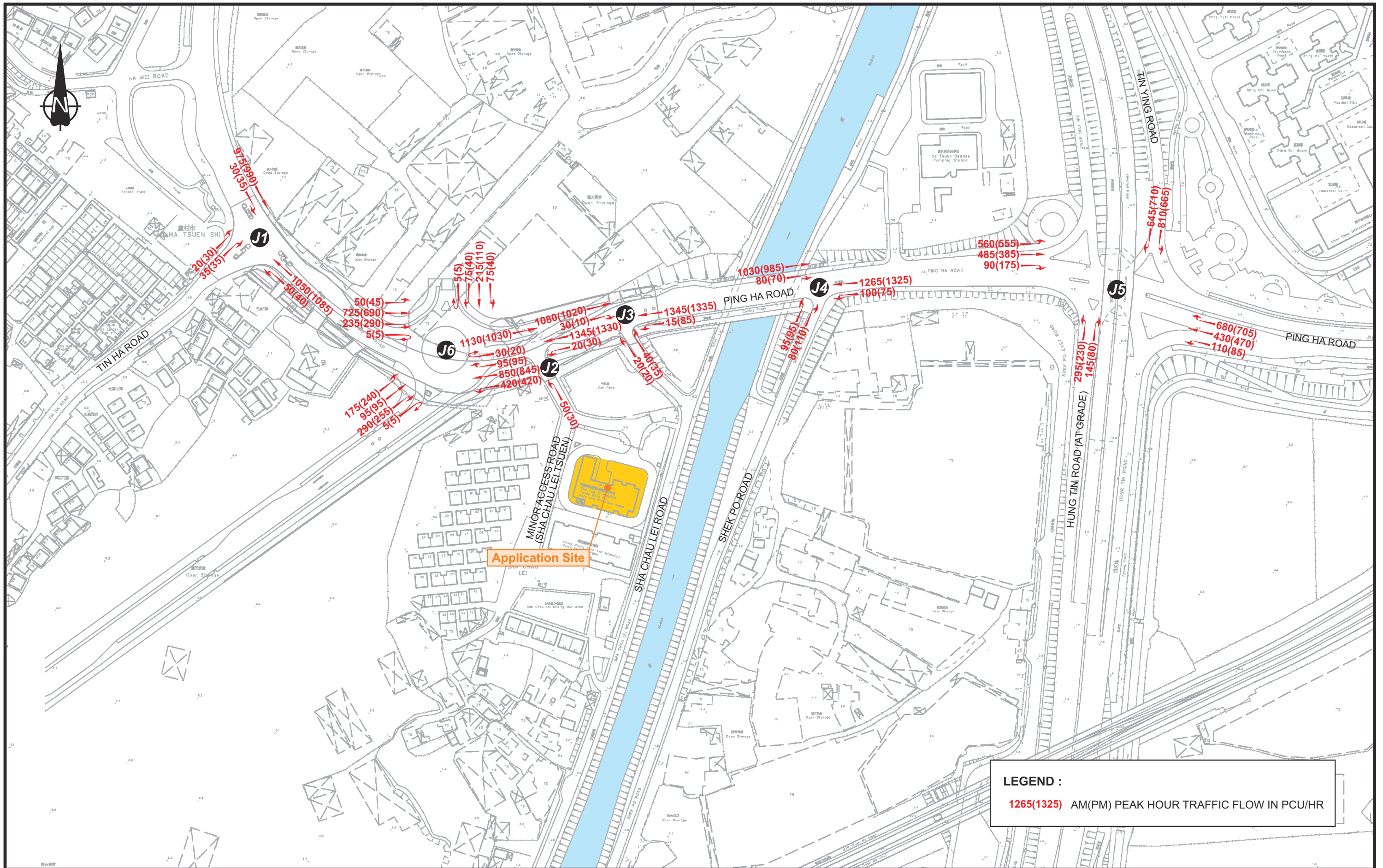
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CARE AND ATTENTION HOME IN YUEN LONG

Drawing Title							
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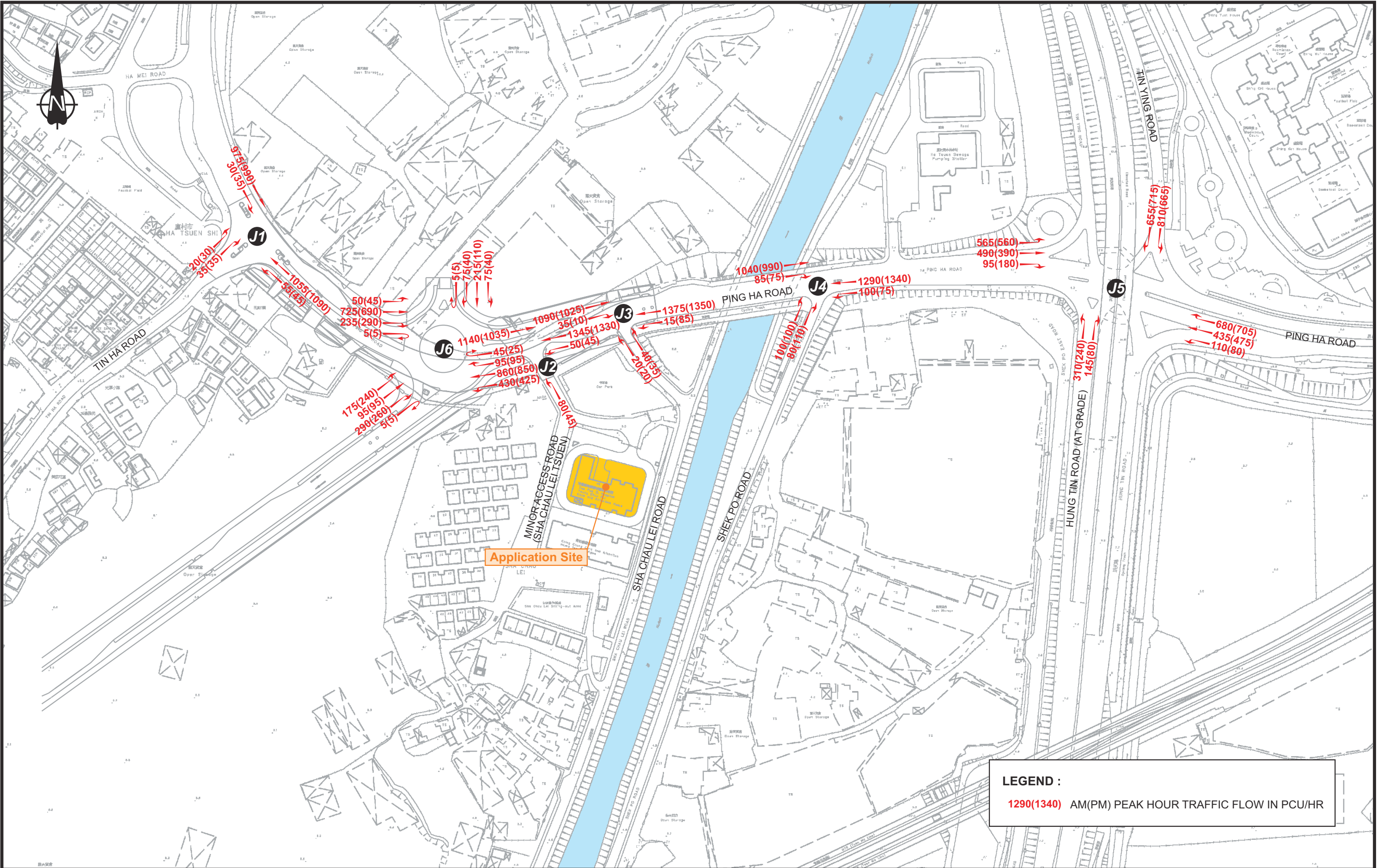




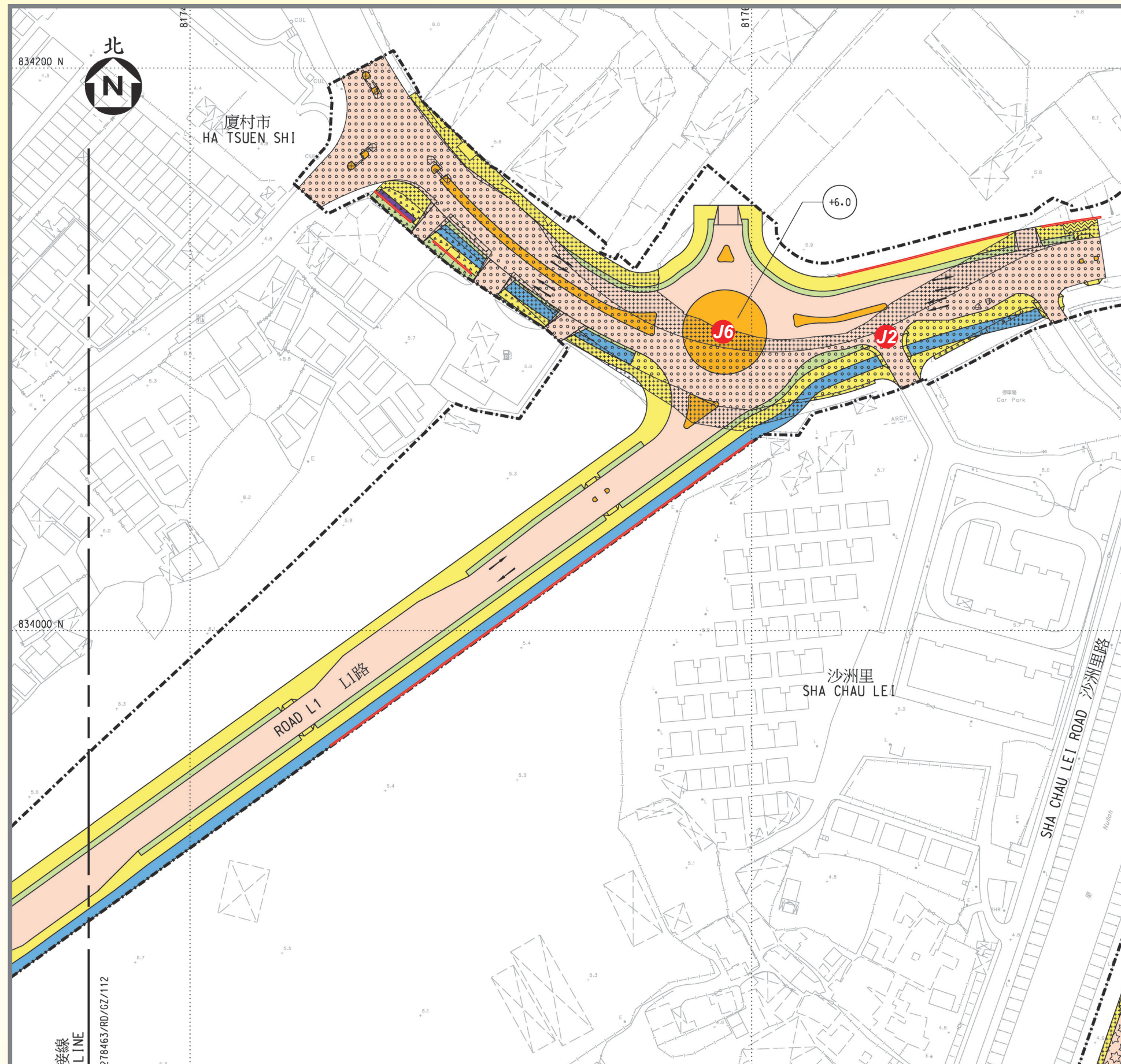
Rev.		Description	Checked	Date	Project Title		Drawing Title		SYSTRA MVA	
-		-	-	-	ARCHITECTURAL AND ASSOCIATED CONSULTANCY SERVICES FOR TECHNICAL FEASIBILITY STUDY FOR PROPOSED REDEVELOPMENT OF POK OI HOSPITAL YUENG CHUN PUI CARE AND ATTENTION HOME IN YUEN LONG		YEAR 2035 REFERENCE TRAFFIC FLOWS - WITHOUT FUTURE ROAD NETWORK			
-		-	-	-			Designed TAT		Checked CYH	
-		-	-	-			Scale NTS		Date FEB 2024	
-		-	-	-			Drawing No. 4.4		Rev. -	



Rev.		Description	Checked	Date	Project Title		Drawing Title		SYSTRA MVA	
-		-	-	-	ARCHITECTURAL AND ASSOCIATED CONSULTANCY SERVICES FOR TECHNICAL FEASIBILITY STUDY FOR PROPOSED REDEVELOPMENT OF POK OI HOSPITAL YEUNG CHUN PUI CARE AND ATTENTION HOME IN YUEN LONG		YEAR 2035 REFERENCE TRAFFIC FLOWS - WITH FUTURE ROAD NETWORK			
-		-	-	-			Designed TAT		Checked CYH	
-		-	-	-			Scale NTS		Date FEB 2024	
-		-	-	-			Drawing No. 4.5		Rev. -	



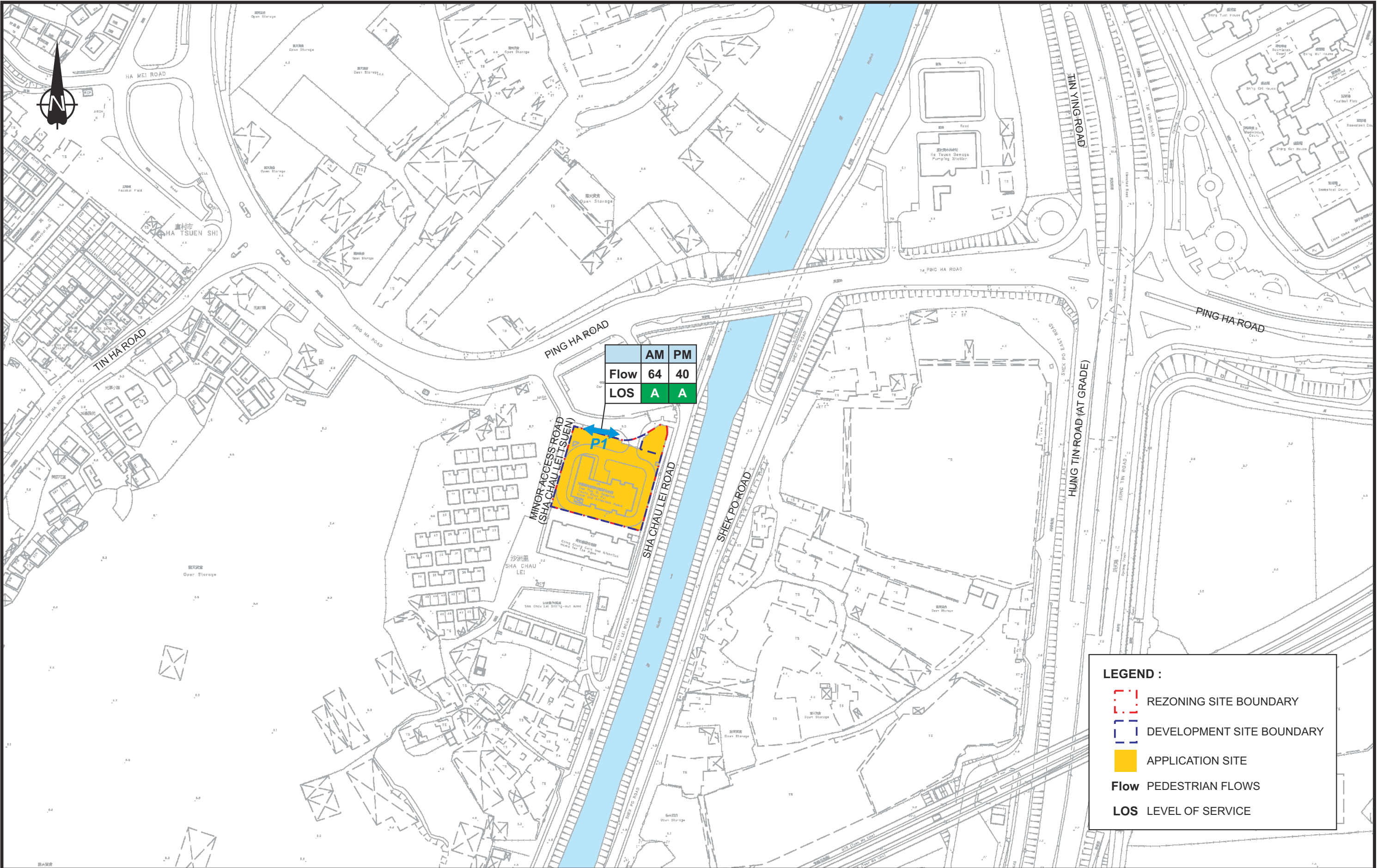
-	-	-	-	Project Title ARCHITECTURAL AND ASSOCIATED CONSULTANCY SERVICES FOR TECHNICAL FEASIBILITY STUDY FOR PROPOSED REDEVELOPMENT OF POK OI HOSPITAL YEUNG CHUN PUI CARE AND ATTENTION HOME IN YUEN LONG	Drawing Title YEAR 2035 DESIGN TRAFFIC FLOWS - WITH FUTURE ROAD NETWORK											
-	-	-	-													
-	-	-	-													
-	-	-	-													
Rev.	Description	Checked	Date													
					Designed	TAT	Checked	CYH	Scale	NTS	Date	FEB 2024	Drawing No.	4.6	Rev.	-



-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Rev.	Description	Checked	Date

Drawing Title

Designed	TAT	Checked	CYH	Scale	NTS	Date	FEB 2024	Drawing No.	5.1	Rev.	-
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LEGEND :

- REZONING SITE BOUNDARY
- DEVELOPMENT SITE BOUNDARY
- APPLICATION SITE
- Flow PEDESTRIAN FLOWS
- LOS LEVEL OF SERVICE

-	-	-	Project Title ARCHITECTURAL AND ASSOCIATED CONSULTANCY SERVICES FOR TECHNICAL FEASIBILITY STUDY FOR PROPOSED REDEVELOPMENT OF POK OI HOSPITAL YEUNG CHUN PUI CARE AND ATTENTION HOME IN YUEN LONG	Drawing Title 2035 REFERENCE FLOWS											
-	-	-													
-	-	-													
-	-	-													
Rev.	Description	Checked		Date	Designed	TAT	Checked	CYH	Scale	NTS		Date	MAY 2024	Drawing No.	6.1	Rev.	-

Appendix A

Junction Calculation Sheets

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50749010**

MVA HONG KONG LIMITED

Junction: J1- Tin Ha Road/Ping Ha Road


Design Year: 2023

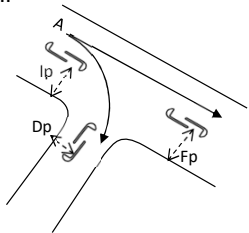
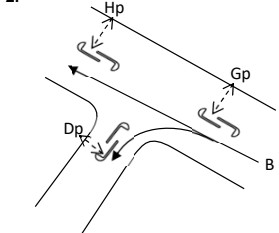
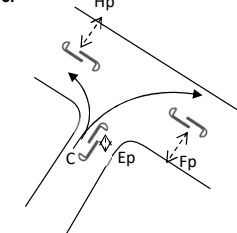

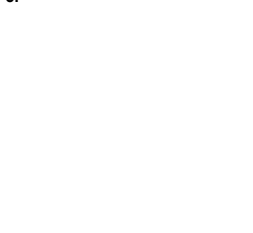
Description: 2023 Existing Flow

Designed By: TAT

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ping Ha Road WB	↗	B	2	3.750	20			81%	66%	1875	1895	454	0.242	0.242	450	0.237	0.237
	↑	B	2	3.750						2130	2130	516	0.242		505	0.237	
Ping Ha Road EB	↑	A	1	3.200						1935	1935	357	0.184		368	0.190	0.190
	↗	A	1	3.200		30		55%	67%	2020	2010	373	0.185	0.185	382	0.190	
Tin Ha Road	↘	C	3	3.100		20				1920	1920	255	0.133	0.133	255	0.133	0.133
	↙	C	3	3.100	20					1790	1790	150	0.084		210	0.117	
Pedestrian Crossing		Dp	1,2	MIN GREEN + FLASH =		5	+	8	=	13							
		Ep	3	MIN GREEN + FLASH =		5	+	11	=	16							
		Fp	1,3	MIN GREEN + FLASH =		5	+	9	=	14							
		Gp	2	MIN GREEN + FLASH =		5	+	5	=	10							
		Hp	2,3	MIN GREEN + FLASH =		5	+	7	=	12							
		Ip	1	MIN GREEN + FLASH =		5	+	9	=	14							

Notes:	Flow: (pcu/hr)		Group	C,lp,B	C,A,B	Group	C,lp,B	C,A,B
			y	0.375	0.560	y	0.370	0.560
			L (sec)	28	21	L (sec)	28	21
			C (sec)	136	136	C (sec)	120	120
			y pract.	0.715	0.761	y pract.	0.690	0.743
			R.C. (%)	91%	36%	R.C. (%)	86%	32%

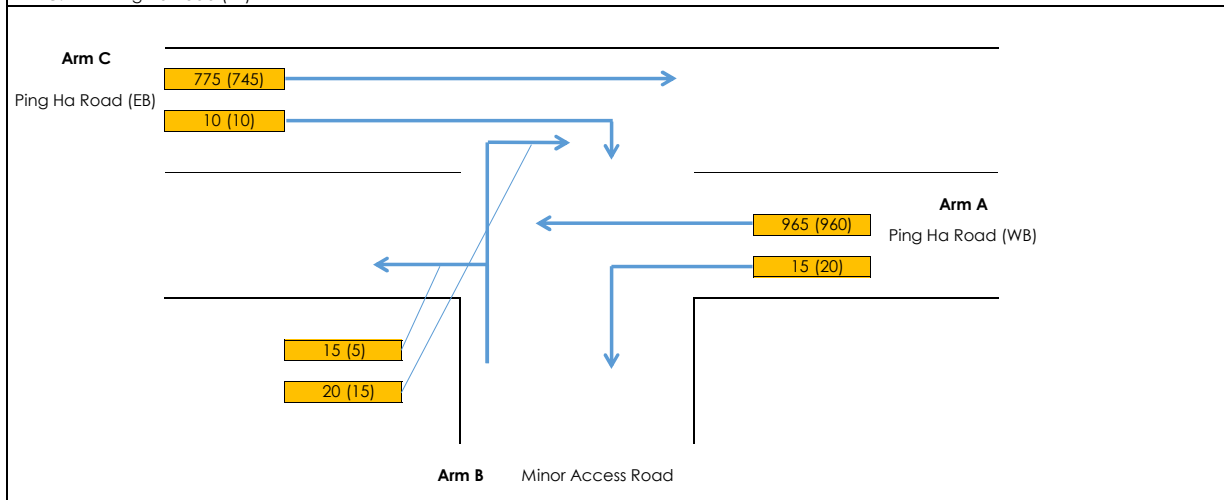
Stage / Phase Diagrams				
1. 	2. 	3. 	4. 	5. 

I/G= 7	I/G= 8	I/G= 9	I/G=	I/G=
I/G= 7	I/G= 8	I/G= 9	I/G=	I/G=
Date: SEP, 2024			Junction: J1- Tin Ha Road/Ping Ha Road	

Simplified Priority Junction Capacity Calculation



Job Title: TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital			
Junction: J2 (Ping Ha Road/ Minor Access Road)		Designed by: TAT	
Scheme:		Checked by: CYH	
Design Year: 2023	Existing Flow	Job No.: CHK50749010	Date: Feb-24
Arm A: Ping Ha Road (WB)			
Arm B: Minor Access Road			
Arm C: Ping Ha Road (EB)			

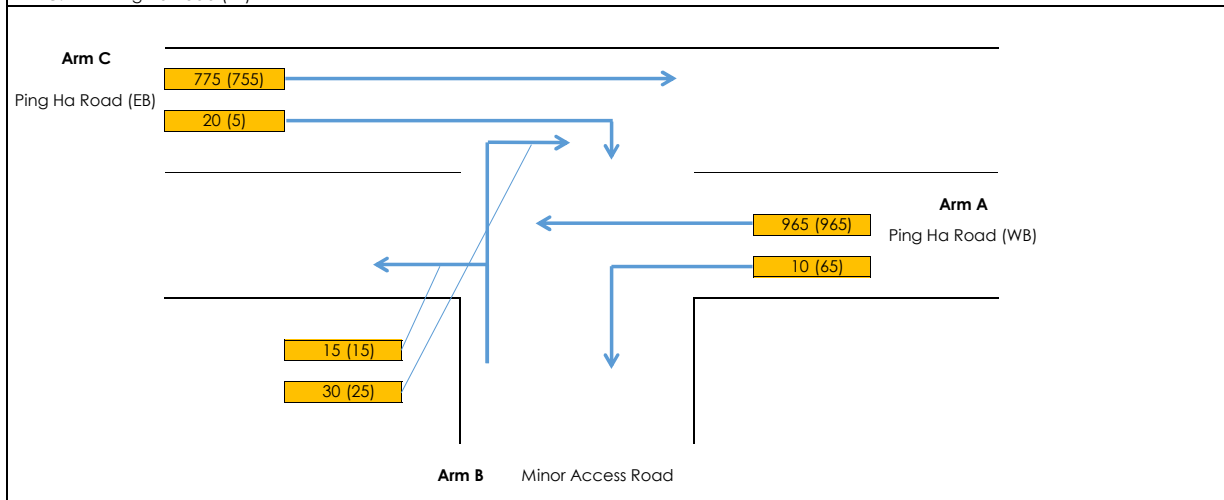


GEOMETRY					
Major Road Width (m)	W	16.50	Lane widths (m)	w(b-a)	4.00
Central Reserve Width (m)	Wcr	0.00		w(b-c)	4.00
Blockage of major road right turn	Y/N?	N		w(c-b)	4.20
Combined stream on minor arm	Y/N?	Y			
Visibility Distances (m)	Vr(b-a)	40	Calculated Parameters	D	0.895
	VI(b-a)	40		E	0.986
	Vr(b-c)	70		F	0.974
	Vr(c-b)	38		Y	0.431
ANALYSIS			AM PEAK PM PEAK		
TRAFFIC FLOWS (pcu/hr)	q(c-a)		775	745	
	q(c-b)		10	10	
	q(a-b)		15	20	
	q(a-c)		965	960	
	q(b-a)		20	15	
	q(b-c)		15	5	
	f		0.43	0.25	
CAPACITIES (pcu/hr)	Q(b-ac)		427	396	
	Q(c-b)		576	576	
RFC's	c-b		0.02	0.02	
	b-ac		0.08	0.05	
RFC			0.08 0.05		
<p>Where VI and Vr are visibility distances to the left or right of the respective streams</p> $D = (1 + 0.094(w(b-a) - 3.65)) / (1 + 0.0009(Vr(b-a) - 120)) / (1 + 0.0006(VI(b-a) - 150))$ $E = (1 + 0.094(w(b-c) - 3.65)) / (1 + 0.0009(Vr(b-c) - 120))$ $F = (1 + 0.094(w(c-b) - 3.65)) / (1 + 0.0009(Vr(c-b) - 120))$ $Y = 1 - 0.0345W$ <p>f = proportion of minor traffic turning left</p> $Q(b-ac) = Q(b-c) * Q(b-a) / ((1-f) * Q(b-c) + f * Q(b-a))$ <p>Capacity of combined streams</p>					
All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1					

Simplified Priority Junction Capacity Calculation



Job Title: TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital			
Junction: J3 (Ping Ha Road/ Sah Chau Lei Road)		Designed by: TAT	
Scheme:		Checked by: CYH	
Design Year: 2023	Existing Flow	Job No.: CHK50749010	Date: Feb-24
Arm A: Ping Ha Road (WB)			
Arm B: Minor Access Road			
Arm C: Ping Ha Road (EB)			

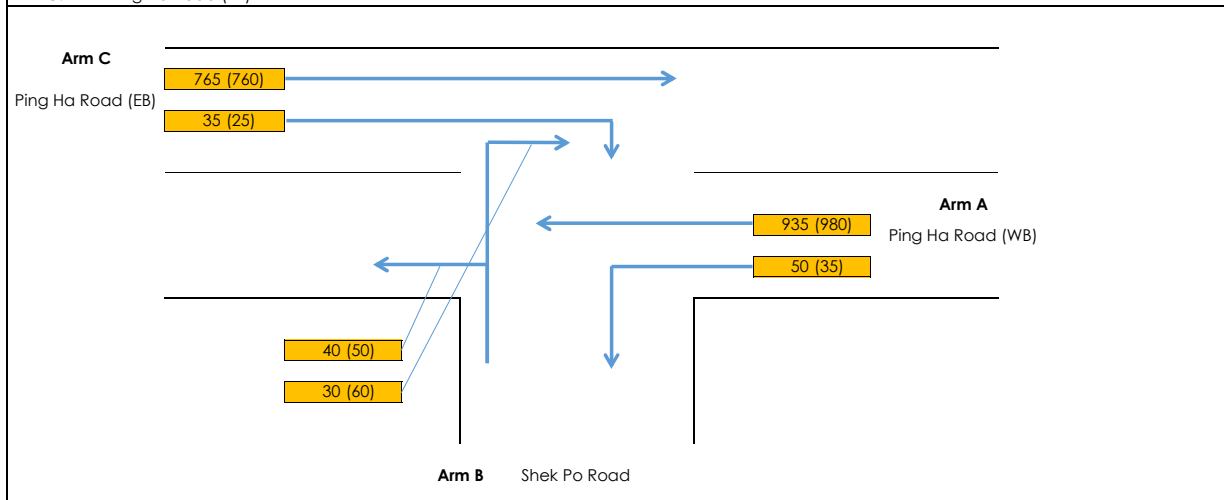


GEOMETRY					
Major Road Width (m)	W	16.00	Lane widths (m)	w(b-a)	3.80
Central Reserve Width (m)	Wcr	0.00		w(b-c)	3.80
Blockage of major road right turn	Y/N?	N		w(c-b)	4.25
Combined stream on minor arm	Y/N?	Y			
Visibility Distances (m)	Vr(b-a)	40	Calculated Parameters	D	0.879
	VI(b-a)	40		E	0.968
	Vr(b-c)	70		F	1.037
	Vr(c-b)	100		Y	0.448
ANALYSIS			AM PEAK	PM PEAK	
TRAFFIC FLOWS (pcu/hr)	q(c-a)		775	755	
	q(c-b)		20	5	
	q(a-b)		10	65	
	q(a-c)		965	965	
	q(b-a)		30	25	
	q(b-c)		15	15	
	f		0	0	
CAPACITIES (pcu/hr)	Q(b-ac)		391	400	
	Q(c-b)		608	599	
RFC's	c-b		0.03	0.01	
	b-ac		0.12	0.10	
RFC			0.12	0.10	
<p>Where VI and Vr are visibility distances to the left or right of the respective streams</p> $D = (1 + 0.094(w(b-a) - 3.65)) / (1 + 0.0009(Vr(b-a) - 120)) / (1 + 0.0006(VI(b-a) - 150))$ $E = (1 + 0.094(w(b-c) - 3.65)) / (1 + 0.0009(Vr(b-c) - 120))$ $F = (1 + 0.094(w(c-b) - 3.65)) / (1 + 0.0009(Vr(c-b) - 120))$ $Y = 1 - 0.0345W$ <p>f = proportion of minor traffic turning left</p> $Q(b-ac) = Q(b-c) * Q(b-a) / ((1-f) * Q(b-c) + f * Q(b-a))$ <p>Capacity of combined streams</p> <p>All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1</p>					

Simplified Priority Junction Capacity Calculation



Job Title: TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital			
Junction: J4 (Ping Ha Road/ Shek Po Road)		Designed by: TAT	
Scheme:		Checked by: CYH	
Design Year: 2023	Existing Flow	Job No.: CHK50749010	Date: Feb-24
Arm A: Ping Ha Road (WB)			
Arm B: Shek Po Road			
Arm C: Ping Ha Road (EB)			



GEOMETRY					
Major Road Width (m)	W	15.00	Lane widths (m)	w(b-a)	3.80
Central Reserve Width (m)	Wcr	0.00		w(b-c)	3.80
Blockage of major road right turn	Y/N?	N		w(c-b)	4.25
Combined stream on minor arm	Y/N?	Y			
Visibility Distances (m)	Vr(b-a)	30	Calculated Parameters	D	0.865
	VI(b-a)	30		E	0.947
	Vr(b-c)	46		F	1.037
	Vr(c-b)	100		Y	0.483
ANALYSIS			AM PEAK	PM PEAK	
TRAFFIC FLOWS (pcu/hr)	a(c-a)		765	760	
	a(c-b)		35	25	
	a(a-b)		50	35	
	a(a-c)		935	980	
	a(b-a)		30	60	
	a(b-c)		40	50	
	f		1	0	
CAPACITIES (pcu/hr)	Q(b-ac)		417	387	
	Q(c-b)		593	588	
RFC's	c-b		0.06	0.04	
	b-ac		0.17	0.28	
RFC			0.17	0.28	
<p>Where VI and Vr are visibility distances to the left or right of the respective streams</p> $D = (1 + 0.094(w(b-a) - 3.65)) / (1 + 0.0009(Vr(b-a) - 120)) / (1 + 0.0006(VI(b-a) - 150))$ $E = (1 + 0.094(w(b-c) - 3.65)) / (1 + 0.0009(Vr(b-c) - 120))$ $F = (1 + 0.094(w(c-b) - 3.65)) / (1 + 0.0009(Vr(c-b) - 120))$ $Y = 1 - 0.0345W$ <p>f = proportion of minor traffic turning left</p> $Q(b-ac) = Q(b-c) * Q(b-a) / ((1-f) * Q(b-c) + f * Q(b-a))$ <p>Capacity of combined streams</p> <p>All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1</p>					

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50749010**

MVA HONG KONG LIMITED

Junction: J5-Ping Ha Road/ Tin Ying Road/Hung Tin Road

Design Year: 2023

Description: 2023 Existing Flow

Designed By: TAT

Checked By: CYH







Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ping Ha Road	↗	B	1	3.500	20					1460	1460	41	0.028		31	0.021	
	↘	B	1	3.500	25					1590	1590	44	0.028		34	0.021	
	↑	B	1	3.500						2105	2105	150	0.071		165	0.078	
	↑	1	1	3.500						2105	2105	150	0.071		165	0.078	
WB	↘	A	1,3,4	3.500		15				1915	1915	540	0.282	0.282	560	0.292	0.292
Hung Tin Road	↗	C	2	3.300	10					1690	1690	220	0.130		165	0.098	
	↘	D	3,4	3.500		25				1855	1855	56	0.030		32	0.017	
	↘	D	3,4	3.500		20				1960	1960	59	0.030		33	0.017	
Ping Ha Road	↑	E	2	3.500						1965	1965	167	0.085		138	0.070	
	↗	E	2	3.500		50		0%	0%	2105	2105	178	0.085		147	0.070	
	↘	E	2	3.500		45				2035	2035	60	0.029		130	0.064	
	↗	E	2	3.300	10					1690	1690	405	0.240	0.240	420	0.249	0.249
Tin Ying Road	↗	F	1	3.500	20					1460	1460	309	0.212		254	0.174	
	↘	F	1	3.500	25					1590	1590	336	0.211		276	0.174	
	↘	G	4	3.500		15				1915	1915	470	0.245		525	0.274	
Pedestrian Crossing		Hp	1,4	MIN GREEN + FLASH =			5	+	8	=	13						
		Ip	1,2	MIN GREEN + FLASH =			5	+	8	=	13						
		Jp	2,3,4	MIN GREEN + FLASH =			5	+	9	=	14						
		Kp	2	MIN GREEN + FLASH =			5	+	8	=	13						
		Lp	1,3,4	MIN GREEN + FLASH =			5	+	9	=	14						
		Mp	1	MIN GREEN + FLASH =			5	+	8	=	13						
		Np	1,2,3	MIN GREEN + FLASH =			5	+	5	=	10						
		Op	1,3,4	MIN GREEN + FLASH =			5	+	5	=	10						

Notes:	Flow: (pcu/hr)		Group	G,B,C	A,E	Group	G,B,C	A,E
			y	0.447	0.522	y	0.450	0.541
			L (sec)	13	12	L (sec)	13	12
			C (sec)	120	120	C (sec)	120	120
			y pract.	0.803	0.810	y pract.	0.803	0.810
			R.C. (%)	80%	55%	R.C. (%)	78%	50%

Stage / Phase Diagrams				
1.	2.	3.	4.	5.

I/G=		I/G= 5		I/G= 9		I/G=		I/G=	
I/G=		I/G= 5		I/G= 9		I/G=		I/G=	
Date: FEB, 2024					Junction: J5				
					J5-Ping Ha Road/ Tin Ying Road/Hung Tin Road				

Job No.: CHK50749010 MVA HONG KONG LIMITED

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ping Ha Road WB	 	B B	2 2	3.750 3.750	20			81% 65%		1875 2130	1895 2130	571 649	0.305 0.305	0.305	565 635	0.298 0.298	0.298
Ping Ha Road EB	 	A A	1 1	3.200 3.200		30		55% 67%		1935 2020	1935 2010	450 470	0.233 0.233	0.233	464 481	0.240 0.239	0.240
Tin Ha Road	 	C C	3 3	3.100 3.100		20				1920 1790	1920 1790	320 190	0.167 0.106	0.167	320 265	0.167 0.148	0.167
Pedestrian Crossing		Dp Ep Fp Gp Hp Ip	1,2 3 1,3 2 2,3 1	MIN GREEN + FLASH = MIN GREEN + FLASH = MIN GREEN + FLASH = MIN GREEN + FLASH = MIN GREEN + FLASH = MIN GREEN + FLASH =			5 5 5 5 5 5	+ + + + + +	8 11 9 5 7 9	= = = = = =	13 16 14 10 12 14						

Stage / Phase Diagrams

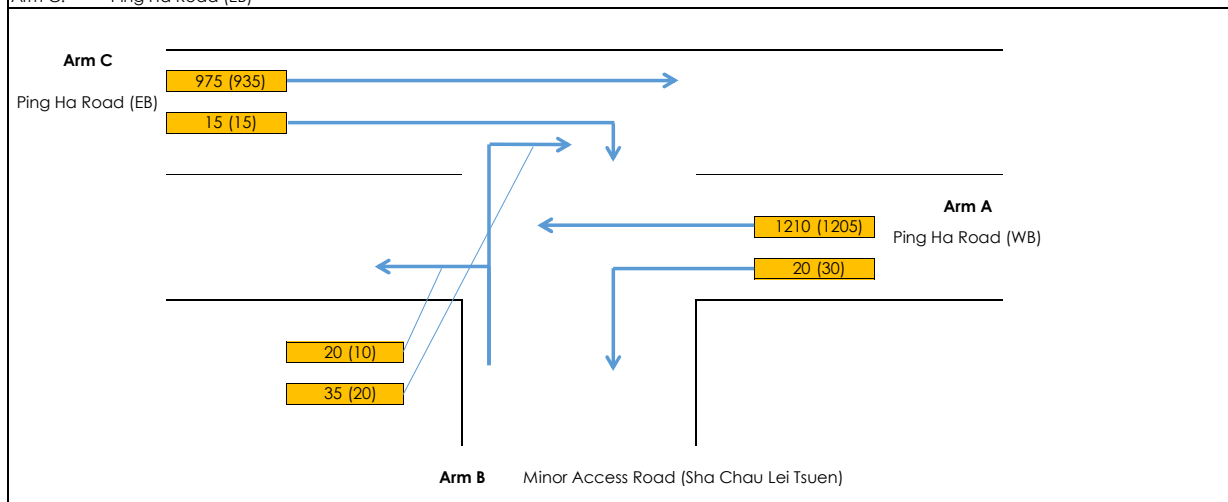
1. 2. 3. 4. 5.

I/G= 7	I/G= 8	I/G= 10	I/G=	I/G=
I/G= 7	I/G= 8	I/G= 10	I/G=	I/G=
			Date: SEP, 2024	Junction: J1- Tin Ha Road/Ping Ha Road

Simplified Priority Junction Capacity Calculation



Job Title: TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital		
Junction: J2 (Ping Ha Road/ Minor Access Road)	Designed by: TAT	
Scheme:	Checked by: CYH	
Design Year: 2035 Reference Flow (Without Future Road Network)	Job No.: CHK50749010	Date: Feb-24
Arm A: Ping Ha Road (WB)		
Arm B: Minor Access Road (Sha Chau Lei Tsuen)		
Arm C: Ping Ha Road (EB)		

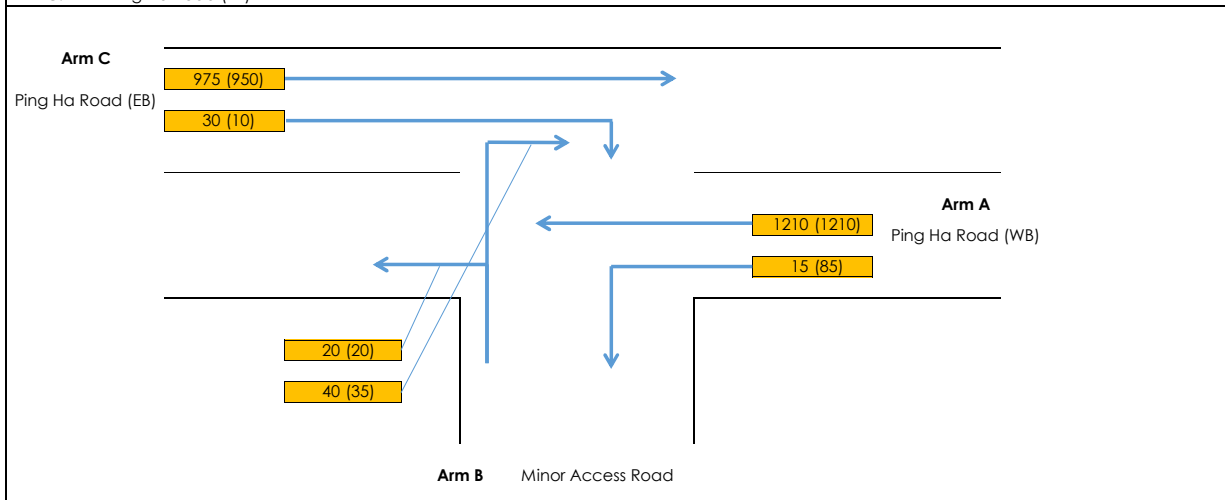


GEOMETRY					
Major Road Width (m)	W	16.50	Lane widths (m)	w(b-a)	4.00
Central Reserve Width (m)	Wcr	0.00		w(b-c)	4.00
Blockage of major road right turn	Y/N?	N		w(c-b)	4.20
Combined stream on minor arm	Y/N?	Y			
Visibility Distances (m)	Vr(b-a)	40	Calculated Parameters	D	0.895
	VI(b-a)	40		E	0.986
	Vr(b-c)	70		F	1.033
	Vr(c-b)	100		Y	0.431
ANALYSIS			AM PEAK PM PEAK		
TRAFFIC FLOWS (pcu/hr)	q(c-a)		975	935	
	q(c-b)		15	15	
	q(a-b)		20	30	
	q(a-c)		1210	1205	
	q(b-a)		35	20	
	q(b-c)		20	10	
	f		0	0	
CAPACITIES (pcu/hr)	Q(b-ac)		360	358	
	Q(c-b)		570	569	
RFC's	c-b		0.03	0.03	
	b-ac		0.15	0.08	
RFC			0.15	0.08	
<p>Where VI and Vr are visibility distances to the left or right of the respective streams</p> $D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$ $E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$ $F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$ $Y = 1-0.0345W$ <p>f = proportion of minor traffic turning left</p> $Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$ Capacity of combined streams					
All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1					

Simplified Priority Junction Capacity Calculation



Job Title: TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital		
Junction: J3 (Ping Ha Road/ Sah Chau Lei Road)	Designed by: TAT	
Scheme:	Checked by: CYH	
Design Year: 2035 Reference Flow (Without Future Road Network)	Job No.: CHK50749010	Date: Feb-24
Arm A: Ping Ha Road (WB)		
Arm B: Minor Access Road		
Arm C: Ping Ha Road (EB)		

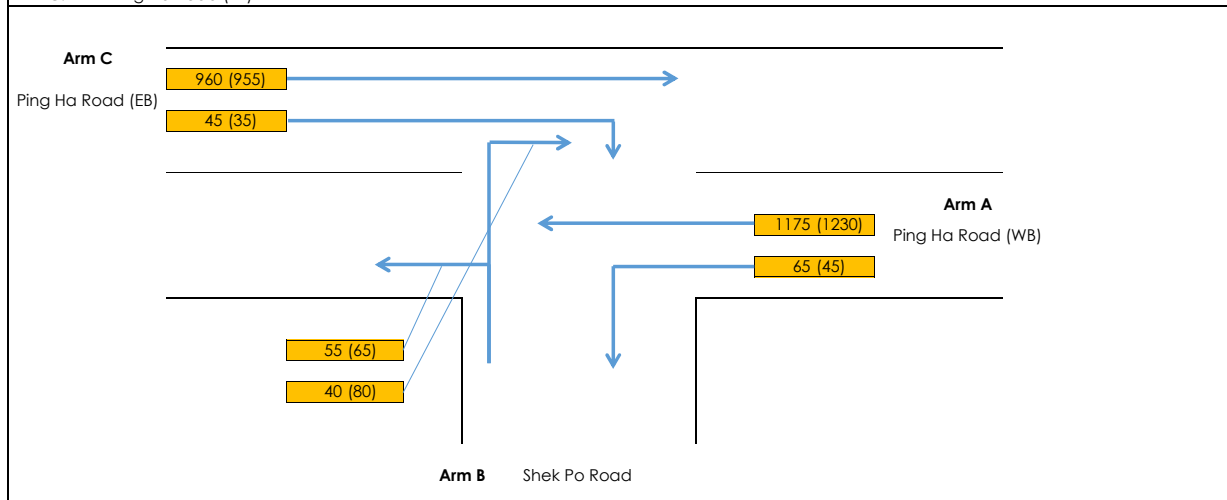


GEOMETRY					
Major Road Width (m)	W	16.00	Lane widths (m)	w(b-a)	3.80
Central Reserve Width (m)	Wcr	0.00		w(b-c)	3.80
Blockage of major road right turn	Y/N?	N		w(c-b)	4.25
Combined stream on minor arm	Y/N?	Y			
Visibility Distances (m)	Vr(b-a)	40	Calculated Parameters	D	0.879
	VI(b-a)	40		E	0.968
	Vr(b-c)	70		F	1.037
	Vr(c-b)	100		Y	0.448
ANALYSIS			AM PEAK PM PEAK		
TRAFFIC FLOWS (pcu/hr)	a(c-a)		975	950	
	a(c-b)		30	10	
	a(a-b)		15	85	
	a(a-c)		1210	1210	
	a(b-a)		40	35	
	a(b-c)		20	20	
	f		0	0	
CAPACITIES (pcu/hr)	Q(b-ac)		335	342	
	Q(c-b)		566	554	
RFC's	c-b		0.05	0.02	
	b-ac		0.18	0.16	
RFC			0.18	0.16	
<p>Where VI and Vr are visibility distances to the left or right of the respective streams</p> $D = (1+0.094(w(b-a)-3.65)) / (1+0.0009(Vr(b-a)-120)) / (1+0.0006(VI(b-a)-150))$ $E = (1+0.094(w(b-c)-3.65)) / (1+0.0009(Vr(b-c)-120))$ $F = (1+0.094(w(c-b)-3.65)) / (1+0.0009(Vr(c-b)-120))$ $Y = 1-0.0345W$ <p>f = proportion of minor traffic turning left</p> $Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$ Capacity of combined streams					
All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1					

Simplified Priority Junction Capacity Calculation



Job Title: TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital		
Junction: J4 (Ping Ha Road/ Shek Po Road)	Designed by: TAT	
Scheme:	Checked by: CYH	
Design Year: 2035 Reference Flow (Without Future Road Network)	Job No.: CHK50749010	Date: Feb-24
Arm A: Ping Ha Road (WB)		
Arm B: Shek Po Road		
Arm C: Ping Ha Road (EB)		



GEOMETRY					
Major Road Width (m)	W	15.00	Lane widths (m)	w(b-a)	3.80
Central Reserve Width (m)	Wcr	0.00		w(b-c)	3.80
Blockage of major road right turn	Y/N?	N		w(c-b)	4.25
Combined stream on minor arm	Y/N?	Y			
Visibility Distances (m)	Vr(b-a)	30	Calculated Parameters	D	0.865
	VI(b-a)	30		E	0.947
	Vr(b-c)	46		F	1.037
	Vr(c-b)	100		Y	0.483
ANALYSIS			AM PEAK PM PEAK		
TRAFFIC FLOWS (pcu/hr)	q(c-a)		960	955	
	q(c-b)		45	35	
	q(a-b)		65	45	
	q(a-c)		1175	1230	
	q(b-a)		40	80	
	q(b-c)		55	65	
	f		1	0	
CAPACITIES (pcu/hr)	Q(b-ac)		360	325	
	Q(c-b)		547	541	
RFC's	c-b		0.08	0.06	
	b-ac		0.26	0.45	
RFC			0.26	0.45	
<p>Where VI and Vr are visibility distances to the left or right of the respective streams</p> $D = (1+0.094(w(b-a)-3.65)) / (1+0.0009(Vr(b-a)-120)) / (1+0.0006(VI(b-a)-150))$ $E = (1+0.094(w(b-c)-3.65)) / (1+0.0009(Vr(b-c)-120))$ $F = (1+0.094(w(c-b)-3.65)) / (1+0.0009(Vr(c-b)-120))$ $Y = 1-0.0345W$ <p>f = proportion of minor traffic turning left</p> $Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$ Capacity of combined streams					
All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1					

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50749010**

MVA HONG KONG LIMITED

Junction: J5-Ping Ha Road/ Tin Ying Road/Hung Tin Road

Design Year: 2035

Description: 2035 Reference Flow (Without Future Road Network)

Designed By: TAT

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ping Ha Road	↖ ↗ ↕	B B B	1 1 1	3.500	20 25					1460 1590 2105	1460 1590 2105	53 57 190	0.036 0.036 0.090		41 44 208	0.028 0.028 0.099	
WB	↖	A	1,3,4	3.500		15				2105 1915	2105 1915	190 680	0.090 0.355	0.355	207 705	0.098 0.368	0.368
Hung Tin Road	↖ ↗ ↕	C D D	2 3,4 3,4	3.300 3.500 3.500	10	25 20				1690 1855 1960	1690 1855 1960	280 71 74	0.166 0.038 0.038		210 41 44	0.124 0.022 0.022	
Ping Ha Road	↖ ↗ ↕	E E E	2 2 2	3.500 3.500 3.500		50 45		0%	0%	1965 2105 2035	1965 2105 2035	210 225 80	0.107 0.107 0.039		174 186 165	0.089 0.088 0.081	
EB	↖	E	2	3.300	10					1690	1690	510	0.302	0.302	530	0.314	0.314
Tin Ying Road	↖ ↗ ↕	F F G	1 1 4	3.500 3.500 3.500	20 25	15				1460 1590 1915	1460 1590 1915	388 422 590	0.266 0.265 0.308		318 347 660	0.218 0.218 0.345	
Pedestrian Crossing		Hp Ip Jp Kp Lp Mp Np Op	1,4 1,2 2,3,4 2 1,3,4 1 1,2,3 1,3,4	MIN GREEN + FLASH = MIN GREEN + FLASH = MIN GREEN + FLASH = MIN GREEN + FLASH = MIN GREEN + FLASH = MIN GREEN + FLASH = MIN GREEN + FLASH = MIN GREEN + FLASH =	5 5 5 5 5 5 5 5	+ + + + + + + +	8 8 9 8 9 8 5 5	= = = = = = = =	13 13 14 13 14 13 10 10								

Notes:	Flow: (pcu/hr)	Group	G,B,C	A,E	Group	G,B,C	A,E
		y	0.564	0.657	y	0.568	0.682
		L (sec)	13	12	L (sec)	13	12
		C (sec)	120	120	C (sec)	120	120
		y pract.	0.803	0.810	y pract.	0.803	0.810
		R.C. (%)	42%	23%	R.C. (%)	41%	19%

Stage / Phase Diagrams				
1.	2.	3.	4.	5.

I/G=		I/G= 5		I/G= 9		I/G=		I/G=	
I/G=		I/G= 5		I/G= 9		I/G=		I/G=	
Date: FEB, 2024					Junction: J5				
					J5-Ping Ha Road/ Tin Ying Road/Hung Tin Road				

Junction: J1- Tin Ha Road/Ping Ha Road

Design Year: 2035

Description: 2035 Reference Flow (With Future Road Network)

Designed By: TAT

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ping Ha Road WB	↑	B	2	3.750	20			9%	7%	1975	1980	532	0.269	0.269	544	0.275	
	↕	B	2	3.750						2130	2130	573	0.269		586	0.275	0.275
Ping Ha Road EB	↑	A	1	3.200						1935	1935	486	0.251	0.251	493	0.255	0.255
	↗	A	1	3.200	30			6%	7%	2070	2070	519	0.251		527	0.255	
Tin Ha Road	↗	C	3	3.100		20				1920	1920	35	0.018		35	0.018	
	↘	C	3	3.100	20					1790	1790	20	0.011		30	0.017	
Pedestrian Crossing		Dp	1,2	MIN GREEN + FLASH =		5	+	8	=	13							
		Ep	3	MIN GREEN + FLASH =		5	+	11	=	16							
		Fp	1,3	MIN GREEN + FLASH =		5	+	9	=	14							
		Gp	2	MIN GREEN + FLASH =		5	+	5	=	10							
		Hp	2,3	MIN GREEN + FLASH =		5	+	7	=	12							
		Ip	1	MIN GREEN + FLASH =		5	+	9	=	14							

Notes:

Flow: (pcu/hr)

975(985)
30(35)
20(30)
35(35)
1055(1090)
50(40)

Group	C,lp,B	C,A,B	Group	C,lp,B	C,A,B
y	0.288	0.521	y	0.275	0.530
L (sec)	28	28	L (sec)	34	28
C (sec)	136	136	C (sec)	120	120
y pract.	0.715	0.715	y pract.	0.645	0.690
R.C. (%)	149%	37%	R.C. (%)	134%	30%

Stage / Phase Diagrams

1.

2.

3.

5.

I/G= 7

I/G= 7

I/G= 8

I/G= 8

I/G= 10

I/G= 10

5

5

I/G=

I/G=

I/G=

I/G=

Date: SEP, 2024

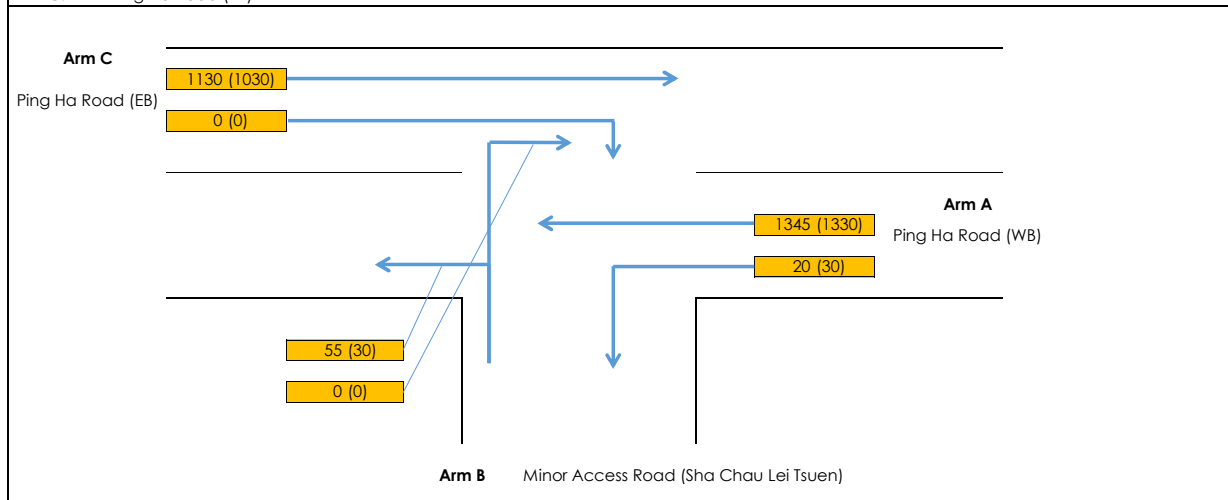
Junction: J1- Tin Ha Road/Ping Ha Road

J1

Simplified Priority Junction Capacity Calculation



Job Title: TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital		
Junction: J2 (Ping Ha Road/ Minor Access Road)	Designed by: TAT	
Scheme:	Checked by: CYH	
Design Year: 2035 Reference Flow (With Future Road Network)	Job No.: CHK50749010	Date: Feb-24
Arm A: Ping Ha Road (WB)		
Arm B: Minor Access Road (Sha Chau Lei Tsuen)		
Arm C: Ping Ha Road (EB)		



GEOMETRY					
Major Road Width (m)	W	16.50	Lane widths (m)	w(b-a)	4.00
Central Reserve Width (m)	Wcr	0.00		w(b-c)	4.00
Blockage of major road right turn	Y/N?	N		w(c-b)	4.20
Combined stream on minor arm	Y/N?	Y			
Visibility Distances (m)	Vr(b-a)	40	Calculated Parameters	D	0.895
	VI(b-a)	40		E	0.986
	Vr(b-c)	70		F	1.033
	Vr(c-b)	100		Y	0.431

ANALYSIS		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	a(c-a) a(c-b) q(a-b) q(a-c) a(b-a) q(b-c) f	1130 0 20 1345 0 55 1	1030 0 30 1330 0 30 1
CAPACITIES (pcu/hr)	Q(b-ac) Q(c-b)	526 548	527 549
RFC's	c-b b-ac	0.00 0.10	0.00 0.06
RFC		0.10	0.06

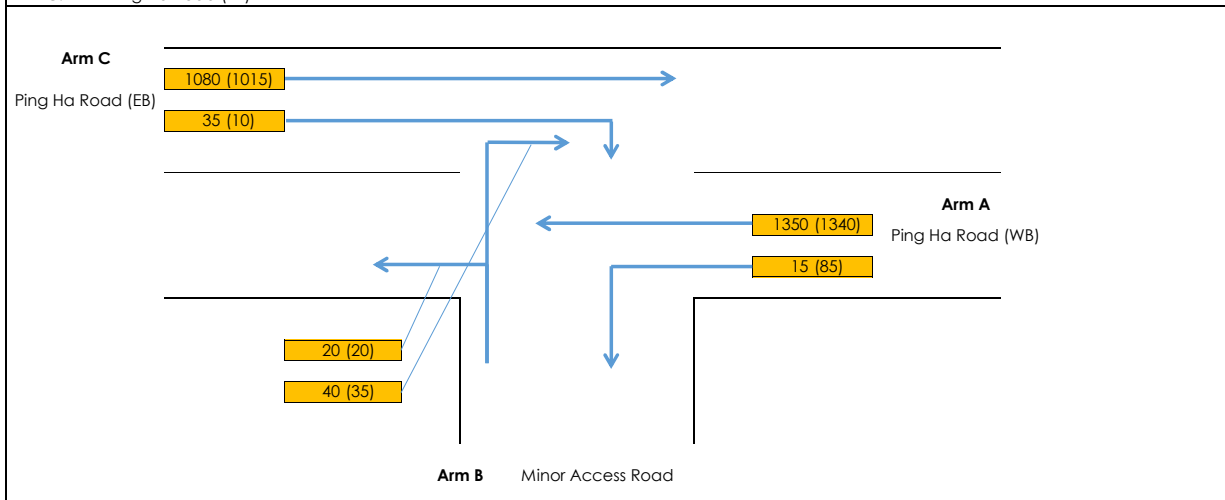
Where VI and Vr are visibility distances to the left or right of the respective streams
 $D = (1 + 0.094(w(b-a) - 3.65)) / (1 + 0.0009(Vr(b-a) - 120)) / (1 + 0.0006(VI(b-a) - 150))$
 $E = (1 + 0.094(w(b-c) - 3.65)) / (1 + 0.0009(Vr(b-c) - 120))$
 $F = (1 + 0.094(w(c-b) - 3.65)) / (1 + 0.0009(Vr(c-b) - 120))$
 $Y = 1 - 0.0345W$
 f = proportion of minor traffic turning left
 $Q(b-ac) = Q(b-c) * Q(b-a) / ((1-f) * Q(b-c) + f * Q(b-a))$ Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1

Simplified Priority Junction Capacity Calculation



Job Title: TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital		
Junction: J3 (Ping Ha Road/ Sah Chau Lei Road)	Designed by: TAT	
Scheme:	Checked by: CYH	
Design Year: 2035 Reference Flow (With Future Road Network)	Job No.: CHK50749010	Date: Feb-24
Arm A: Ping Ha Road (WB)		
Arm B: Minor Access Road		
Arm C: Ping Ha Road (EB)		

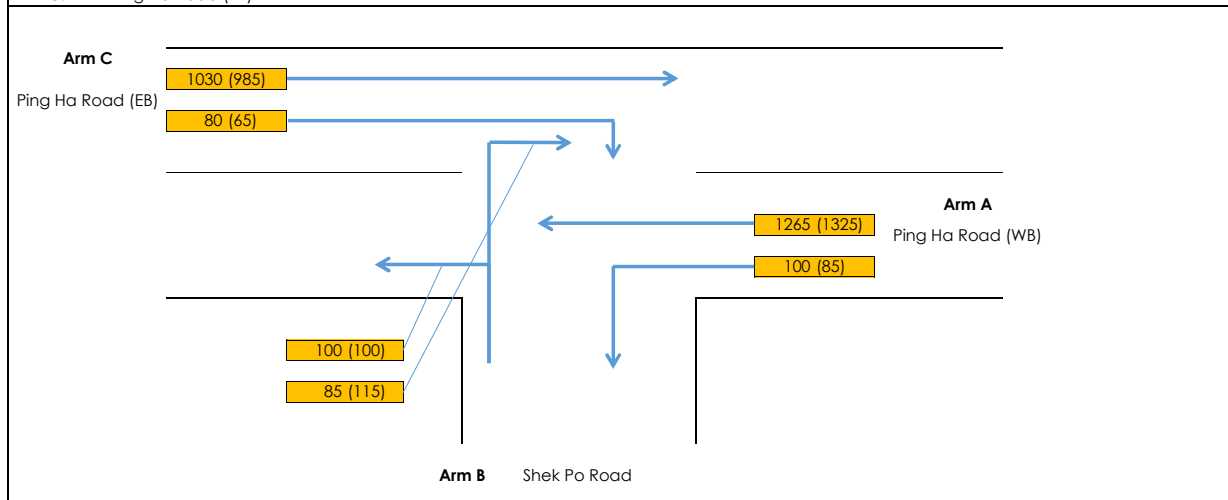


GEOMETRY					
Major Road Width (m)	W	16.00	Lane widths (m)	w(b-a)	3.80
Central Reserve Width (m)	Wcr	0.00		w(b-c)	3.80
Blockage of major road right turn	Y/N?	N		w(c-b)	4.25
Combined stream on minor arm	Y/N?	Y			
Visibility Distances (m)	Vr(b-a)	40	Calculated Parameters	D	0.879
	VI(b-a)	40		E	0.968
	Vr(b-c)	70		F	1.037
	Vr(c-b)	100		Y	0.448
ANALYSIS			AM PEAK	PM PEAK	
TRAFFIC FLOWS (pcu/hr)	q(c-a)		1080	1015	
	q(c-b)		35	10	
	q(a-b)		15	85	
	q(a-c)		1350	1340	
	q(b-a)		40	35	
	q(b-c)		20	20	
	f		0	0	
CAPACITIES (pcu/hr)	Q(b-ac)		303	316	
	Q(c-b)		542	532	
RFC's	c-b		0.06	0.02	
	b-ac		0.20	0.17	
RFC			0.20	0.17	
<p>Where VI and Vr are visibility distances to the left or right of the respective streams</p> $D = (1 + 0.094(w(b-a) - 3.65)) / (1 + 0.0009(Vr(b-a) - 120)) / (1 + 0.0006(VI(b-a) - 150))$ $E = (1 + 0.094(w(b-c) - 3.65)) / (1 + 0.0009(Vr(b-c) - 120))$ $F = (1 + 0.094(w(c-b) - 3.65)) / (1 + 0.0009(Vr(c-b) - 120))$ $Y = 1 - 0.0345W$ <p>f = proportion of minor traffic turning left</p> $Q(b-ac) = Q(b-c) * Q(b-a) / ((1-f) * Q(b-c) + f * Q(b-a))$ <p>Capacity of combined streams</p> <p>All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1</p>					

Simplified Priority Junction Capacity Calculation



Job Title: TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital		
Junction: J4 (Ping Ha Road/ Shek Po Road)	Designed by: TAT	
Scheme:	Checked by: CYH	
Design Year: 2035 Reference Flow (With Future Road Network)	Job No.: CHK50749010	Date: Feb-24
Arm A: Ping Ha Road (WB)		
Arm B: Shek Po Road		
Arm C: Ping Ha Road (EB)		



GEOMETRY					
Major Road Width (m)	W	15.00	Lane widths (m)	w(b-a)	3.80
Central Reserve Width (m)	Wcr	0.00		w(b-c)	3.80
Blockage of major road right turn	Y/N?	N		w(c-b)	4.25
Combined stream on minor arm	Y/N?	Y			
Visibility Distances (m)	Vr(b-a)	30	Calculated Parameters	D	0.865
	VI(b-a)	30		E	0.947
	Vr(b-c)	46		F	1.037
	Vr(c-b)	100		Y	0.483
ANALYSIS			AM PEAK		PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)		1030	985	
	q(c-b)		80	65	
	q(a-b)		100	85	
	q(a-c)		1265	1325	
	q(b-a)		85	115	
	q(b-c)		100	100	
	f		1	0	
CAPACITIES (pcu/hr)	Q(b-ac)		321	301	
	Q(c-b)		524	516	
RFC's	c-b		0.15	0.13	
	b-ac		0.58	0.71	
RFC			0.58	0.71	
<p>Where VI and Vr are visibility distances to the left or right of the respective streams</p> $D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$ $E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$ $F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$ $Y = 1-0.0345W$ <p>f = proportion of minor traffic turning left</p> $Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$ <p>Capacity of combined streams</p> <p>All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1</p>					

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50749010**

MVA HONG KONG LIMITED

Junction: J5-Ping Ha Road/ Tin Ying Road/Hung Tin Road

Design Year: 2035

Description: 2035 Reference Flow (With Future Road Network)

Designed By: TAT

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ping Ha Road	↖	B	1	3.500	20					1460	1460	53	0.036		41	0.028	
	↗	B	1	3.500	25					1590	1590	57	0.036		44	0.028	
	↑	B	1	3.500						2105	2105	215	0.102		235	0.112	
	↑	1	1	3.500						2105	2105	215	0.102		235	0.112	
WB	↗	A	1,3,4	3.500		15				1915	1915	680	0.355	0.355	705	0.368	0.368
Hung Tin Road	↖	C	2	3.300	10					1690	1690	295	0.175		230	0.136	
	↗	D	3,4	3.500		25				1855	1855	71	0.038		39	0.021	
	↗	D	3,4	3.500		20				1960	1960	74	0.038		41	0.021	
Ping Ha Road	↑	E	2	3.500						1965	1965	234	0.119		188	0.096	
	↖	E	2	3.500		50		0%	0%	2105	2105	251	0.119		202	0.096	
	↗	E	2	3.500		45				2035	2035	90	0.044		175	0.086	
	↖	E	2	3.300	10					1690	1690	560	0.331	0.331	560	0.331	0.331
Tin Ying Road	↖	F	1	3.500	20					1460	1460	388	0.266		318	0.218	
	↗	F	1	3.500	25					1590	1590	422	0.265		347	0.218	
	↗	G	4	3.500		15				1915	1915	645	0.337		715	0.373	
Pedestrian Crossing	Hp	1,4	MIN GREEN + FLASH =				5	+	8	=	13						
	Ip	1,2	MIN GREEN + FLASH =				5	+	8	=	13						
	Jp	2,3,4	MIN GREEN + FLASH =				5	+	9	=	14						
	Kp	2	MIN GREEN + FLASH =				5	+	8	=	13						
	Lp	1,3,4	MIN GREEN + FLASH =				5	+	9	=	14						
	Mp	1	MIN GREEN + FLASH =				5	+	8	=	13						
	Np	1,2,3	MIN GREEN + FLASH =				5	+	5	=	10						
	Op	1,3,4	MIN GREEN + FLASH =				5	+	5	=	10						

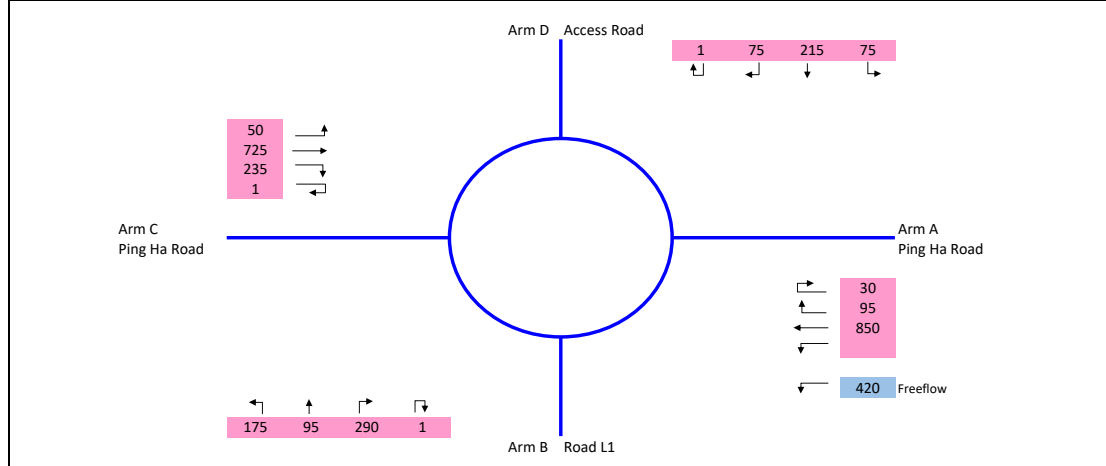
Notes:	Flow: (pcu/hr)	Group	G,B,C	A,E	Group	G,B,C	A,E
		y	0.614	0.686	y	0.621	0.700
		L (sec)	13	12	L (sec)	13	12
		C (sec)	120	120	C (sec)	120	120
		y pract.	0.803	0.810	y pract.	0.803	0.810
		R.C. (%)	31%	18%	R.C. (%)	29%	16%

Stage / Phase Diagrams				
1.	2.	3.	4.	5.

I/G=		I/G= 5		I/G= 9		I/G=		I/G=	
I/G=		I/G= 5		I/G= 9		I/G=		I/G=	
Date: FEB, 2024					Junction: J5				
					J5-Ping Ha Road/ Tin Ying Road/Hung Tin Road				

Roundabout Capacity Calculation

Job Title: TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital			
Junction: J6- Ping Ha Road New Planned Roundabout			Designed by: TAT
Scheme:			Checked by: CYH
Design Year:	2035	Reference Flow-With Future Road Network (AM Peak)	Date: 16 Feb 2024
Arm A	Ping Ha Road		
Arm B	Road L1		
Arm C	Ping Ha Road		
Arm D	Access Road		
Arm E			



ENTRY ARM				A	B	C	D
INPUT PARAMETERS							
V	Approach Half Width (m)			7.00	4.00	7.00	5.00
E	Entry Width (m)			12.00	6.00	7.00	5.00
L	Effective Length of Flare (m)			10.00	10.00	0.00	0.00
R	Entry Radius (m)			20.00	20.00	20.00	20.00
D	Inscribed Circle Diameter (m)			50.00	50.00	50.00	50.00
A	Entry Angle (degree)			30.00	30.00	35.00	25.00
Q	Entry Flow (pcu/hour)			975	561	1,011	366
Qc	Circulating Flow Across Entry (pcu/hour)			528	1,052	512	1,282
OUTPUT PARAMETERS							
S	$= 1.6 (E - V) / L$ Sharpness of flare			0.80	0.32	0.00	0.00
K	$= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$			1.00	1.00	0.98	1.02
X2	$= V + ((E-V) / (1+2S))$			8.92	5.22	7.00	5.00
M	$= EXP ((D-60) / 10)$			0.37	0.37	0.37	0.37
F	$= 303 * X2$			2704	1582	2121	1515
Td	$= 1 + (0.5 / (1+M))$			1.37	1.37	1.37	1.37
Fc	$= 0.21 * Td (1 + 0.2 * X2)$			0.80	0.59	0.69	0.57
Qe	$= K (F - Fc * Qc)$			2282	965	1738	793
DFC $= Q / Qe$				0.43	0.58	0.58	0.46
Design Flow / Capacity				0.58			
Total Entry Flows				2,913			

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

Job Title: TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital			Designed by: TAT		
Junction: J6- Ping Ha Road New Planned Roundabout			Checked by: CYH		
Scheme:			Date: 16 Feb 2024		
Design Year:	2035	Reference Flow-With Future Road Network (PM Peak)	Job No.:	CHK50749010	
Arm A Ping Ha Road					
Arm B Road L1					
Arm C Ping Ha Road					
Arm D Access Road					
Arm E					
<div><div><div>45 685 290 1</div><div><div><div></div><div></div><div></div><div></div></div></div></div><div>Arm C Ping Ha Road</div><div><div>240952551</div><div><div><div></div><div></div><div></div><div></div></div></div></div><div>Arm B Road L1</div><div><div>14011040</div><div><div><div></div><div></div><div></div><div></div></div></div></div><div>Arm D Access Road</div><div><div>2095855</div><div><div><div></div><div></div><div></div><div></div></div></div></div><div>Arm A Ping Ha Road</div><div><div>420</div><div>Freeflow</div></div></div>					
ENTRY ARM					
INPUT PARAMETERS		A	B	C	D
V	Approach Half Width (m)	7.00	4.00	7.00	5.00
E	Entry Width (m)	12.00	6.00	7.00	5.00
L	Effective Length of Flare (m)	10.00	10.00	0.00	0.00
R	Entry Radius (m)	20.00	20.00	20.00	20.00
D	Inscribed Circle Diameter (m)	50.00	50.00	50.00	50.00
A	Entry Angle (degree)	30.00	30.00	35.00	25.00
Q	Entry Flow (pcu/hour)	970	591	1,021	191
Qc	Circulating Flow Across Entry (pcu/hour)	443	1,012	467	1,252
OUTPUT PARAMETERS					
S	= 1.6 (E - V) / L Sharpness of flare	0.80	0.32	0.00	0.00
K	= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)	1.00	1.00	0.98	1.02
X2	= V + ((E-V) / (1+2S))	8.92	5.22	7.00	5.00
M	= EXP ((D-60) /10)	0.37	0.37	0.37	0.37
F	= 303 * X2	2704	1582	2121	1515
Td	= 1 + (0.5 / (1+M))	1.37	1.37	1.37	1.37
Fc	= 0.21*Td (1 + 0.2*X2)	0.80	0.59	0.69	0.57
Qe	= K (F - Fc*Qc)	2350	988	1768	811
DFC = Q / Qe					
		Design Flow / Capacity	0.60		
		Total Entry Flows	2,773		
All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9					

Junction: J1- Tin Ha Road/Ping Ha Road

Design Year: 2035

Description: 2035 Design Flow

Designed By: TAT

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ping Ha Road WB	↑	B	2	3.750	20			10%	10%	1975	1975	536	0.271	0.272	553	0.280	0.280
	↕	B	2	3.750														2130	2130	579	0.272	597	0.280
Ping Ha Road EB	↑	A	1	3.200				6%	7%	1935	1935	486	0.251	0.251	493	0.255	0.255
	↗	A	1	3.200		30												2070	2070	519	0.251	527	0.255
Tin Ha Road	↗	C	3	3.100		20				1920	1920	35	0.018		35	0.018	
	↘	C	3	3.100	20				1790									1790	20	0.011	30	0.017
Pedestrian Crossing		Dp	1,2	MIN GREEN + FLASH =		5	+	8	=	13							
		Ep	3	MIN GREEN + FLASH =		5	+	11	=	16							
		Fp	1,3	MIN GREEN + FLASH =		5	+	9	=	14							
		Gp	2	MIN GREEN + FLASH =		5	+	5	=	10							
		Hp	2,3	MIN GREEN + FLASH =		5	+	7	=	12							
		Ip	1	MIN GREEN + FLASH =		5	+	9	=	14							

Notes:

Flow: (pcu/hr)

↑ N

Group	C, Ip, B	C, A, B	Group	C, Ip, B	C, A, B
y	0.290	0.523	y	0.280	0.535
L (sec)	28	28	L (sec)	34	28
C (sec)	136	136	C (sec)	120	120
y pract.	0.715	0.715	y pract.	0.645	0.690
R.C. (%)	146%	37%	R.C. (%)	130%	29%

Stage / Phase Diagrams

1.

2.

3.

5.

I/G= 7

I/G= 7

I/G= 8

I/G= 8

I/G= 10

I/G= 10

5

5

I/G=

I/G=

I/G=

I/G=

Date:

SEP, 2024

Junction:

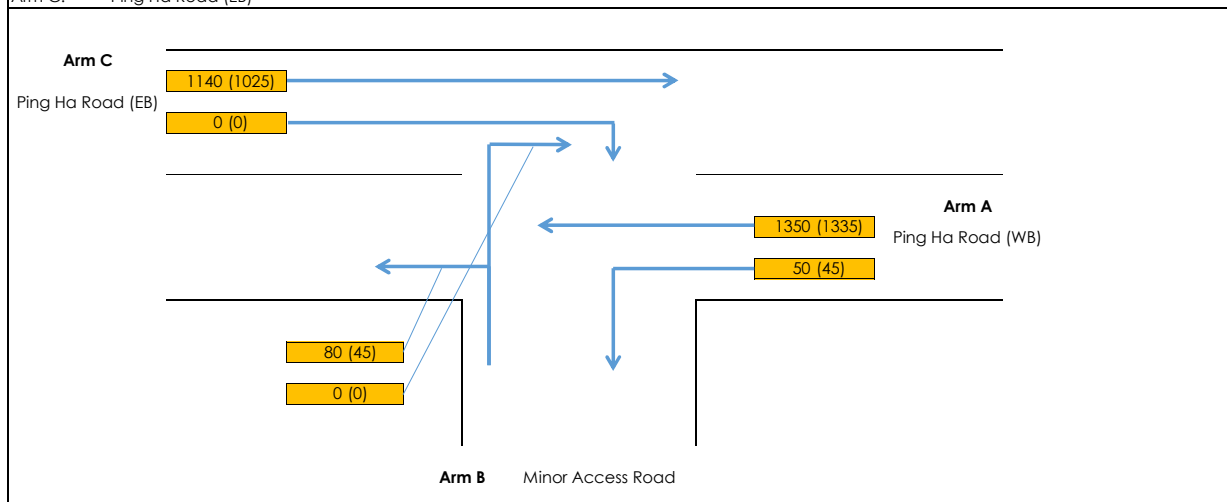
J1- Tin Ha Road/Ping Ha Road

J1

Simplified Priority Junction Capacity Calculation



Job Title: TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital			
Junction: J2 (Ping Ha Road/ Minor Access Road)		Designed by: TAT	
Scheme:		Checked by: CYH	
Design Year: 2035	DesignFlow	Job No.: CHK50749010	Date: Feb-24
Arm A: Ping Ha Road (WB)			
Arm B: Minor Access Road			
Arm C: Ping Ha Road (EB)			

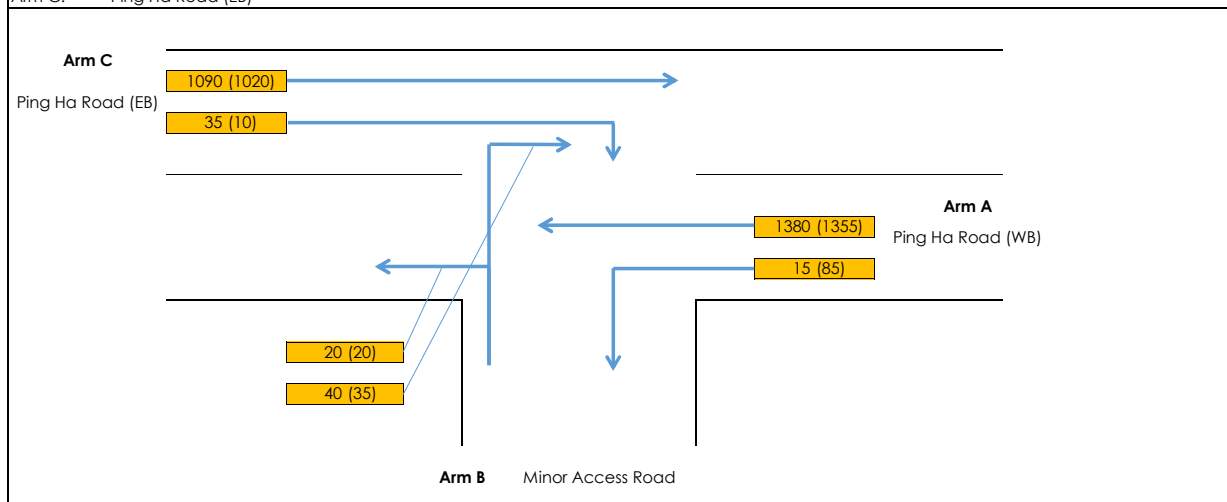


GEOMETRY					
Major Road Width (m)	W	16.50	Lane widths (m)	w(b-a)	4.00
Central Reserve Width (m)	Wcr	0.00		w(b-c)	4.00
Blockage of major road right turn	Y/N?	N		w(c-b)	4.20
Combined stream on minor arm	Y/N?	Y			
Visibility Distances (m)	Vr(b-a)	40	Calculated Parameters	D	0.895
	VI(b-a)	40		E	0.986
	Vr(b-c)	70		F	1.033
	Vr(c-b)	100		Y	0.431
ANALYSIS			AM PEAK	PM PEAK	
TRAFFIC FLOWS (pcu/hr)	a(c-a)		1140	1025	
	a(c-b)		0	0	
	a(a-b)		50	45	
	a(a-c)		1350	1335	
	a(b-a)		0	0	
	a(b-c)		80	45	
	f		1	1	
CAPACITIES (pcu/hr)	Q(b-ac)		523	526	
	Q(c-b)		543	546	
RFC's	c-b		0.00	0.00	
	b-ac		0.15	0.09	
RFC			0.15	0.09	
<p>Where VI and Vr are visibility distances to the left or right of the respective streams</p> $D = (1 + 0.094(w(b-a) - 3.65)) / (1 + 0.0009(Vr(b-a) - 120)) / (1 + 0.0006(VI(b-a) - 150))$ $E = (1 + 0.094(w(b-c) - 3.65)) / (1 + 0.0009(Vr(b-c) - 120))$ $F = (1 + 0.094(w(c-b) - 3.65)) / (1 + 0.0009(Vr(c-b) - 120))$ $Y = 1 - 0.0345W$ <p>f = proportion of minor traffic turning left</p> $Q(b-ac) = Q(b-c) * Q(b-a) / ((1-f) * Q(b-c) + f * Q(b-a))$ <p>Capacity of combined streams</p> <p>All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1</p>					

Simplified Priority Junction Capacity Calculation



Job Title: TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital			
Junction: J3 (Ping Ha Road/ Sah Chau Lei Road)		Designed by: TAT	
Scheme:		Checked by: CYH	
Design Year: 2035	DesignFlow	Job No.: CHK50749010	Date: Feb-24
Arm A: Ping Ha Road (WB)			
Arm B: Minor Access Road			
Arm C: Ping Ha Road (EB)			

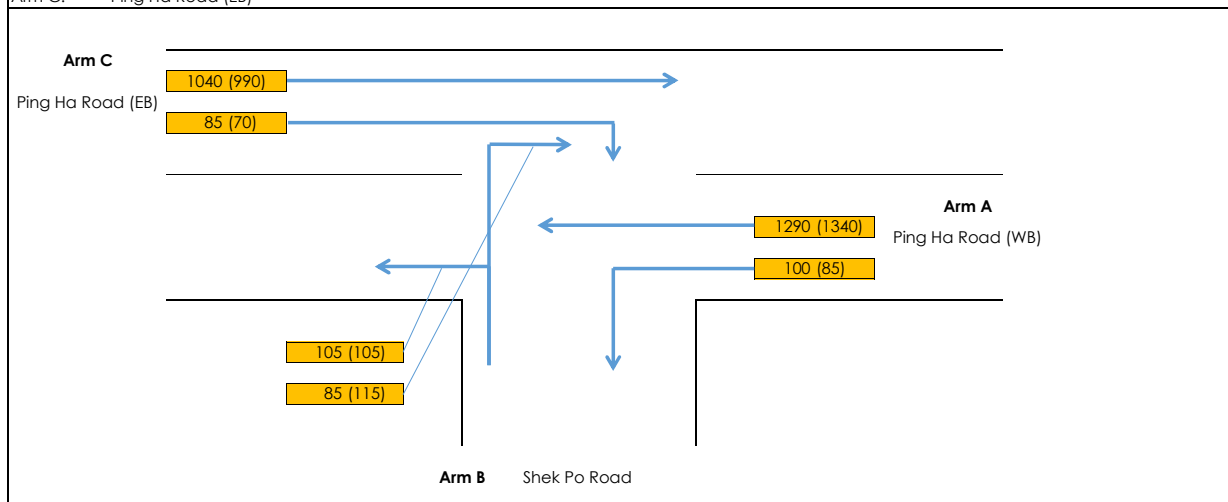


GEOMETRY					
Major Road Width (m)	W	16.00	Lane widths (m)	w(b-a)	3.80
Central Reserve Width (m)	Wcr	0.00		w(b-c)	3.80
Blockage of major road right turn	Y/N?	N		w(c-b)	4.25
Combined stream on minor arm	Y/N?	Y			
Visibility Distances (m)	Vr(b-a)	40	Calculated Parameters	D	0.879
	VI(b-a)	40		E	0.968
	Vr(b-c)	70		F	1.037
	Vr(c-b)	100		Y	0.448
ANALYSIS			AM PEAK PM PEAK		
TRAFFIC FLOWS (pcu/hr)	q(c-a)		1090	1020	
	q(c-b)		35	10	
	q(a-b)		15	85	
	q(a-c)		1380	1355	
	q(b-a)		40	35	
	q(b-c)		20	20	
	f		0	0	
CAPACITIES (pcu/hr)	Q(b-ac)		297	313	
	Q(c-b)		537	529	
RFC's	c-b		0.07	0.02	
	b-ac		0.20	0.18	
RFC			0.20	0.18	
Where VI and Vr are visibility distances to the left or right of the respective streams $D = (1+0.094(w(b-a)-3.65)) / ((1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150)))$ $E = (1+0.094(w(b-c)-3.65)) / ((1+0.0009(Vr(b-c)-120)))$ $F = (1+0.094(w(c-b)-3.65)) / ((1+0.0009(Vr(c-b)-120)))$ $Y = 1-0.0345W$ f = proportion of minor traffic turning left $Q(b-ac) = Q(b-c)*Q(b-a)/((1-f)*Q(b-c)+f*Q(b-a))$ Capacity of combined streams					
All the above formulas are in accordance to I.P.D.M. Volume 2 Chapter 4 Appendix 1					

Simplified Priority Junction Capacity Calculation



Job Title: TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital			
Junction: J4 (Ping Ha Road/ Shek Po Road)		Designed by: TAT	
Scheme:		Checked by: CYH	
Design Year: 2035	DesignFlow	Job No.: CHK50749010	Date: Feb-24
Arm A: Ping Ha Road (WB)			
Arm B: Shek Po Road			
Arm C: Ping Ha Road (EB)			



GEOMETRY					
Major Road Width (m)	W	15.00	Lane widths (m)	w(b-a)	3.80
Central Reserve Width (m)	Wcr	0.00		w(b-c)	3.80
Blockage of major road right turn	Y/N?	N		w(c-b)	4.25
Combined stream on minor arm	Y/N?	Y			
Visibility Distances (m)	Vr(b-a)	30	Calculated Parameters	D	0.865
	VI(b-a)	30		E	0.947
	Vr(b-c)	46		F	1.037
	Vr(c-b)	100		Y	0.483
ANALYSIS			AM PEAK PM PEAK		
TRAFFIC FLOWS (pcu/hr)	q(c-a)		1040	990	
	q(c-b)		85	70	
	q(a-b)		100	85	
	q(a-c)		1290	1340	
	q(b-a)		85	115	
	q(b-c)		105	105	
	f		1	0	
CAPACITIES (pcu/hr)	Q(b-ac)		317	300	
	Q(c-b)		520	513	
RFC's	c-b		0.16	0.14	
	b-ac		0.60	0.73	
RFC			0.60 0.73		
<p>Where VI and Vr are visibility distances to the left or right of the respective streams</p> $D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$ $E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$ $F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$ $Y = 1-0.0345W$ <p>f = proportion of minor traffic turning left</p> $Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$ Capacity of combined streams					
All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1					

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50749010**

MVA HONG KONG LIMITED

Junction: J5-Ping Ha Road/ Tin Ying Road/Hung Tin Road

Design Year: 2035

Description: 2035 Design Flow

Designed By: TAT

Checked By: CYH

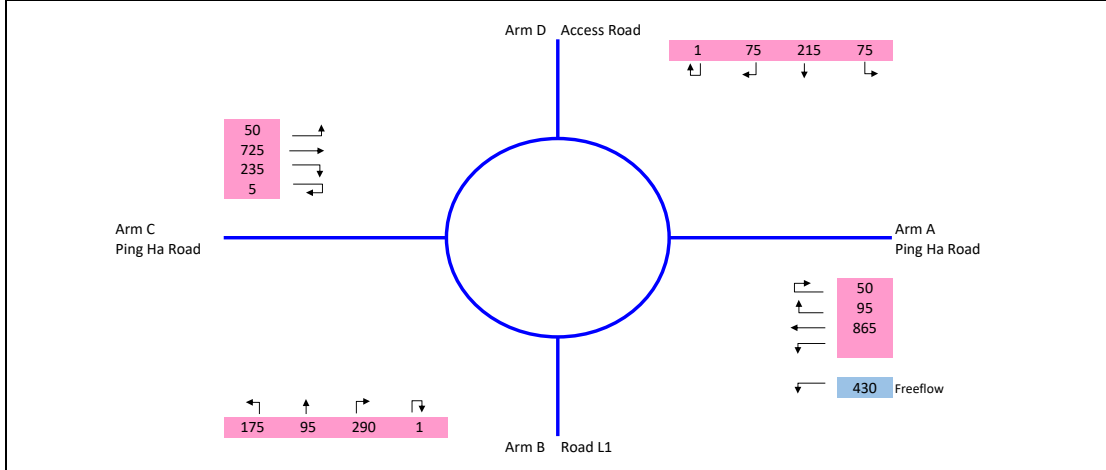
Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ping Ha Road	↖	B	1	3.500	20					1460	1460	53	0.036		41	0.028	
	↗	B	1	3.500	25					1590	1590	57	0.036		44	0.028	
	↑	B	1	3.500						2105	2105	218	0.104		238	0.113	
	↑	1	1	3.500						2105	2105	217	0.103		237	0.113	
WB	↗	A	1,3,4	3.500		15				1915	1915	680	0.355	0.355	705	0.368	0.368
Hung Tin Road	↖	C	2	3.300	10					1690	1690	310	0.183		240	0.142	
	↗	D	3,4	3.500		25				1855	1855	71	0.038		39	0.021	
	↗	D	3,4	3.500		20				1960	1960	74	0.038		41	0.021	
Ping Ha Road	↑	E	2	3.500						1965	1965	237	0.121		191	0.097	
	↖	E	2	3.500		50		0%	0%	2105	2105	253	0.120		204	0.097	
	↗	E	2	3.500		45				2035	2035	95	0.047		180	0.088	
	↖	E	2	3.300	10					1690	1690	565	0.334	0.334	565	0.334	0.334
Tin Ying Road	↖	F	1	3.500	20					1460	1460	388	0.266		318	0.218	
	↗	F	1	3.500	25					1590	1590	422	0.265		347	0.218	
	↗	G	4	3.500		15				1915	1915	655	0.342		720	0.376	
Pedestrian Crossing		Hp	1,4	MIN GREEN + FLASH =		5	+	8	=	13							
		Ip	1,2	MIN GREEN + FLASH =		5	+	8	=	13							
		Jp	2,3,4	MIN GREEN + FLASH =		5	+	9	=	14							
		Kp	2	MIN GREEN + FLASH =		5	+	8	=	13							
		Lp	1,3,4	MIN GREEN + FLASH =		5	+	9	=	14							
		Mp	1	MIN GREEN + FLASH =		5	+	8	=	13							
		Np	1,2,3	MIN GREEN + FLASH =		5	+	5	=	10							
		Op	1,3,4	MIN GREEN + FLASH =		5	+	5	=	10							

Notes:	Flow: (pcu/hr)	Group	G,B,C	A,E	Group	G,B,C	A,E
		y			y		
		L (sec)	13	12	L (sec)	13	12
		C (sec)	120	120	C (sec)	120	120
		y pract.	0.803	0.810	y pract.	0.803	0.810
		R.C. (%)	28%	17%	R.C. (%)	27%	15%

Stage / Phase Diagrams							
1.	2.	3.	4.	5.			
					I/G=	I/G=	I/G=
					I/G=	I/G=	I/G=

Roundabout Capacity Calculation

Job Title:	TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital		
Junction:	J6- Ping Ha Road New Planned Roundabout	Designed by:	TAT
Scheme:		Checked by:	CYH
Design Year:	2035 Design Flow (AM Peak)	Job No.:	CHK50749010
Design Year:	2035 Design Flow (AM Peak)	Date:	16 Feb 2024
Arm A	Ping Ha Road		
Arm B	Road L1		
Arm C	Ping Ha Road		
Arm D	Access Road		
Arm E			

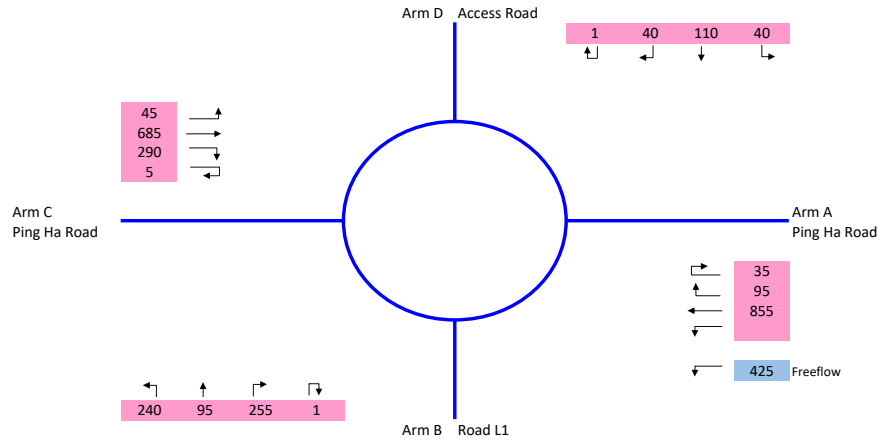


ENTRY ARM		A	B	C	D	
INPUT PARAMETERS						
V	Approach Half Width (m)	7.00	4.00	7.00	5.00	
E	Entry Width (m)	12.00	6.00	7.00	5.00	
L	Effective Length of Flare (m)	10.00	10.00	0.00	0.00	
R	Entry Radius (m)	20.00	20.00	20.00	20.00	
D	Inscribed Circle Diameter (m)	50.00	50.00	50.00	50.00	
A	Entry Angle (degree)	30.00	30.00	35.00	25.00	
Q	Entry Flow (pcu/hour)	1,010	561	1,015	366	
Qc	Circulating Flow Across Entry (pcu/hour)	532	1,091	532	1,306	
OUTPUT PARAMETERS						
S	= $1.6 (E - V) / L$ Sharpness of flare	0.80	0.32	0.00	0.00	
K	= $1 - 0.00347 (A - 30) - 0.978 (1/R - 0.05)$	1.00	1.00	0.98	1.02	
X2	= $V + ((E - V) / (1 + 2S))$	8.92	5.22	7.00	5.00	
M	= $EXP ((D - 60) / 10)$	0.37	0.37	0.37	0.37	
F	= $303 * X2$	2704	1582	2121	1515	
Td	= $1 + (0.5 / (1 + M))$	1.37	1.37	1.37	1.37	
Fc	= $0.21 * Td (1 + 0.2 * X2)$	0.80	0.59	0.69	0.57	
Qe	= $K (F - Fc * Qc)$	2279	942	1724	779	
DFC	= Q / Qe	0.44	0.60	0.59	0.47	
	Design Flow / Capacity	0.60				
	Total Entry Flows	2,952				

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

Job Title: TFS for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home In Yuen Long by Pok Oi Hospital			
Junction: J6- Ping Ha Road New Planned Roundabout			Designed by: TAT
Scheme:			Checked by: CYH
Design Year: 2035	Design Flow (PM Peak)		Job No.: CHK50749010
Design Year: 2035	Design Flow (PM Peak)		Date: 16 Feb 2024
Arm A	Ping Ha Road		
Arm B	Road L1		
Arm C	Ping Ha Road		
Arm D	Access Road		
Arm E			



ENTRY ARM				A	B	C	D	
INPUT PARAMETERS								
V	Approach Half Width (m)			7.00	4.00	7.00	5.00	
E	Entry Width (m)			12.00	6.00	7.00	5.00	
L	Effective Length of Flare (m)			10.00	10.00	0.00	0.00	
R	Entry Radius (m)			20.00	20.00	20.00	20.00	
D	Inscribed Circle Diameter (m)			50.00	50.00	50.00	50.00	
A	Entry Angle (degree)			30.00	30.00	35.00	25.00	
Q	Entry Flow (pcu/hour)			985	591	1,025	191	
Qc	Circulating Flow Across Entry (pcu/hour)			447	1,031	482	1,271	
OUTPUT PARAMETERS								
S	= $1.6 (E - V) / L$	Sharpness of flare		0.80	0.32	0.00	0.00	
K	= $1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$			1.00	1.00	0.98	1.02	
X2	= $V + ((E-V) / (1+2S))$			8.92	5.22	7.00	5.00	
M	= $EXP ((D-60) / 10)$			0.37	0.37	0.37	0.37	
F	= $303 * X2$			2704	1582	2121	1515	
Td	= $1 + (0.5 / (1+M))$			1.37	1.37	1.37	1.37	
Fc	= $0.21 * Td (1 + 0.2 * X2)$			0.80	0.59	0.69	0.57	
Qe	= $K (F - Fc * Qc)$			2347	977	1758	800	
DFC = Q / Qe		Design Flow / Capacity	0.60	0.42	0.60	0.58	0.24	
		Total Entry Flows	2,792					

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

APPENDIX B

Level-Of-Service (LOS) Criteria for Pedestrian Walkways



DESCRIPTION OF LEVEL-OF-SERVICE (LOS) CRITERIA FOR PEDESTRIAN WALKWAYS

(Reference: HCM 2000 Exhibit 18-3 and Transport Planning and Design Manual Volume 6 Chapter 10.5 Section 10.5.2)

LOS	Space (m ² /ped)	Flow Rate (ped/min/m)	Description
A	> 5.6	≤ 16	Pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.
B	> 3.7 – 5.6	> 16 – 23	Sufficient space is provided for pedestrians to freely select their walking speeds, to bypass other pedestrians and to avoid crossing conflicts with others. At this level, pedestrians begin to be aware of other pedestrians and to respond to their presence in the selection of walking paths.
C	> 2.2 – 3.7	> 23 – 33	Sufficient space is available to select normal walking speeds and to bypass other pedestrians primarily in unidirectional stream. Where reverse direction or crossing movement exist, minor conflicts will occur, and speed and volume will be somewhat lower.
D	> 1.4 – 2.2	> 33 – 49	Freedom to select individual walking speeds and bypass other pedestrians is restricted. Where crossing or reverse-flow movements exist, the probability of conflicts is high and its avoidance requires changes of speeds and position. The LOS provides reasonable fluid flow; however considerable friction and interactions between pedestrians are likely to occur.
E	> 0.75 – 1.4	> 49 – 75	Virtually, all pedestrians would have their normal walking speeds restricted. At the lower range of this LOS, forward movement is possible only by shuffling. Space is insufficient to pass over slower pedestrians. Cross- and reverse-movement are possible only with extreme difficulties. Design volumes approach the limit of walking capacity with resulting stoppages and interruptions to flow.
F	≤ 0.75	> 75	Walking speeds are severely restricted. Forward progress is made only by shuffling. There are frequent and unavoidable conflicts with other pedestrians. Cross- and reverse-movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristics of queued pedestrians than of moving pedestrian streams.

Remark:

- The criteria range from LOS "A" (best) to LOS "F" (worst)
- LOS "A", standing and free circulation through the walkway is possible without disturbing others

- iii. LOS "F" is described as "virtually all persons are standing in direct physical contact with those surrounding them. This density is extremely discomforting with potential for panic exists in large crowds at this density".
- iv. The minimum acceptable LOS from Transport Department is "C" for all newly proposed pedestrian facilities and "D" for existing facilities.

Appendix 4

Visual Impact Assessment

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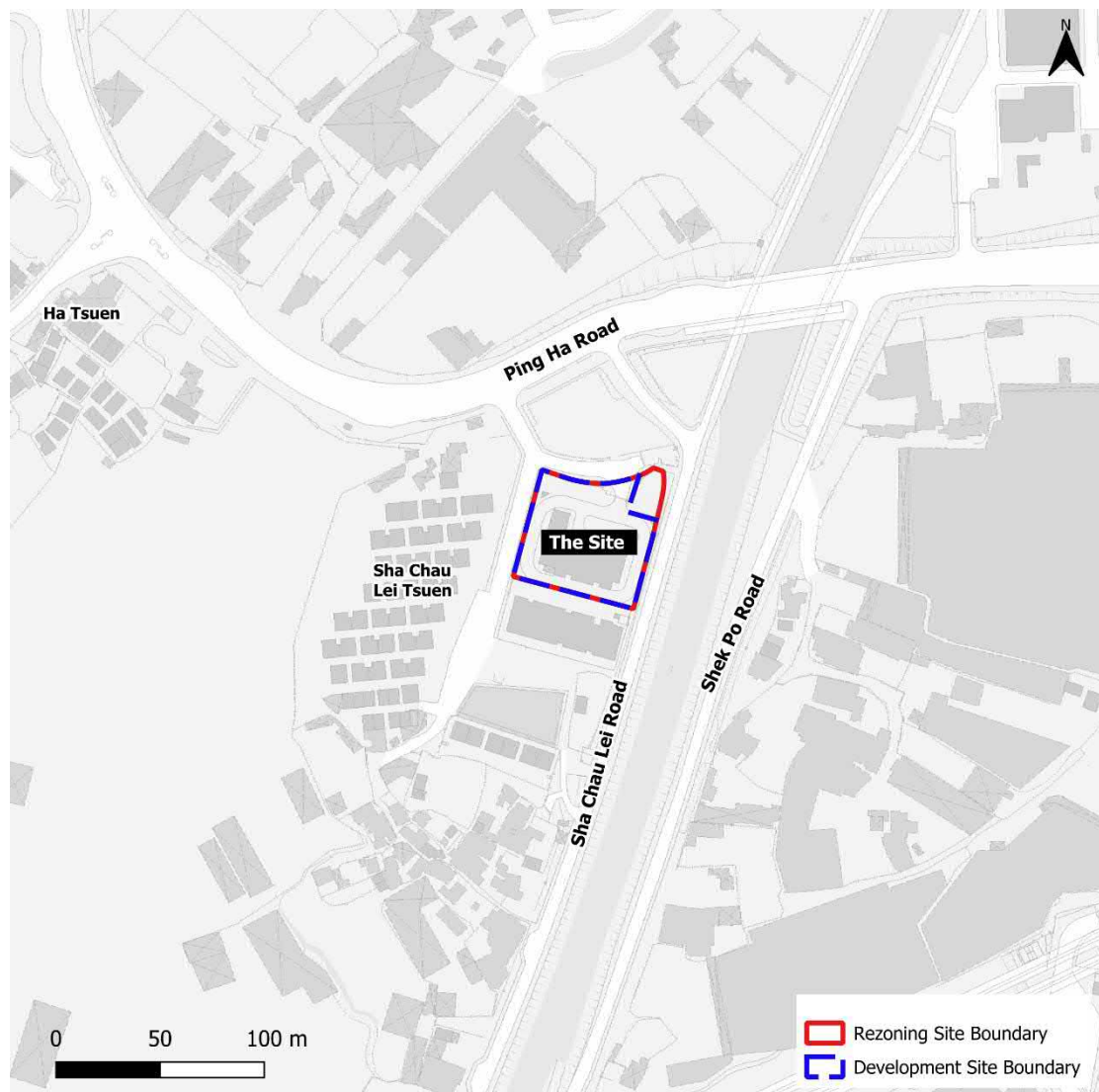
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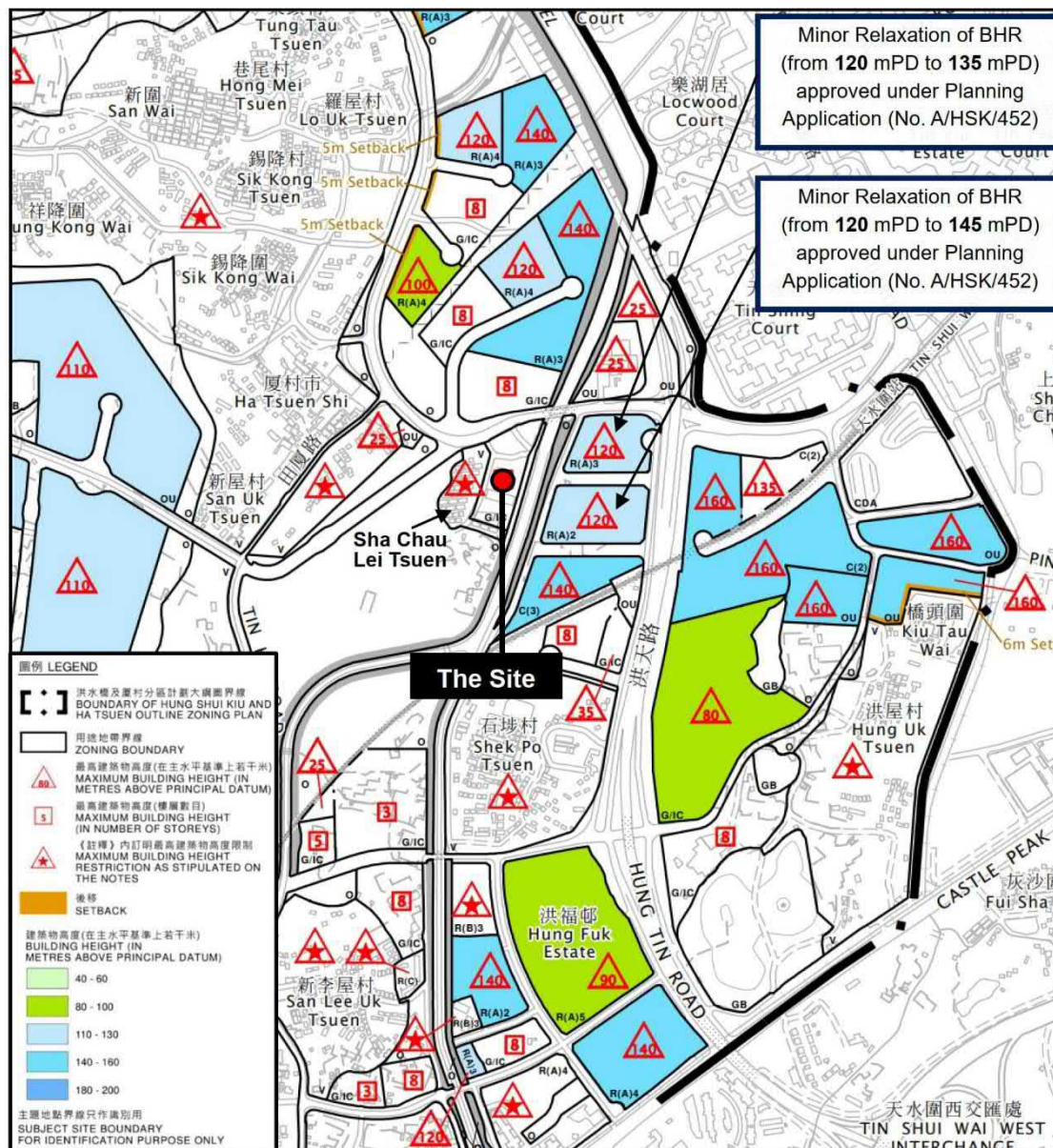
1 BACKGROUND

- 1.1 The Project comprises the demolition of existing building and construction of new block for the Pok Oi Hospital Yeung Chun Pui Care and Attention Home at 58 Sha Chau Lei Tsuen, Ha Tsuen, Ping Ha Road, Yuen Long at Lot No. 2273 and the Extension thereto in Demarcation District 125, bounded by Sha Chau Lei Road in the east, and a nullah running adjacent to Sha Chau Lei Road. The Rezoning Site Area is about 3,388.7 m² while the Development Site Area (for calculation of plot ratio and site coverage) is about 3,090 m². The diagrams below show the site location and the overall building height concept of the HSK/HT NDA.

Site Location



Building Height Concept of HSK/HT NDA (Extracted from the Approved OZP No. S/HSK/2)



- 1.2 The proposed redevelopment includes social welfare facilities to cater the increasing demand for elderly, rehabilitation and child care services, by providing more floor area and better and upgraded facilities, under The Special Schemes on Privately Owned Sites for Welfare Uses, administrated by Social Welfare Department (SWD) and self-financing welfare related ancillary facilities.

2 INTRODUCTION

- 2.1 The VIA study will investigate the visual impacts of the proposed the demolition of existing building and construction of new block for the Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long. This VIA report is prepared in accordance with the Town Planning Board PG-No. 41 – Guidelines on Submission of Visual Impact Assessment for Planning Applications to the Town Planning Board.

3 LEGISLATION, STANDARDS AND GUIDELINES

3.1 The following legislation, standards and guidelines are applicable to the visual impact assessment for this Project:

- (1) Town Planning Board PG-No. 41 – Guidelines on Submission of Visual Impact Assessment for Planning Applications to the Town Planning Board;
- (2) Town Planning Ordinance (Cap 131);
- (3) Hong Kong Planning Standards and Guidelines Chapters 4, 10 and 11;

4 ASSESSMENT METHODOLOGY

General

4.1 The assessment of visual impacts has involved the following procedures.

- **Identification of the Visual Envelope of the Project.** This is achieved by site visit and desktop study of topographic maps and photographs. Size, distance and other factors will be considered, to determine the visual envelope of the Project. The visual envelope is expected to cover the fields of views from sensitive viewers in direct sight of the Proposed Development; usually defined by natural ridgeline, man-made features, or road infrastructures, etc.

4.2 The VIA will include:

- (1) Identification of Public Viewing Points (VPs) within the visual envelope and;
- (2) Assessment of the visual sensitivity of the public viewer from the VPs;

4.3 These various elements of the VIA are detailed below.

- **Identification of the Public VPs within the Visual Envelope.** These VPs are where members of the public or tourists can assess or view the site easily.
- **Assessment of the degree of sensitivity to change of the VPs.** Factors considered include:
 - Visual impact on sensitive public viewers from the most affected viewing points, include key pedestrian nodes, popular areas used by the public or tourists for outdoor activities, recreation, rest, sitting-out, leisure, walking, sight-seeing, and prominent travel routes where travelers' visual attention may be caught by the Proposed Development;
 - People engaged in working activities are regarded as less sensitive to the visual changes;
 - Viewing point should be at human eye level for a realistic presentation of the views;
 - Key public viewing points may refer to Chapter 11 on Urban design Guidelines in the Hong Kong Planning Standards and Guidelines (HKPSG), the Explanatory Statement of the relevant statutory plans, adopted outline development plans and layout plans, and completed planning studies available for public reference;

- Local viewpoints should be determined with reference to the setting of the project and views of local significance;

4.4 The sensitivity of VPs is classified as follows:

High:	The VP is highly sensitive to any change in their viewing experience.
Medium:	The VP is moderately sensitive to any change in their viewing experience.
Low:	The VP is only slightly sensitive to any change in their viewing experience.

- **Visual elements.**

- This includes major physical structures, visual resources or attractors, and/ or visual eyesores or detractors that currently exist or area known to be planned within the assessment area. Different visual elements may enhance, degrade or neutralize the overall visual impact of the development being assessed;
- This VIA will demonstrate whether and how the Proposed Development would cause impact on the views to ridgelines and harbour if the site location is within the assessment area where views to ridgelines and the harbour may be reduced or blocked.

- **Appraisal of visual changes.** *Visual changes may be positive or negative and they are not necessarily mutually exclusive:*

- Visual Composition: the total visual effects of all the visual elements due to their variation in locations, massing, heights, dispositions, scales, forms, proportions and characters vis-a-viz the overall visual backdrop. It may result in visual balance, compatibility, harmony, unity or contrast. This appraisal should have due regard to the overall visual context and character within the wider and local contexts;
- Visual Obstruction: this 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. Blockage or partial blockage of views which substantially reduce visual permeability, existing panorama, vistas, visual resources or visual amenities should be avoided or minimized, in particular with regard to impact on prominent ridgelines, the harbour, natural coastlines, open sea horizon, skyline, scenic areas, valued landscape, special landmark, heritage features to be preserved, etc.
- Effect on Public Viewers: this VIA will assess and demonstrate the effects of visual changes from key public viewing points with direct sightlines to the Proposed Development.
- Effect on Visual Resources: this VIA will appraise if the condition, quality and character of the assessment area is changed positively or negatively as a result of the development, and any on-site, off-site visual impact related to the development.

4.5 The resultant overall impact may be concluded and classified within a range of threshold:

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 effect 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 term 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 term 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 term negative visual effects to most of the key identified key public viewing points.
Significantly Adverse:	If the Proposed Development will in overall term cause serious and detrimental visual effects to most of the identified key public viewing points even with mitigation measures.

5 PROPOSED DEVELOPMENT

- 5.1 The Site is zoned “Government, Institution or Community” on the Approved Hung Shui Kiu and Ha Tsuen Outline Zoning Plan No. S/HSK/2 and is subjected to a building height restriction of 3 storeys. According to the Statutory Notes of the Approved OZP, ‘Social Welfare Facility’ is a column 1 use which is an always permitted use. The site location is shown in **Figure 1**.
- 5.2 As shown in the latest proposed layout in **Figure 2**, the building height of the Proposed Development is +47.90mPD. The increase in building height from 3 storeys to 47.90mPD. may not be considered ‘minor’ thus seeking a building height relaxation by lodging a S16 planning application for minor relaxation of the building height restrictions may not applicable. Hence, a S12A Amendment of Plan Application to amend the building height restriction of the “G/IC” zone may be required.

Table 5.1 Key Development Parameters

	Existing Development	Proposed Development
Rezoning Site Area (about)	3,388.7m ²	3,388.7m ²
Development Site Area (about)	3,090m ²	3,090m ²
Total GFA (about)	2,351m ²	17,922 m ²
Total Plot Ratio (about) ¹	0.761	5.8
Site Coverage (about) ¹	25%	58%
No. of Blocks	1	1
No. of Storey (about)	3	11
Building Height (about)	15.75mPD	47.90mPD
Absolute Building Height (about)	10.25m	42.4m
Note		
¹ Calculated based on Development Site Area of about 3,090m ² .		

- 5.3 Planning merits and justifications including meeting the acute demand for the much needed social welfare facilities and efficient use of scarce land resources will be required in support of the Planning Application.
- 5.4 Building bulk would have a fundamental visual impact. Building height and disposition of building blocks of the Proposed Development at the Site should be carefully considered in order to be compatible with the adjacent buildings and avoid possible visual impact onto the sensitive receivers. Various appropriate and thoughtful building design i.e. setback and employment of

landscape treatment may be considered as mitigation measures to alleviate the possible visual impact onto the surrounding area and maintain visual permeability from key viewing points. The potential visual impact from various public sensitive viewpoints in the area shall be identified and assessed in the visual impact assessment exercise in support of the S12A Planning Application.

6 ASSESSMENT AREA

- 6.1 The assessment area for the visual impact assessment is defined by the visual envelope of the Proposed Development. The visual envelope covers the fields of views from all sensitive viewers in direct sight of the Proposed Development.
- 6.2 The Visual Envelope is bounded by Ping Ha Road to the north, the fringe of built-up area to the east and south, and the built-up area to the west. The assessment area also covers the immediate surroundings of the Proposed Development.
- 6.3 The visual envelope is shown in **Figure 1**.

7 VIEWING POINTS

- 7.1 Within the Visual Envelope, the following Public Viewing Points are identified:

- (1) VP1 – Sha Chau Lei Tsuen Carpark
- (2) VP2 – Sha Chau Lei Sitting-out Area
- (3) VP3 – Shek Po Road, near intersection with Tin Shui Path
- (4) VP4 – Ping Ha Road, near intersection with Shek Po Road

- 7.2 The location of all VPs is shown in **Figure 1**.

7.3 VP1 – Sha Chau Lei Tsuen Carpark

VP1 is located at around 20m from the Proposed Development. The general view of this VP consists of streetscape and greenery near Sha Chau Lei Tsuen Carpark in the foreground, and streetscapes, greenery, Ching Chung Care and Attention Home for the Aged at the background. The key visual resource is limited to the partly sky view and roadside greenery seen in the distance. The key public viewers of this VP are mainly the pedestrians, Sha Chau Lei Tsuen villagers and those heading towards Pok Oi Hospital Yeung Chun Pui Care and Attention Home, or Ching Chung Care and Attention Home for the Aged. The view is considered transient. The visual sensitivity of the public viewers from this VP is graded as *medium*. Existing photo of VP1 is shown in **Figure 3**.

7.4 VP2 – Sha Chau Lei Sitting-out Area

VP2 is located at around 70m from the Proposed Development. The general view of this VP consists of Sha Chau Lei Sitting-out Area and Ching Chung Care and Attention Home for the Aged as the foreground, and streetscape and greenery as the background. The key visual resources are the partly open sky view, roadside trees and streetscape along access to Sha Chau Lei Tsuen. The key public viewers of this VP are mainly the recreational users in Sha Chau Lei Sitting-out Area, pedestrians, Sha Chau Lei Tsuen villagers and the future users of the planned Regional Park and Sports Ground to the southwest of the Proposed Development.

The proposed Development is situated behind Ching Chung Care and Attention Home for the Aged, recreational users may catch a glimpse of the Proposed Development. The visual sensitivity of the public viewers from this VP is graded as *medium*. Existing photo of VP2 is shown in **Figure 4**.

7.5 **VP3 – Shek Po Road, near intersection with Tin Shui Path**

VP3 is located at around 110m from the Proposed Development. The general view of this VP consists of existing streetscape and greenery as the foreground, and Ching Chung Care and Attention Home for the Aged, Sha Chau Lei Tsuen and Yuen Tau Shan as the background. The key visual resources are the open sky view, roadside trees and mountainous backdrop. The key public viewers of this VP are mainly the pedestrians travelling along Shek Po Road. The view is considered transient, with pedestrians only stopping at this location when crossing Shek Po Road. The visual sensitivity of the public viewers from this VP is graded as *low*. Existing photo of VP3 is shown in **Figure 5**.

7.6 **VP4 – Ping Ha Road, near intersection with Shek Po Road**

VP4 is located at around 100m from the Proposed Development. The general view of this VP consists of the Tin Shui Wai Main Nullah at the foreground, and Ching Chung Care and Attention Home for the Aged, Sha Chau Lei Tsuen and Yuen Tau Shan at the background. The key visual resources are the open sky view, roadside trees along Tin Shi Wai Nullah, Sha Chau Lei Road and near Sha Chau Lei Tsuen, and the mountainous backdrop. The key public viewers of this VP are mainly the pedestrians travelling along Ping Ha Road, existing recreational users / cyclist at the existing cycling track, and future users of the planned open space designated as riverside promenade on the Outline Zoning Plan, and have relatively short viewing duration to the proposed development. The view is considered transient. The visual sensitivity of the public viewers from this VP is graded as *medium*. Existing photo of VP4 is shown in **Figure 6**.

8 **VISUAL ELEMENTS**

8.1 The visual outlook is shaped by the combined composition of all the visual elements which come into sight of the viewers. Presently the assessment area consists of or is dominated by following visual elements:

- The northern and eastern extent of the assessment area is dominated by industrial and open storage area.
- The southern and western extent of the assessment area consist of industrial and open storage area and residential developments.
- Key visual resources are the **Sha Chau Lei Sitting-out Area**, streetscape, landscape buffer, roadside greenery and open sky view along Ping Ha Road, Sha Chau Lei Road, Shek Po Road and Sha Chau Lei Tsuen, and Tin Shui Wai Main Nullah.

9 **APPRAISAL OF VISUAL CHANGES**

9.1 **VP1 – Sha Chau Lei Tsuen Carpark**

Visual Composition

As shown in **Figure 3**, since VP1 is very close to the Proposed Development (about 50m) and

facing directly towards access road to Sha Chau Lei Tsuen and Sha Chau Lei Sitting-out Area, the Proposed Development screens off the partial open sky and is dominant in this view. The existing roadside trees along the Sha Chau Lei Tsuen Carpark and the access road partially screens off the Proposed Development, as well as the planned public housing development (PHD) under planning application No. A/HSK/452 locating at the background of the Proposed Development. The Proposed Development is further screened off by the proposed trees as landscape buffer.

Visual Obstruction

The Proposed Development will substantially block the partly open sky view, which is inevitable given the proposed change in building height, and become visually dominant in this view. Nonetheless, the planned public housing development (PHD) under planning application No. A/HSK/452 locating at the background of the Proposed Development already obscures the partly open sky view at the back. There is no blockage of views towards the existing roadside trees and greenery along access road to Sha Chau Lei Tsuen.

Effect on Public Viewers

The value of this view is primarily due to the open sky between the existing buildings in Sha Chau Lei Tsuen, as well as the roadside trees along the access road to Sha Chau Lei Tsuen and Sha Chau Lei Sitting-out Area. Despite the increase in height of the Proposed Development, stepped terrace design of the proposed building provides visual contrast and adds variety to the surrounding building mass and creates points of visual prominence and interest to the neighborhood. Given the Proposed Development has certain effect to the visual composition of this VP, thus the effect of visual changes on public viewers from this VP is qualitatively graded as *moderate*.

Effect on Visual Resources

A part of the open sky will be obscured. The key visual resources including the existing roadside trees access road to Sha Chau Lei Tsuen and Sha Chau Lei Sitting-out Area are retained. With the proposed buffer planting along the periphery of the Proposed Development, the lower portion of the Proposed Development will be blocked by proposed buffer planting at the Proposed Development. Although the profile of Proposed Development will partially interrupt the visual openness of the current open sky view, stepped terraced design is adopted to reduce the visual impact of the building bulk as viewed from pedestrian level, as well as allow better air flow and permeability.

Based on the comparison between the existing condition and the proposed scenario, although the effect of visual change is *moderate*, it well integrates with the surrounding environment and is *unlikely* that the Proposed Development will substantially degrade the visual amenity that is enjoyed from the VP. Therefore, visual impact anticipated from the Proposed Development of VP1 is *moderately adverse*.

9.2 VP2 – Sha Chau Lei Sitting-out Area

Visual Composition

As shown in **Figure 4**, VP2 is facing directly towards Ching Chung Care and Attention Home for the Aged, and greenery in Sha Chua Lei Sitting-out Area, which is already dominant in this view. The Proposed Development is located behind the existing Ching Chung Care and Attention Home for the Aged and further screened by the existing building and trees along the periphery of Sha Chau Lei Sitting-out Area. The partial open sky view is further obscured by the planned public housing development (PHD) under planning application No. A/HSK/452 locating at the background of the Proposed Development.

Visual Obstruction

The Proposed Development has limited visual obstruction to the prominent visual elements. The top of Proposed Development will intercept a portion of the current partial sky view, which is inevitable given the proposed change in building height. Nonetheless, the planned public housing development (PHD) under planning application No. A/HSK/452 locating at the

background of the Proposed Development already obscures the partly open sky view at the back. There is no intervention to the existing prominent plantings in the foreground and background.

Effect on Public Viewers

The value of this view is primarily attached to the existing landscape resources such as the partly open sky view, greenery in Sha Chau Lei Sitting-out Area and roadside trees access road next to Sha Chau Lei Tsuen, which are to be maintained. The current view, beyond the existing trees in Sha Chau Lei Sitting-out Area, is dominated by the existing Ching Chung Care and Attention Home for the Aged that already obscures much of the roadside trees and greenery in the background. As there is limited significant impact to the prominent view, with no significant change on the visual identity and character is anticipated. Thus, the effect of visual changes on public viewers from this VP is qualitatively graded as *slight to moderate*.

Effect on Visual Resources

The Proposed Development creates limited visual change to this VP as key visual resources including the existing trees in Sha Chau Lei Sitting-out Area, roadside trees and greenery are maintained to preserve the character of the district. It is noted that only upper portion of the Proposed Development would be seen from this VP and the lower part of the Proposed Development would be screened. The character and quality of the VP and assessment area are not substantially degraded by the Proposed Development.

Based on the comparison between the existing condition and the proposed scenario, it is *unlikely* that the Proposed Development will substantially degrade the visual amenity that is enjoyed from the VP. Balancing the visual enhancement brought about by the Proposed Development with its limited impact on the visual resources at this VP, the visual impact is anticipated from the Proposed Development is *slightly to moderately adverse*.

9.3 VP3 – Shek Po Road, near intersection with Tin Shui Path

Visual Composition

As shown in **Figure 5**, VP3 is facing directly towards Shek Po Road and Tin Shui Wai Main Nullah. The open sky view, streetscape and greenery along Tin Shui Wai Main Nullah, and mountainous backdrop of Yuen Tau Shan are the main visual composition. The Proposed Development is located behind streetscape along Shek Po Road and Tin Shui Wai Main Nullah, which is dominant in this view.

Visual Obstruction

The Proposed Development will partially block the open sky view and mountainous backdrop, which is inevitable given the proposed change in building height. Existing visual elements including the roadside trees along Tin Shui Wai Main Nullah is not obstructed by the Proposed Development.

Effect on Public Viewers

The value of this view is primarily attached to the visual amenity of the open sky view, the existing roadside trees along Tin Shui Wai Main Nullah and the mountainous backdrop of Yuen Tau Shan. The existing landscape resource of roadside trees are maintained, Although the profile of Proposed Development will partially interrupt the visual openness of the current open sky and mountain view, stepped terraced design is adopted to reduce the visual impact of the building bulk as viewed from pedestrian level. The Proposed Development with stepped terrace design provides visual contrast and adds variety to the surrounding building mass and creates points of visual prominence and interest to the neighborhood. Given the Proposed Development has certain effect to the visual composition of this VP, thus the effect of visual changes on public viewers from this VP is qualitatively graded as *slight to moderate*.

Effect on Visual Resources

A small amount of the open sky and mountain view will be obscured. The key visual resources including the existing roadside trees roadside trees along Tin Shui Wai Main Nullah are retained,

and the existing trees within the Proposed Development are retained. Despite the visual change induced, the character and quality of the VP and assessment area are not substantially degraded by the Proposed Development.

Based on the comparison between the existing condition and the proposed scenario, it is *unlikely* that the Proposed Development will substantially degrade the visual amenity that is enjoyed from the VP. Balancing the visual enhancement brought about by the Proposed Development with its limited impact on the visual resources at this VP, the visual impact is anticipated from the Proposed Development is *slightly to moderately adverse*.

9.4 VP4 – Ping Ha Road, near intersection with Shek Po Road

Visual Composition

As shown in **Figure 6**, the view is dominated by the open sky view, the existing roadside trees along Sha Chau Lei Road, the existing Tin Shui Wai Main Nullah and adjacent greenery and the mountainous backdrop of Yuen Tau Shan, which the existing greenery near the Proposed Development which partially screen off the lower and middle portion of the Proposed Development. As a result, mainly the upper portion of the Proposed Development is seen from this VP in the background. Although the existing visual configuration and visual character of the urban setting would not change significantly, it will become a new visual element from the existing low-rise development.

Visual Obstruction

The Proposed Development will have very limited obstruction to existing visual elements as only a small part of the partial open sky and mountain view will be blocked by the upper portion of the Proposed Development. There is no blockage of views towards the existing roadside trees and greenery along Sha Chau Lei Road, Tin Shui Wai Main Nullah and near the Proposed Development.

Effect on Public Viewers

The value of this view is primarily attached to the visual amenity of the open sky view, the existing roadside trees, Tin Shi Wai Nullah and adjacent greenery. It is noted that the existing roadside trees will be retained which serves to screen off part of the Proposed Development at the distance. Sensitive design measures including stepped terraced design of the Proposed Development minimize the building bulk seen from this VP. Thus, the effect of visual changes on public viewers from this VP is qualitatively graded as *medium* in view of the medium sensitivity.

Effect on Visual Resources

A limited amount of the open sky and mountain view will be obscured. The key visual resources including the existing roadside trees roadside trees along Tin Shui Wai Main Nullah and the existing trees near the Proposed Development are retained. Although the profile of Proposed Development will partially interrupt the visual openness of the current open sky view, stepped terraced design is adopted to reduce the visual impact of the building bulk, with partial of the proposed building screened by existing greenery. Therefore, the character and quality of the VP and assessment area are not substantially degraded by the Proposed Development.

Based on the comparison between the existing condition and the proposed scenario, it is *unlikely* that the Proposed Development will degrade the visual amenity that is enjoyed from the VP. However, it will become a new visual element from this VP that is currently surrounded by low-rise development. Taking into account the sensitive design measures, the visual impact is anticipated from the Proposed Development is *moderately adverse*.

10 EVALUATION OF OVERALL VISUAL IMPACT

- 10.1 The design and layout of the Proposed Development has carefully considered the surrounding contexts and key public viewers located within the assessment area. The massing and disposition of the building blocks have been carefully considered not to create significant visual

blockage and to reduce substantial visual impact to the surrounding. Sensitive design measures have been introduced to minimize adverse visual impacts and to enhance the visual character and quality of the VPs towards the Proposed Development. Key mitigation measures are listed and described below:

Building Disposition

- 10.2 Potential visual impact and obstruction resulting from the proposed Development with the open sky view and greenery hillside as background would be unavoidable. In order to reduce the effect of these potential impact, building is setback from Sha Cha Lei Road and the village road to create a wider street canyon and setback with buffer planting along the riverside to maintain a relax river promenade adjoining the site. The setback will hence reduce the sense of encroachment and visual intrusiveness of the concrete structures onto the pedestrians.

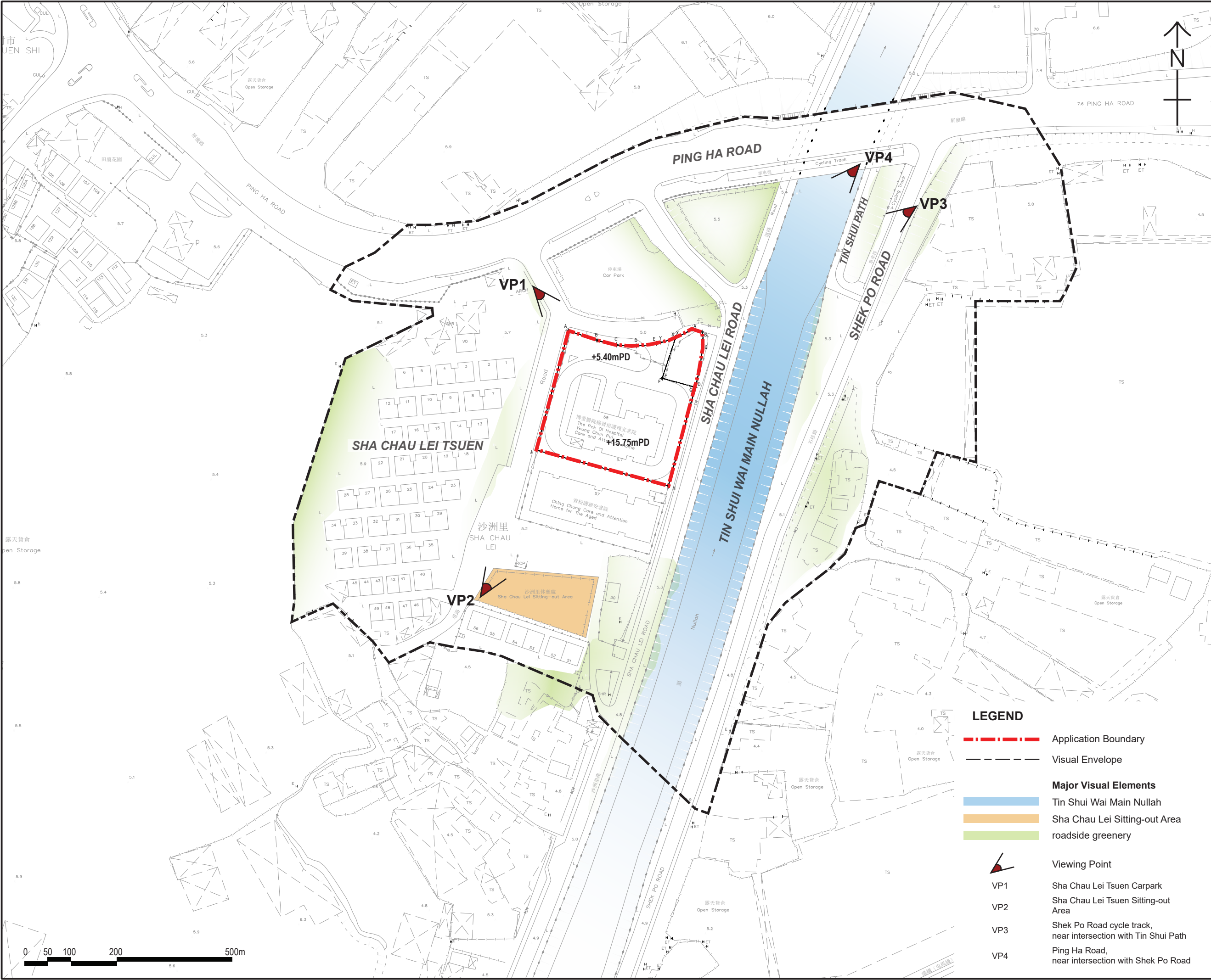
Visual Compatibility of the Proposed Development

- 10.3 The proposed Development shall be visually compatible with the adjacent landscape setting. The overall setting of the Development Proposals, including building layouts and forms, materials, finishing (e.g. colour theme, pattern, texture), shall be carefully designed and effectuated to match the adjoining environment in detail design stage.
- 10.4 With the adoption of stepped terraced design, the form and mass of the proposed building would break down the visual bulk of the Proposed Development as viewed from pedestrian level, to create a more synergistic and visually permeable layout. The use of extensive landscaping on multiple levels would also soften the form of the buildings and enhance the amenity of the development as well as the neighbourhood environment, allowing the development to well integrate within its future urban fabric and visual context.

Maximisation of Greenery Provision

- 10.5 Provision of greenery shall be maximised as far as appropriate, such as preservation of existing greenery on ground level, provision of buffer greenery along riverside and terrace greening in different floor levels, to soften the proposed development so as to provide a source of green visual relief and minimise any potential adverse visual changes for public viewers from surrounding area.
- 10.6 The introduction of the Proposed Development, having considered the sensitivity of public viewers, the visual composition, the visual resources, the effects on public viewers and the effects visual resources, will not generate significant adverse visual impact. The visual change caused by the Proposed Development is not significant when viewed from the identified VPs. It will not detract the visual value attached to the views or have a significant impact to the visual accessibility to the existing visual amenity and resources nearby.
- 10.7 The proposed design has catered for the sensitivity of visual experience to the neighborhood and will continually improve the overall aesthetics and visual interests of the Proposed Development in upcoming architectural design development stages.
- 10.8 To this end in overall terms, most visual impacts from the Proposed Development are anticipated to be *slightly adverse to moderately adverse*. Efforts have been made to ameliorate the potential visual impact of the Proposed Development as far as possible. The proposed expansion targets to allow better spatial arrangement and facilities to support the Applicant's future development in order to continue offering quality social welfare and rehabilitation services. In return, the Proposed Development will make a positive to the social welfare and rehabilitation services for the persons in need.

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PROJECT

PROPOSED DEVELOPMENT OF
POK OI HOSPITAL YEUNG CHUN
PUI CARE AND ATTENTION
HOME IN YUEN LONG

CLIENT

業主

CONSULTANT

工程顧問公司

P&T Architects Limited

SUB-CONSULTANTS

分判工程顧問公司

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設計

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設計	日期	描述	校核

STATUS

校核

SCALE

比例

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METRES

PROJECT NO.

項目編號

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CONTRACT NO.

合約編號

SHEET TITLE

圖紙名稱

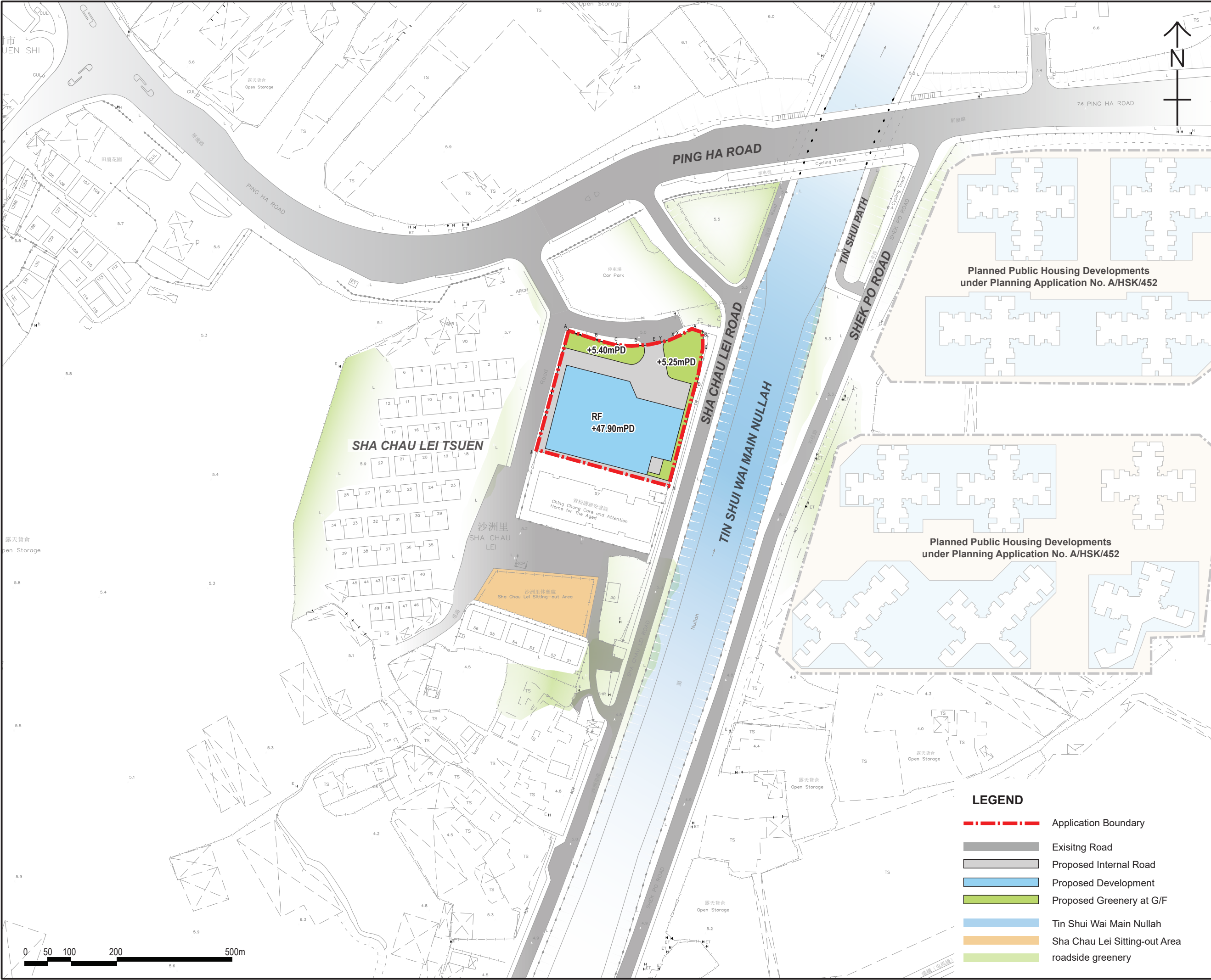
SITE LOCATION WITH VIEWING
POINTS AND VISUAL ENVELOPE

SHEET NUMBER

圖紙編號

Figure 1

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LEGEND

- Application Boundary
- Existing Road
- Proposed Internal Road
- Proposed Development
- Proposed Greenery at G/F
- Tin Shui Wai Main Nullah
- Sha Chau Lei Sitting-out Area
- roadside greenery

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PROJECT

PROPOSED DEVELOPMENT OF
POK OI HOSPITAL YEUNG CHUN
PUI CARE AND ATTENTION
HOME IN YUEN LONG

CLIENT

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STATUS

校核

SCALE

比例

A3 1:1500

DIMENSION UNIT

尺寸單位

METRES

PROJECT NO.

項目編號

60725280

CONTRACT NO.

合約編號

SHEET TITLE

圖紙名稱

PROPOSED SCHEME

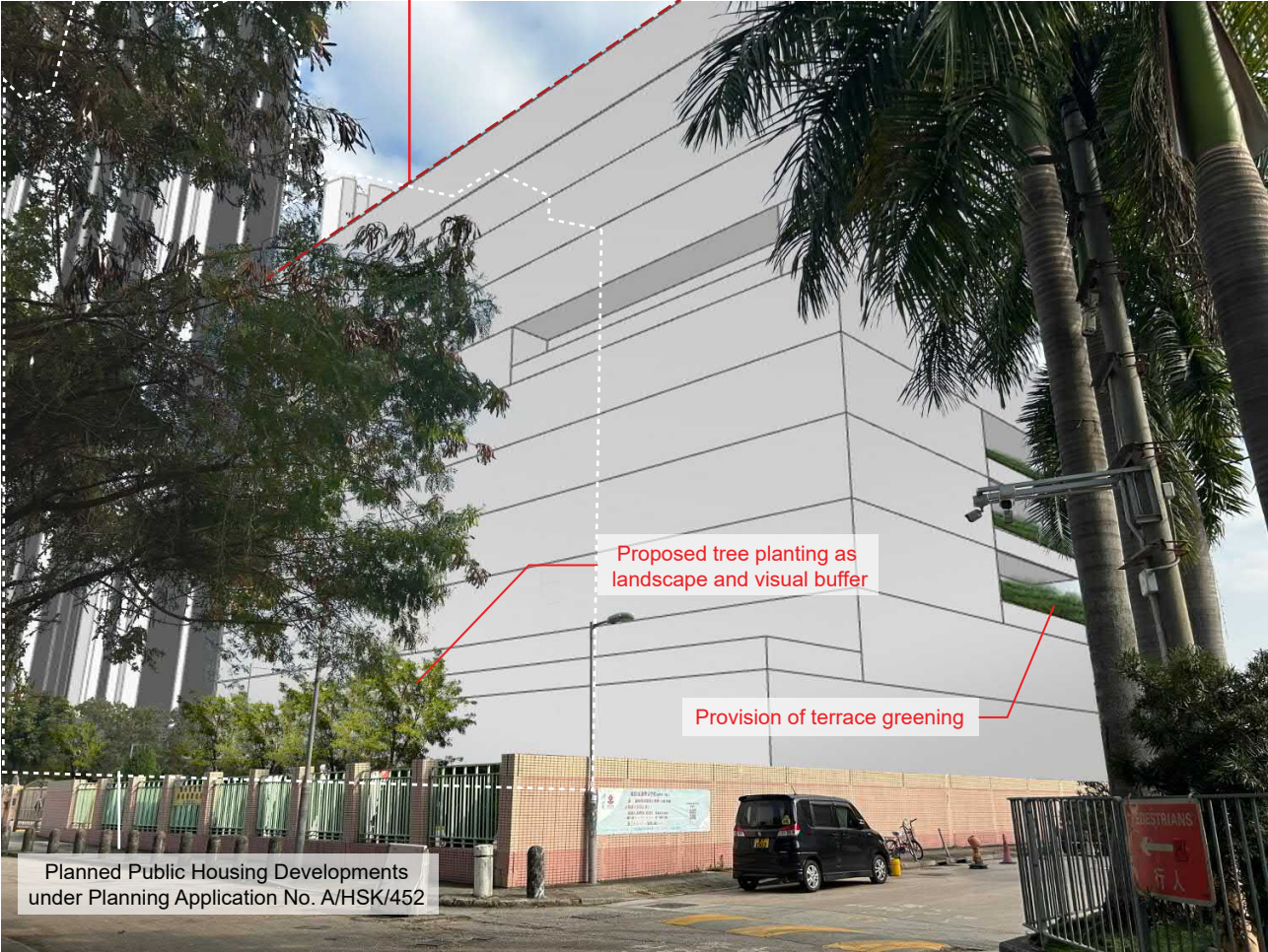
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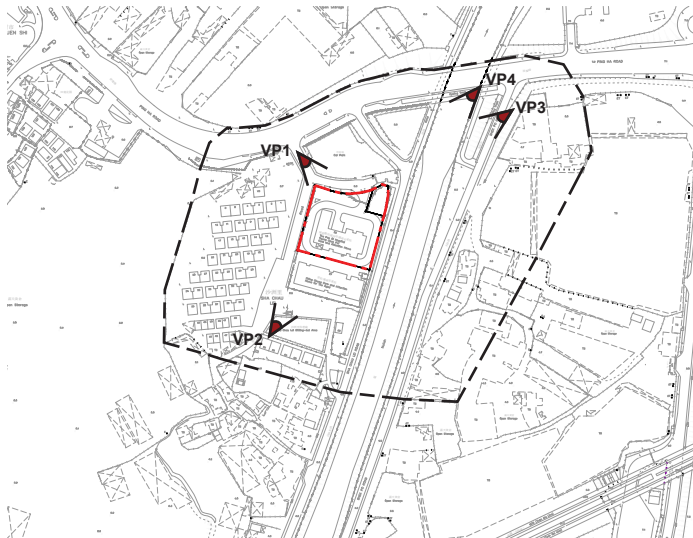
Figure 2



Existing Condition



Proposed Development



KEY PLAN

AECOM

PROJECT
PROPOSED DEVELOPMENT OF
POK OI HOSPITAL YEUNG CHUN
PUI CARE AND ATTENTION
HOME IN YUEN LONG

CLIENT

CONSULTANT
P&T Architects Limited

SUB-CONSULTANTS
AECOM Asla Company Ltd.
www.aecom.com

ISSUE/REVISION			
I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE
A3 1:3000

DIMENSION UNIT
METRES

PROJECT NO.
60725280

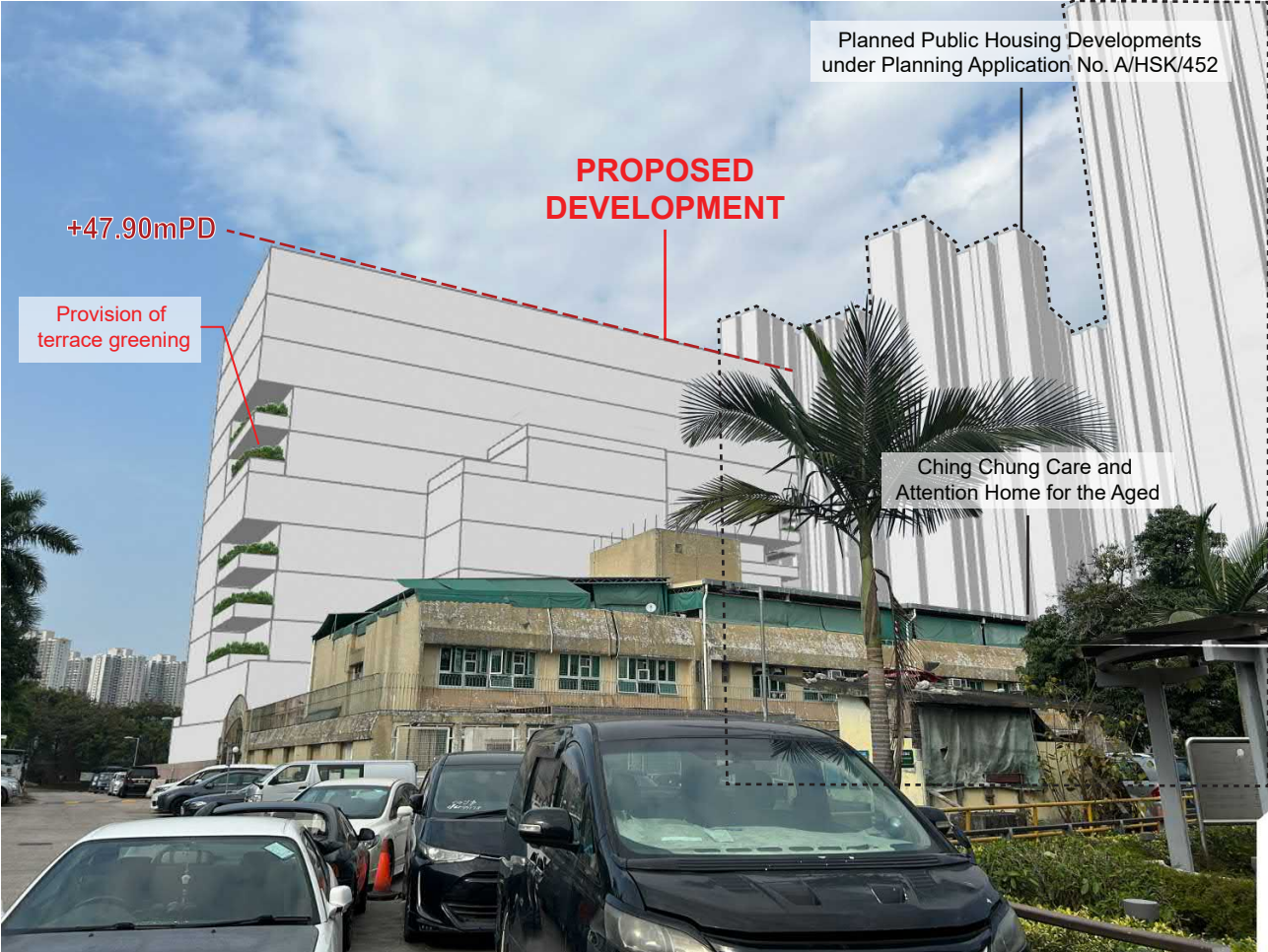
CONTRACT NO.

SHEET TITLE
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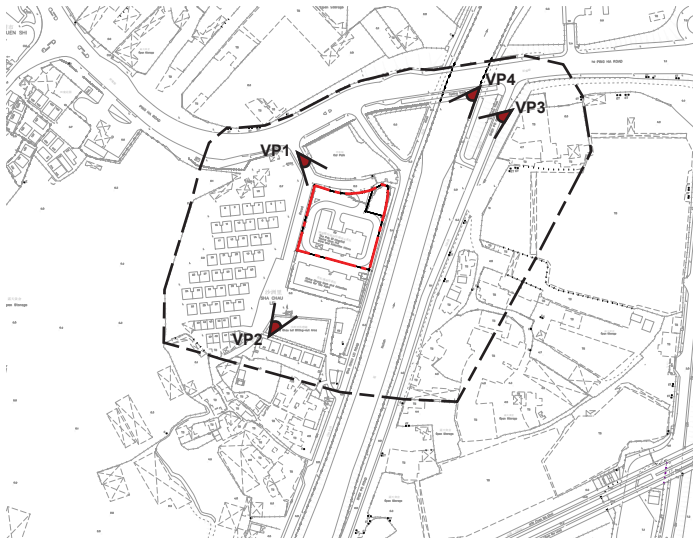
SHEET NUMBER
Figure 3



Existing Condition



Proposed Development



KEY PLAN

AECOM

PROJECT
PROPOSED DEVELOPMENT OF
POK OI HOSPITAL YEUNG CHUN
PUI CARE AND ATTENTION
HOME IN YUEN LONG

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ISSUE/REVISION			

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SCALE	DIMENSION UNIT
A3 1:3000	METRES

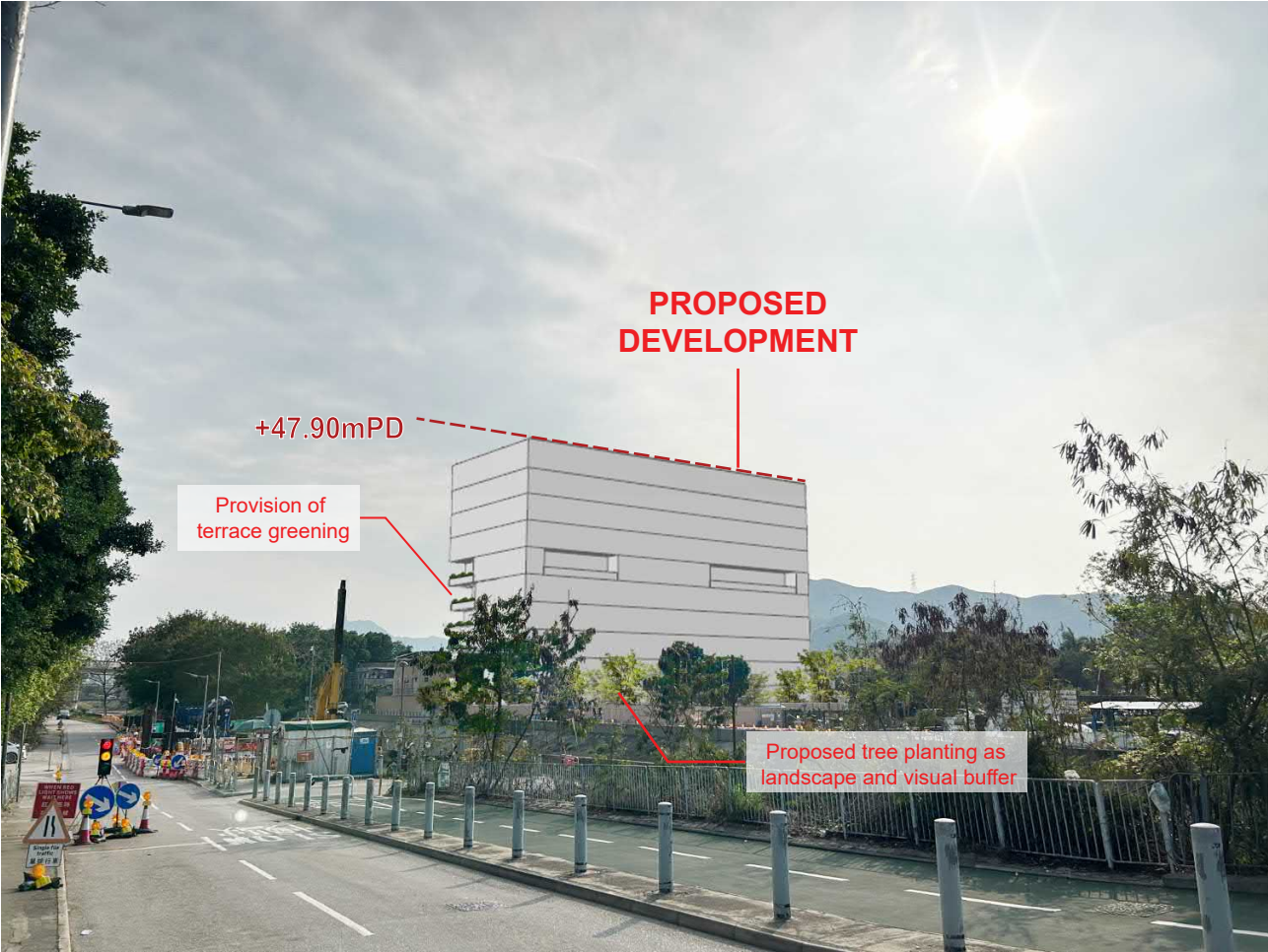
PROJECT NO.
60725280

SHEET TITLE
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SHA CHAU LEI SITTING-OUT AREA

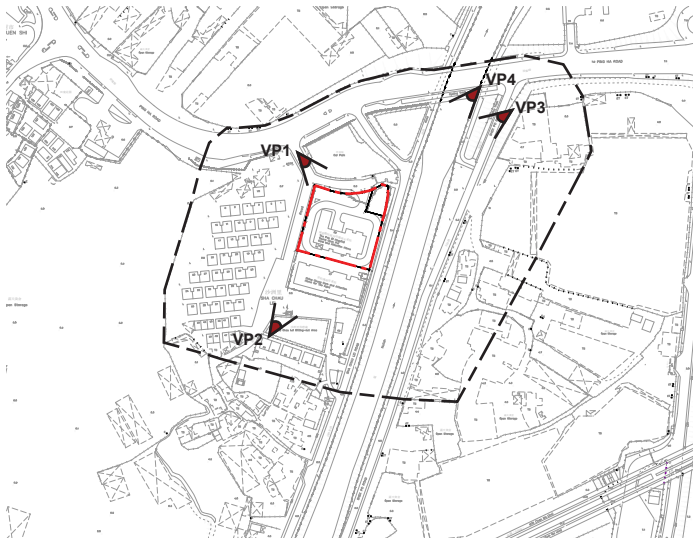
SHEET NUMBER
Figure 4



Existing Condition



Proposed Development



KEY PLAN

PROJECT
PROPOSED DEVELOPMENT OF
POK OI HOSPITAL YEUNG CHUN
PUI CARE AND ATTENTION
HOME IN YUEN LONG

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ISSUE/REVISION			
I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE	DIMENSION UNIT
A3 1:3000	METRES

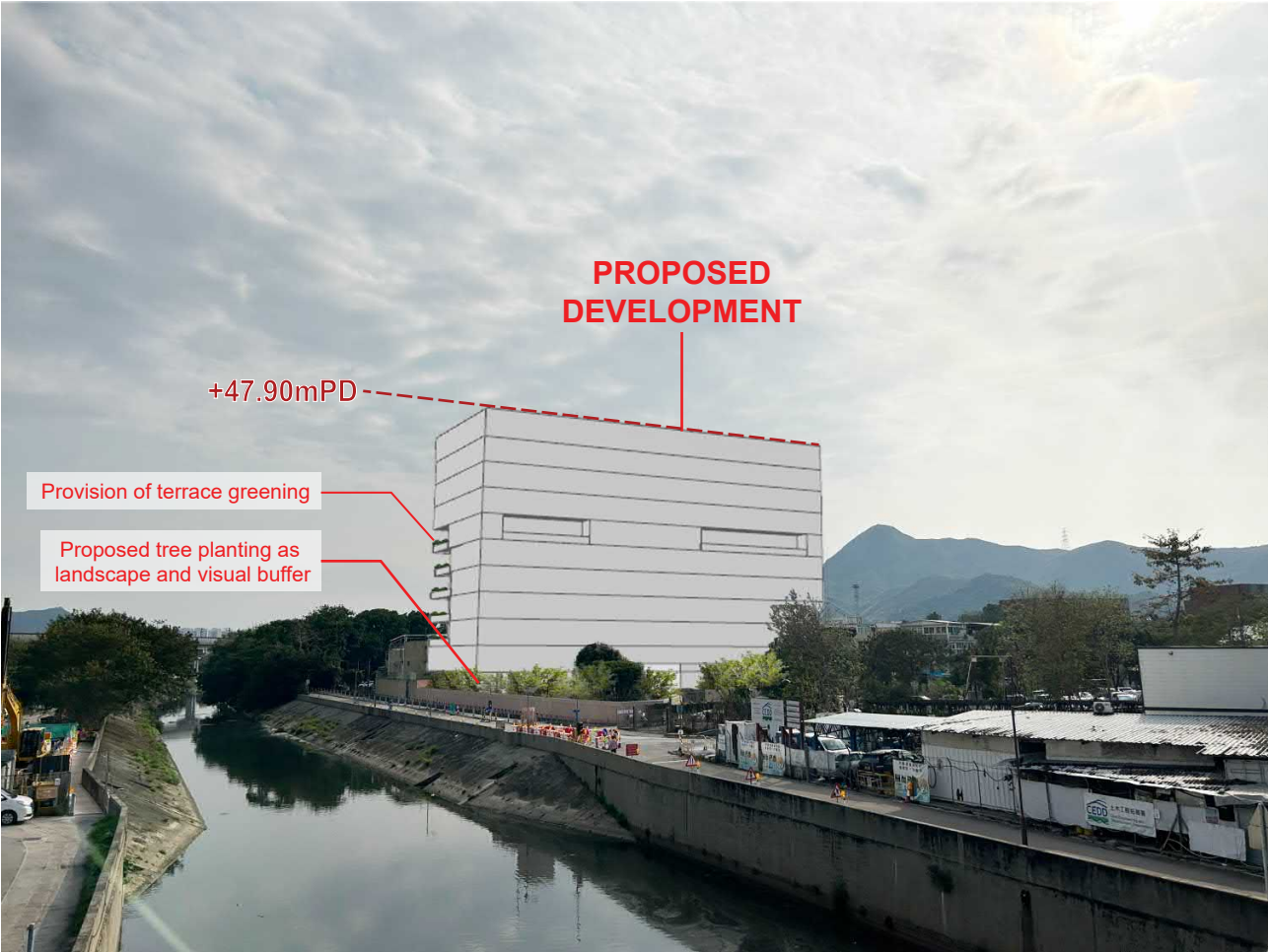
PROJECT NO.
60725280

SHEET TITLE
PHOTOMONTAGE AT VP3 -
SHEK PO ROAD, NEAR
INTERSECTION WITH TIN SHUI PATH

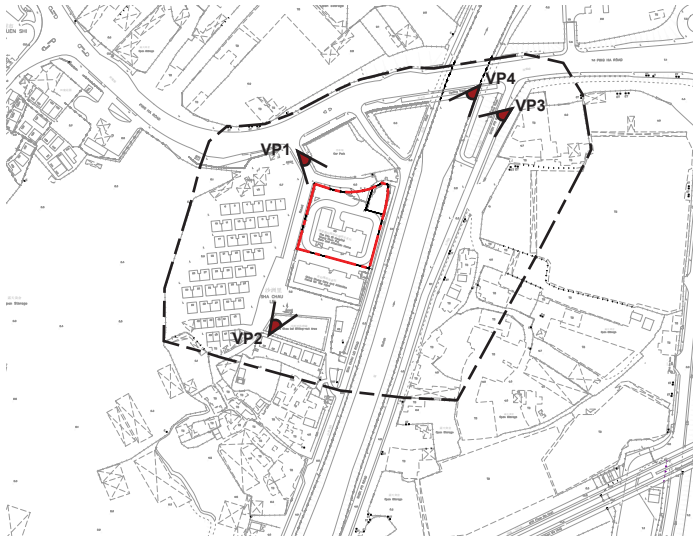
SHEET NUMBER
Figure 5



Existing Condition



Proposed Development



KEY PLAN

AECOM

PROJECT
PROPOSED DEVELOPMENT OF
POK OI HOSPITAL YEUNG CHUN
PUI CARE AND ATTENTION
HOME IN YUEN LONG

CLIENT

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ISSUE/REVISION			
I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE
A3 1:3000

DIMENSION UNIT
METRES

PROJECT NO.
60725280

CONTRACT NO.

SHEET TITLE
PHOTOMONTAGE AT VP4 -
PING HA ROAD, NEAR
INTERSECTION WITH SHEK PO ROAD

SHEET NUMBER

Figure 6

Appendix 5

Environmental Assessment

Issue No. : 5
Issue Date : Nov 2024
Project No. : 2162EA



ENVIRONMENTAL ASSESSMENT

FOR

**PROPOSED REDEVELOPMENT
OF POK OI HOSPITAL YEUNG
CHUN PUI CARE AND
ATTENTION HOME IN YUEN
LONG**

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

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Document Verification



Project Title		Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long			Project No. 2162EA
Document Title		Environmental Assessment			
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1	Feb 2024	1 st Submission	Leanna Lei	Cathy Man	Grace Kwok
2	May 2024	2 nd Submission	Leanna Lei	Cathy Man	Grace Kwok
3	July 2024	3 rd Submission	Leanna Lei	Cathy Man	Grace Kwok
4	Sep 2024	4 th Submisison	NGAN Chun Sang	Cathy Man	Grace Kwok
5	Nov 2024	5 th Submission	NGAN Chun Sang	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 redevelopment at Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long under S.12A of the Town Planning Ordinance (hereinafter called “Proposed redevelopment”) at 58 Sha Chau Lei Tsuen, Ha Tsuen, Ping Ha Road, Yuen Long at Lot No. 2273 and the Extension thereto in Demarcation District 125(“the Application Site”).
- 1.1.2. The Application Site is currently zoned as “Government, Institution or Community” (“G/IC”) with maximum building height of 3 storeys on the Approved Hung Shui Kiu and Ha Tsuen Outline Zoning Plan No. S/HSK/2 (Approved OZP). The Applicant proposes to redevelop the Application site for Residential Care Home for the Elderly (RCHE) with 11 storeys in height. Given the redevelopment proposal does not comply with the BH restriction for the subject “G/IC” zone, an application for amendment of plan under s.12A of the Town Planning Ordinance is therefore required.
- 1.1.3. The proposed redevelopment will consist of the demolition of the existing building and the construction of an 11-storey (47.9 mPD) new block for Pok Oi Hospital Yueng Chun Pui Care & Attention Home of residential tower (Proposed Redevelopment). The tentative completion year is 2032.
- 1.1.4. Indicative drawings and other technical information on the Proposed redevelopment are provided by the Project Architect (P&T Architects Limited) and the traffic forecast is provided by the Project Traffic Consultant (MVA Hong Kong Limited).

2. Objectives

- 2.1.1. An Environmental Assessment for the Proposed Redevelopment is required in support of S12A Planning Application to assess the potential air quality, noise, water quality impacts and land contamination based on the proposed development scheme and recommend relevant mitigation measures where necessary.

3. The Site Environ

- 3.1.1. The rezoning site area of the Application Site is 3,388.7m² with a development site area of about 3,090 m² and elevated at around 5.5 mPD currently. It is currently completely paved with a 3-storey building with building height of 16.6 mPD.
- 3.1.2. The Proposed Redevelopment is bounded by Ping Ha Road to the north, Sha Chau Lei Road

to the east and the unnamed rural road (“Access Road on the West”). Village and open storage/temporary structures areas are identified to the south and west. Location of the Application Site and its surroundings are presented in **Figure 3.1**.

- 3.1.3. The Application Site is zoned as “Government, Institution or Community ” (“G/IC”) on the Approved OZP. The surrounding areas are mainly zoned village (“V” zone), (“G/IC”), Residential(Group A) (“R(A)2” and “R(A)3” zone) , “Commercial”(“C” zone). A strip of area zoned “Open Space (“O”) are respectively located to the southwest and the south of the Application Site.
- 3.1.4. According to Hung Shui Kiu New Development Area (HSK NDA) Planning and Engineering Study-Investigation Agreement No. CE 2/2011 (CE), the Application Site is within the HSK NDA. Planned residential developments and educational development are identified to the east and north of the Application Site. The Master Layout Plan of the HSK NDA is given in Appendix 3.1. The planned land uses specified in HSK NDA are taken into consideration for this environmental assessment.
- 3.1.5. According to the Planning Application No. A/HSK/452, it is noted that R(A)2” and “R(A)3” zone to the east of the Application Site is proposed as public housing development. The intake year of the public housing development is scheduled at Year 2030.

4. The Proposed Redevelopment

4.1. Project Planning and Programme

- 4.1.1. The Proposed Redevelopment will comprise the demolition of the existing 3-storey building and the construction of a new block with 11-storey (47.9 mPD) to cater for the increasing demand for elderly, rehabilitation and child care services.
- 4.1.2. Upon completion by 2032, a total of 282-bed spaces (i.e. 192 for Care and Attention Home(C&AH), 50 for Hostel for Severely Mentally Handicapped Persons (HSMH) and 40 for Hostel for Moderately Mentally Handicapped Persons (HMMH)), will be provided to meet the needs of the community. The Development Schedule is given in **Table 4-1**. An indicative development layout of the Proposed Redevelopment is shown in **Appendix 3.1**.

Table 4-1 Development Schedule

Floor	Major Uses
G/F	Child Care Centre(CCC) , Car Park, E&M Facilities
1/F	Day Care Centre for the Elderly (DE)
1/F-4/F	Care & Attention Home(C&A) (192 nos of bed)
5/F	Hostel for Severely Mentally Handicapped Persons (HSMH)

Floor	Major Uses
	(50 nos of bed)
6/F	Hostel for Moderately Mentally Handicapped Persons (HMMH) (40 nos of bed)
7/F	Day Activity Centre (DAC), clinic, massage
8/F	Showroom, Kitchen, Canteen
9/F	Integrated Vocational Rehabilitation Services Centre (IVRSC), E&M Facilities
R/F	E&M Facilities

4.2. Interfacing with Other Projects

4.2.1. Based on the best available information, the Project may have interaction with other projects including, but not limited to the following:

Table 4-2 List of Concurrent Projects

	Project	Construction Programme	Potential Cumulative Impacts	
			Construction Phase	Operation Phase
1.	Hung Shui Kiu/Ha Tsuen New Development Area stage 1 works – site formation and engineering infrastructure (YL/2020/03)	Commenced in September 2023, Completion in May 2025	x	x
2.	Water Supply to Hung Shui Kiu New Development Area	Commencement year unknown, expected year of completion: 2031*	-	-
3.	Public housing development “R(A)2” and “R(A)3” (Advanced Work-Phase 3)	Tentative Development year 2019-2029, expected year of completion: 2030*	-	✓
4.	Educational development “E” (Phase 3)	Tentative Development Period 2031-2035, expected year of completion: 2036*	-	✓

Note: *With Reference to HSK NDA EIA No. CE 2/2011 (CE)

4.2.2. Major concurrent projects in the vicinity which would interface with this Project have been identified and the potential cumulative impacts from these concurrent projects have also been reviewed in **Table 4-2**. **Figure 4.1** shows the location of these projects.

- 4.2.3. Hung Shui Kiu/Ha Tsuen New Development Area stage 1 works – site formation and engineering infrastructure are currently under construction phase and will be completed tentatively by 2025, where cumulative environmental impact is not expected.
- 4.2.4. Given details of the construction programme and plant inventory are not available for the Water supply works, no detailed impact assessment can be carried out.
- 4.2.5. For HSK NDA Public housing and educational development, which will tentatively be completed by 2030 and 2036, the cumulative impact associated with the construction of the Proposed Redevelopment is subject to the construction programme of the concurrent project, and there may be potential cumulative air and noise impact.

5. Implication of Environmental Impact Assessment

- 5.1.1. 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 air quality, noise, water quality and land contamination aspects. Drainage and sewerage impact assessments are presented separately.

6. Air Quality Impact Assessment

6.1. Introduction

- 6.1.1. This section assesses the potential air quality impacts in association with the proposed redevelopment 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.

6.2. Environmental Legislation, Standards and Guidelines

General

- 6.2.1. The relevant legislations, standards and guidelines applicable to the present study for the assessment of air quality impacts include:

- Air Pollution Control Ordinance (APCO) (Cap. 311);

- Air Pollution Control (Construction Dust) Regulation;
- Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation; and
- Air Pollution Control (Fuel Restriction) Regulation.

Air Pollution Control Ordinance: Hong Kong Air Quality Objectives (AQOs)

6.2.2. 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 6-1**.

Table 6-1 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 ^[iv]	50	N/A
FSP or PM _{2.5} ^[iii]	24-hour	50	18 ^[v]
	Annual ^[iv]	25	N/A
Nitrogen Dioxide (NO ₂)	1-hour	200	18
	Annual ^[iv]	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 ^[iv]	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.

[iv] Arithmetic mean

[v] The new AQO allows 35 days of exceedance per calendar year for daily FSP for non-government projects. However, government projects shall adopt a more stringent standard with the number of allowable exceedances of 18 days per calendar year.

Hong Kong Planning Standards and Guidelines

6.2.3. 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 6-2 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	>20m
		(b) Passive recreational uses	3 – 20m
		(c) Amenity areas	< 3m
	District Distributor	(a) Active and passive recreational uses	>10m
		(b) Passive recreational uses	<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
	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 (Fuel Restriction) Regulation

6.2.4. The Air Pollution Control (Fuel Restriction) Regulation 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 (SO₂) emissions. In June 2008, the Regulation was amended to tighten the control requirements of liquid fuels.

6.3. Background Air Quality

Existing Air Quality in Yuen Long District

6.3.1. The nearest EPD air quality monitoring station (AQMS) is Yuen Long Monitoring Station and is 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 **Table 6-3** to depict the trend of the localised air quality.

Table 6-3 Background Air Quality at Yuen Long Monitoring Station

Pollutant	Averaging time	Concentration 2018-2022 ($\mu\text{g}/\text{m}^3$)[1][2]					AQO ($\mu\text{g}/\text{m}^3$)
		2018	2019	2020	2021	2022	
SO ₂	4 th peak 10-min	52	42	26	24	21	500
	4 th peak 24-hr	16	11	10	14	7	50
PM ₁₀	10 th peak 24-hr	75	83	77	73	56	100
	Annual Average	37	37	30	30	25	50
PM _{2.5}	36 th peak 24-hr	34	34	28	31	30	50
	Annual Average	20	20	16	17	16	25
NO ₂	19 th peak 1-hr	150	161	135	148	122	200
	Annual Average	<u>43</u>	<u>44</u>	32	40	37	40
O ₃	10 th peak 8-hr	<u>162</u>	<u>200</u>	154	<u>178</u>	<u>194</u>	160
CO	1 st peak 1-hr	1,720	2,150	1,530	2,090	1,700	30,000
	1 st peak 8-hr	1,574	1,903	1,279	1,591	1,519	10,000

Notes:

[1] Monitoring result(s) exceeding the AQO is/are bolded and underlined.

[2] All air quality data were extracted from EPD's Environmental Protection Interactive Centre.

6.3.2. Exceedance of concentration of NO₂ and O₃ in the AQO has been recorded at Yuen Long Monitoring Station. The exceedance of NO₂ is likely due to the influence from exhaust emission from traffic on the busy networks (e.g. Ma Miu Road and Castle Peak Road- Yuen Long etc.) in Yuen Long Area, whereas the exceedance of O₃ is mainly caused by regional air pollution problem and it is not directly emitted from man-made sources. In general, the results show a decreasing trend in the concentration of most pollutants in these 5 years.

Future Ambient Air Quality Condition

6.3.3. In view of the occupation year of 2032, Background air quality concentrations extracted from the path v3 data at Grid (22, 47) in Year 2030 represents background air quality concentrations at the Application Site area. A summary of background air quality concentration in Year 2030 is shown in **Table 6-4**. These data have demonstrated that the concentrations of pollutants are below the AQOs, except for O₃. O₃ is not directly emitted from an emission source. It is formed by the chemical reactions of NO_x and VOCs under the

presence of sunlight and a regional pollution problem. O₃ is therefore not considered as a key parameter in this assessment.

Table 6-4 Background Air Quality Concentration of Pollutants

Pollutant	Averaging time	AQOs Concentration limit (µg/m ³) (exceedance) [1]	Background (22,47)
SO ₂	4th peak 10-min	500	27.27
	4th peak 24-hr	50	6.92
PM ₁₀	10th peak 24-hr	100	52.98
	Annual Average	50	19.70
PM _{2.5}	36th peak 24-hr	30.33	30.4
	Annual Average	13.99	12.16
NO ₂	19th peak 1-hr	200	74.28
	Annual Average	40	16.53
O ₃	10th peak 8-hr	160	<u>190.65</u>
CO	1st peak 1-hr	30,000	530.78
	1st peak 8-hr	10,000	485.87

Notes:

[1] Prediction result(s) exceeding the AQO is/are bolded and underlined.

6.4. Identification of Assessment Area and Air Sensitive Receivers

- 6.4.1. 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 6.1**.
- 6.4.2. Representative air quality sensitive receivers (ASRs) were identified and the separation distance between ASRs and Application Site are shown in **Figure 6.1** and summarized **Table 6-5**.
- 6.4.3. The existing and planned 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 Hung Shui Kiu and Ha Tsuen OZP No. S/HSK/2), 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. Site surveys were conducted on 23 February 2024 to verify the sensitive receivers and confirm with the desktop studies.

Table 6-5 Representative Air Sensitive Receivers

ASR ID	Location	Land Use	Shortest Horizontal Distance (m)	Maximum Building Height (mPD)
ASR1	Ching Chung Taoist Association Of Hong Kong Limited Ching Chung Care And Attention Home For The Aged	RCHE	9	16
ASR2	Shek Po Tsuen	Village	430	14
ASR3*	Planned Public Housing	Residential	90	120
ASR4*	Planned Education Development	Educational	120	140
ASR5	Ha Tsuen	Village	190	18
ASR6	Sha Chau Lei Tsuen Village	Village	20	17
ASR7	Sha Chau Lei Sitting Out Area	Recreational	67	17

Note: *Planned Development, according to HSK NDA Planning and Engineering Study

6.5. Potential Air Quality Impact - Construction Phase

- 6.5.1. Demolition, foundation and superstructure works would be anticipated in the construction phase. It is anticipated that the demolition of the 3-storey high existing building will generate a total of 246 m³ of demolished material. As advised by the Project team, the excavation area is around 2,000 m³, and 2,885 m³ of excavated material is estimated to be generated for the foundation.

Table 6-6 Estimated Quantity of Waste

Construction Stage	Amount of materials to be handled
Demolition	246 m ³
Foundation and Excavation	2,885 m ³

- 6.5.2. During the construction, the Contractor(s) will be required to transport the excavated materials out from the site to avoid the cumulation of materials on site. Excavated materials will be reused as fill materials within the Project Site 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.
- 6.5.3. Under the Air Pollution Control (non-road Mobile Machinery)(Emission), only approved or exempted non-road mobile machineries with a proper label are allowed to be used in the

construction site. In addition, dust potentially generated from concreting works could be minimized with the adaptation of MiC where most of the building structures are prefabricated offsite. Moreover, according to the current proposal, no basement floor is to be constructed, dusty emission from extensive associated earthworks is not expected. Noted that there will be some concurrent projects in the vicinity of the Project Site. The construction programme of potential concurrent projects, particularly HSK NDA Public housing development and Water Supply to Hung Shui Kiu New Development Area are unknown. The latest construction programme of the concurrent projects will be obtained during detailed design stage and construction stage such that the likeliness of overlapping construction phases should be avoided as far as practicable. Liaison with the contractors of these projects will be made to avoid scheduling heavy dust-generating activities simultaneously.

6.5.4. With the implementation of sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation and good site practices, significant adverse air quality impact 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 piling 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 Application Site is located as far as possible from nearby ASRs.
 - Provide electric power supply for on-site machinery as far as practicable and diesel generators and machinery shall be avoided to minimise the gaseous and PM emissions
 - Erect higher hoarding at the locations with ASRs in immediate proximity to the project site boundary
 - Avoid using exempted NRMMS
- 6.5.5. Contractors shall also implement the recommended air pollution control measures set out in “Recommended Pollution Control Clauses for Construction Contracts” available on EPD website.
- 6.5.6. Due to the small development scale, the construction works to be involved the Application Site would be very limited. Also, requirements set out in the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation to control potential emissions from non-road mobile machinery will need to be fully complied with. Therefore, gaseous emissions from diesel-fueled construction equipment would be minor and would not cause any significant adverse air quality impact.

6.6. Potential Air Quality Impact - Operation Phase

Industrial Emissions from chimney

- 6.6.1. An environmental survey was conducted and records of specified licenses were reviewed in October 2023. In addition, site inspections were conducted in 23 February 2024. The results of that survey have confirmed that no chimney is being located within 200m from the Application Site so that the horizontal buffer distance requirement is deemed complied with.

Odour Emission

- 6.6.2. Ha Tsuen Sewage Pumping Station is identified within 500m assessment area with a separation distance of 265m. As refer to the EIA Report of Upgrading and expansion of San Wai Sewage Treatment Works and expansion of Ha Tsuen Pumping Station (AEIAR-072/2003), the odour emission has been abated by design (i.e. the sewage surface within the wet wells would not be exposed to the atmosphere under normal operation) and mitigated, odour emission is thus expected to be minimal and air quality impact is considered insignificant.
- 6.6.3. No existing and proposed slaughterhouses, sewage treatment works facilities, village incinerators, odour sources and duty uses are found within 500m radius of the Application Site. Thus, no significant odour emission impact on the Proposed redevelopment is anticipated.
- 6.6.4. No odour impact is observed from the nearby Tin Shui Wai Nullah during the site visits in 23 February 2024. It is further confirmed by EPD that there is no odour complaint records in the past five years related to the concerned location at Tin Shui Wai Nullah (see **Appendix 9.2**) .

Industrial Emissions from Other Specified Uses

- 6.6.5. No Industrial zone is identified in the vicinity of the Application Site. However, during the site visits, it was observed that land zoned “R(A)2”, “R(A)3” and “E” in the planned HSK NDA to the north and west of the Application Site have been used as “Other Specified” uses currently. The shortest separation distance from these uses is 61m to the east and 79m to the north. Open storage, repairing workshops and logistic centre have been identified within the planned “R(A)2”, “R(A)3” and “E” zone, which are considered potential source of dusty and odour emission.
- 6.6.6. As refer to the HSK NDA Planning and Engineering Study-Investigation (**Appendix 3.1**), the development year Residential and Educational uses of R(A) zone and E zone are 2019-2029 and 2031-2035 respectively. Given the tentative completion year of the Proposed Redevelopment will be 2032, the existing open storage areas, repairing workshops and logistic centres within these areas shall be removed before these developments. Besides, based on site observations, the E zone are only used as temporary storage with infrequent operation of powered mechanical equipment currently. No excavation is observed. In view of the separation distance of 90m, short term and minial air quality impact from existing uses

on the proposed development is expected in case the existing uses are still in operation after commissioning of the proposed development in 2032. Thus, air quality impact of these activities on the Application Site during operation phase is thus not expected.

Vehicular Emissions from Open Road Traffic

- 6.6.7. The major air pollution source in the vicinity of the Application Site during operational phase would be tailpipe emission generated from road traffic along open road.
- 6.6.8. **Figure 6.2** shows the buffer separation between kerb side of nearby roads to the nearest façade of building. The Application Site is bounded by Ping Ha Road to the north, which is classified as rural road. The Application Site is also bounded by Sha Chau Lei Road to the East and an access road to the west, no information is available for these two roads in The Annual Traffic Census 2022. As advised by Traffic Consultant, these two roads are feeder roads. The buffer distance is summarized in **Table 6-7**. The buffer separation can meet the buffer distance requirement. No adverse air quality impact due to vehicular emission is anticipated.

Table 6-7 Buffer distance between the Proposed redevelopment and Nearby Road

Road	Road Type	HKPSG Guideline Buffer Distance Requirement	Distance between Proposed Redevelopment Site Boundary and nearby road
Ping Ha Road (from Hung Tin Rd to Tin Ha Rd) ^[1]	Rural Road	5m	65m
Sha Chau Lei Road	Feeder Road	5m ^[2]	6m
Access Road on the West	Feeder Road	5m ^[2]	6m

Note: ^[1]Although the AADT of Ping Ha Road (from Hung Tin Rd to Tin Ha Rd) is approx. 20,000 in both 2021 and 2022, the maximum buffer distance (>20m) as required in the HKPSG could be met and no adverse vehicular emission impact from Ping Ha Road to the proposed development would be expected.

^[2]The buffer distance for local distributors (>5m) is adopted for these road types as buffer distance requirements for these road types are not specified.

- 6.6.9. Openable windows will be provided at dormitory of RCHE for ventilation. No openable windows will be designed at buffer zone. Centralised Air conditioning will be provided at the Project Redevelopment, the location of fresh air intake will be carefully design and will not encroach on the buffer zone as recommended in the HKPSG. Recreational uses in the open

area will not be provided within the buffer zone as well.

Air quality impact arising from the Proposed Redevelopment

6.6.10. The nature of the proposed Redevelopment is not environmental polluting. The use of the Proposed Redevelopment is similar to other typical institutional uses in Hong Kong, including normal rehabilitation and child care services. In addition, the design and operation of refuse collection point on G/F will adhere to the requirements and guidelines stipulated in HKPSG. In this connection, dust generation or gaseous emissions are not expected. While about 13 open car parking spaces will be provided tentatively and the majority of visitors are expected to travel to the Application Site by public transportation or on foot. Additional traffic flow induced by the Project is considered insignificant.

6.6.11. A kitchen will be provided at 8/F. Oily fumes and cooking odour emissions may potentially arise from the kitchen. To minimize these emissions, the following considerations when positioning the exhaust outlets of the kitchen are recommended in EPD's Control of Oil Fume and Cooking Odour from Restaurants and Food Business, and will be considered during the detailed design:

- Locate the outlets at such a place where the ventilation is good and the emissions from them can be adequately dispersed without hindrance;
- Provide sufficient separation distance from any sensitive receptor in the vicinity so that the emissions will not cause, or contribute to, an odour nuisance or other type of air pollution to the public;
- Ensure the emissions from the exhaust system will be directed vertically upwards, unless it can be demonstrated by an environmental professional that other direction is more advantageous in preventing emissions from causing air pollution problems; and
- Ensure that emissions from the exhaust system will not be restricted nor deflected by, for example, the use of plates or caps.

6.7. Conclusions

- 6.7.1. With the implementation of dust suppression measures of the Proposed redevelopment 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.
- 6.7.2. For the vehicular emission, a sufficient horizontal buffer distance between Ping Ha Road, Sha Chau Lei Road and Access Road on the West to the Application 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 redevelopment is anticipated.
- 6.7.3. In view of no chimney was identified within 200m from the project site boundary, no air quality impact with respect to industrial chimney emission on the future domestic users in the Proposed redevelopment is anticipated.
- 6.7.4. Dust generation and gaseous emission are not anticipated during the operation phase from the Project, where additional traffic flow induced by the operation of the Project is also insignificant. Therefore, adverse cumulative air quality impact arising from the Project during operation phase is not expected.

7. Noise Impact Assessment

7.1. Introduction

- 7.1.1. Traffic noise and fixed noise impact are identified upon the Proposed redevelopment.
- 7.1.2. The potential traffic noise impact is mainly dominated by Ping Ha Road, Sha Chau Lei Road and access road within the assessment area, road traffic noise impact assessment was conducted to evaluate potential adverse noise impact arising from the carriageways in the vicinity of the Application Site (detailed in **Section 6.3**).
- 7.1.3. Since the Application Site is surrounded by open storage/workshops, numerous village settlements and a Care and Attention Home in its vicinity, potential fixed noise impact on the proposed redevelopment is envisaged.

7.2. Design Strategy for Noise Consideration

- 7.2.1. 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 redevelopment. **Table 7-1** below summarizes the design strategies adopted in the Proposed redevelopment.

Table 7-1 Summary of Noise Conscious Design Strategy

Item	Design Strategy/Mitigation Measure	Considerations in the Proposed redevelopment
1	Building Setback	- The proposed redevelopment requires to maintain a setback from Ping Ha Road to increase the horizontal separation distance from noise sources.

7.3. Traffic Noise Impact Assessment

- 7.3.1. This traffic Noise Impact Assessment is prepared to assess the potential traffic noise impact on the noise sensitive uses of the Proposed redevelopment and recommend mitigation measures where practicable to attenuate the noise impact, if any.

Assessment Criteria

- 7.3.2. 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 office and dormitories of CCC (relies on openable windows for ventilation) are $L_{10(1-hour)} 70dB(A)$; sick bays/wards of RCHE/RCHD is $L_{10(1-hour)} 55dB(A)$.

Noise Assessment Points

- 7.3.3. Noise Assessment Points (NAP) within the Proposed redevelopment have been selected to assess the road traffic noise impact to the noise sensitive uses. Dormitory in CCC(G/F), bedrooms, sickbays and office in the RCHE (2-4/F) and RCHD (5-6/F), with openable windows/doors for prescribed ventilation purposes are regarded as NSRs, which are likely to be affected by traffic noise impact. For other rooms in RCHE, centralized air-conditioning will be provided and will not rely on openable windows for ventilation. 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.
- 7.3.4. **Figure 7.1** shows the location of the selected NAPs for traffic noise impact assessment.

Assessment Methodology

- 7.3.5. The potential noise impact arising from nearby existing and future road carriageways on the Noise Sensitive Receivers (NSRs) of Proposed redevelopment was assessed.
- 7.3.6. This approach considers the worst-case scenario of 15 years from the tentative completion date (Year 2032) of the Proposed redevelopment. 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.
- 7.3.7. **Appendix 7.1** 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, which is provided by the Project Traffic Consultant. The endorsement of Traffic Department on the road type is shown in **Appendix 7.3**.
- 7.3.8. 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 and office uses, $L_{10(1\text{-hour})}$ 55dB(A) for Diagnostic Rooms). Practicable noise mitigation measures have been recommended where necessary.

Assessment Result under Base Case Scenario

- 7.3.9. Road traffic noise assessment is being carried out for a “base case scenario”, which is based on the building design strategy mentioned above while without any noise mitigation measures proposed. The results of the assessment have indicated that the highest predicted noise level is 71dB(A) for dormitories/bedrooms/office and 63 dB(A) for sick bays in RCHE and RCHD. 3 sickbays will exceed with the traffic noise criteria of 55dB(A) as set out in the

HKPSG. **Table 7-2** summarizes the results of the of traffic noise assessment under base case scenario.

Table 7-2 Traffic Noise Prediction Results, Base Case Scenario

	CCC, RCHE & RCHD (G/F-6/F)		
	Dormitory/ Bedrooms / Office	Sickbay	Total
Maximum Predicted Traffic Noise Level, $L_{10,1\text{ hr}}$ in dB(A)	68	63	-
Noise Criteria $L_{10,1\text{ hr}}$ in dB(A)	70	55	-
Total No. of Rooms with Openable windows	56	5	61
Total No. of Rooms Exceed Traffic Noise Criteria	0	3	3
Compliance Rate	100%	40%	95%

7.3.10. Since noise exceedance is found in the Proposed redevelopment, traffic noise assessment for a “mitigation scenario” has been carried out.

7.3.11. Mitigations including 1.8m fin and fixed windows have been adopted. The location of architectural fin and fixed windows is given in **Figure 7.2** and summarized in **Table 7-3**. **Table 7-4** summarizes the results of the traffic noise assessment under the mitigation scenario. Under the mitigated scenario, no room will exceed the traffic noise criteria of 70dB(A) and 55 dB(A) as set out in HKPSG.

Table 7-3 Mitigation Schedule

Floor	Room	NAP	Mitigation Measure
6F	Sickbay	I	Fixed Window
2F	Sickbay	O	Fixed Window
3F	Sickbay	K	Fixed Window

Table 7-4 Traffic Noise Prediction Results, Mitigation Scenario

	CCC, RCHE & RCHD (G/F-6/F)		
	Bedrooms / Office	Sickbay	Total
Maximum Predicted Traffic Noise Level, $L_{10,1\text{ hr}}$ in dB(A)	68	55	-
Noise Criteria $L_{10,1\text{ hr}}$ in dB(A)	70	55	-
Total No. of Rooms with Openable windows	56	2	58
Total No. of Rooms Exceed Traffic Noise Criteria	0	0	0
Compliance Rate	100%	100%	100%

Summary for Road Traffic Noise Impact Assessment

- 7.3.12. Potential road traffic noise impact on the Proposed redevelopment has been assessed. According to the road traffic noise impact assessment result, the Proposed redevelopment would not be subject to significant adverse road traffic noise impact under the mitigation scenario. Full compliance will be achieved with respect to the traffic noise criterion recommended in the HKPSG.

7.4. Fixed Plant Noise Impact Assessment

Introduction

- 7.4.1. 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

- 7.4.2. 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.
- 7.4.3. According to the Approved OZP, various “Residential (Group A)” (“R(A)”) , Government, Institution or Community (“G/IC”) and “Village Type Development” (“V”) zoned developments, including Sha Chau Lei Tsuen, Ching Chung Taoist Association Of Hong Kong Limited Ching Chung Care And Attention Home For The Aged, and Proposed Public housing are identified in the vicinity of the Proposed redevelopment. A strip of area zoned “Open Space (“O”) are respectively located to the southwest and the south of the Application Site.
- 7.4.4. In determination of the Acceptable Noise Level (ANL) of concerned NSRs, the Area Sensitive Rating (ASR) should be identified under the IND-TM. According to Annual Traffic Census of 2022 issued by Traffic Department, Ping Ha Road has an annual average daily traffic flow below 30,000 and is not considered as an influencing factor (IF) by definition. In addition, Ha Tsuen is considered a rural area will village-type developments. Since no industrial zone is identified inside a 100m radius around the Application Site, the area sensitive rating of “A” is adopted in this project.

Table 7-5 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	A	60	55

- 7.4.5. 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.



Industrial noise impacts on the proposed redevelopment


7.4.6. According to desktop study and site visits, adjacent areas have been used as open storage, open storage of machinery, car repairing workshop and logistic entre, which are considered as potential fixed noise sources. These sources are found within 300m of the Application Site, as shown in **Figure 7.2**.




7.4.7. Site inspections have been conducted in February 2024. Most of the potential noise sources are situated to the west of the Proposed Redevelopment. Among the fixed sources identified, the logistic centre and the open storage of machinery with ancillary workshop has direct line of sight from the NSRs to these activities. All of the fixed noise sources have no nighttime operation. The activities observed, shortest separation distance of the fixed noise source is tabulated in **Table 7-6**.


Table 7-6 Potential fixed plant noise sources in the surrounding


Fixed Noise Source	Activities identified	Photo	Shortest Distance
S1- Kingway Enterprise Ltd-Open Storage of Machinery with Ancillary Workshop	<p>Open storage of machinery with an ancillary workshop is found to the north of the Application Site, across Ping Ha Road.</p> <p>During site visits, loading and unloading of construction materials using a mounted excavator was observed. Uncontinuous operation has been observed. [max. 15 mins operation in 30 mins]</p> <p>There is a direct line of sight from the NSRs to those activities.</p>		90m

Fixed Noise Source	Activities identified	Photo	Shortest Distance
S2-T M Testing Co., Ltd.	<p>It is within R(A) zone to the east of application site with proposed public housing development.</p> <p>The Site involved in testing of construction materials (i.e. curtain walls), with no powered machnical equipment involved.</p> <p>Activities were observed to be carried out within the temporary structure. Infrequent operation were observed in site visits. No noisy activities were observed inside the area.</p> <p>The Site was closed at night, nighttime operation is not expected.</p>		75m
S3-CK Motor Car Repairing Workshop	<p>A vehicle maintenance and repair work with temporary structures was identified next to the logistics centre.</p> <p>As observed in the site visits, vehicle maintenance and repair works were carried out within the structures. No nighttime operation as confirmed by the operator.</p> <p>Used of both powered mechanical equipment and manual operations were observed, including hand-held pneumatic tool and 2 2no. car lifter.</p>		150m


Fixed Noise Source	Activities identified	Photo	Shortest Distance
	<p>Concurrent operation of powered mechanical equipment (max. 2no.) is observed.</p> <p>The noise due to the hand-held pneumatic tool was noncontinuous and short in duration.</p> <p>Since the workshop is mostly enclosed in a shelter while the opening of this facility is surrounded by other temporary structures. It has no direct line of sight from the NSRs to those activities. Noise from the workshop was not noticeable at the Application Site.</p>		
S4- Sing Kee Car Repairing Workshop	<p>It is within R(A) zone to the east of application site with proposed public housing development.</p> <p>A vehicle maintenance and repair works with temporary structures was identified. Works were observed to be carried out within the temporary structures.</p> <p>As confirmed by the workshop owner, the workshop closes at 7 pm, nighttime operation is not expected.</p> <p>Used of both powered mechanical equipment and manual operations were observed,</p>		116m


Fixed Noise Source	Activities identified	Photo	Shortest Distance
	<p>including hand held pneumatic tool and forklift.</p> <p>Concurrent operation of max. 2 works were observed. Continuous operations were not observed. The noise was not noticeable at the Application Site.</p>		
S5- Temporary Vehicle Repair Workshop	<p>A vehicle maintenance and repair works with temporary structures was identified. Works were observed to be carried out with the temporary structures.</p> <p>Only manual operation with use of hand-held tools observed and confirmed by workshop operator. Max 1 maintenance works to be carried out on site.</p> <p>No nighttime operation is observed and confirmed by workshop operator.</p> <p>It is expected to have direct line of sight from the NSRs.</p>		108m
S6-Wellside International Logistic Centre	<p>It is within R(A) zone to the east of application site with proposed public housing development.</p> <p>A logistic centre is found at the east of the Application Site</p>		79m


Fixed Noise Source	Activities identified	Photo	Shortest Distance
	<p>across the Tin Shui Wai Nullah. During site visits, movements of vehicle were observed. As confirmed by the site owner, the facility is closed at night, there is no night-time operation.</p> <p>Based on the on-site observations, approximately 30 lorry trucks entering and/or leaving the facility in every 30 mins. Loading and unloading activities were observed within the parking lane and the facility.</p> <p>The loading and unloading activities were carried out at the shelter area with operation time of approximately 10 mins. The use of forklift was observed.</p> <p>There is direct line of sight from the NSR to the logistic centre.</p>		
S7-Hing Luen Motor Company	<p>It is within R(A) zone to the east of application site with proposed public housing development.</p> <p>A vehicle maintenance and repair works with temporary structures was identified. Works were observed to be carried out within the temporary structures.</p> <p>Since the facility is closed at night, there</p>		145m

Fixed Noise Source	Activities identified	Photo	Shortest Distance
	<p>is no nighttime operation.</p> <p>based on site visits, only vehicle parking was observed.</p> <p>No powered mechanical equipment observed.</p> <p>There is no direct line of sight from the NSRs to this facility</p>		
S8-Metal storage area	<p>It is within R(A) zone to the east of application site with proposed public housing development.</p> <p>An open storage area of metals was found to the east of the Application Site.</p> <p>The facility was closed at night, there is no nighttime operation.</p> <p>During site observation, no entry of vehicles and maintenance/repair activities was observed. Use of excavator is expected.</p>		101m

Fixed Noise Source	Activities identified	Photo	Shortest Distance
S9- Public Open Carpark	<p>An open car park is found to the north of the Application Site.</p> <p>During site inspections, only parking of light vehicles were observed. Infrequent activities were found in the carpark, no noticeable noise were observed.</p> <p>Full-day operation is expected.</p> <p>There is direct line of site from the NSRs.</p>		13 m

Fixed Noise Source	Activities identified	Photo	Shortest Distance
<p>S10 -VRV outdoor units (VRV OUs) of Ching Chung C&AH</p>	<p>During site observation, a set of VRV OUs was observed at the façade of Chng Chung C&AH facing the Application Site. No noticeable noise from the OUs was observed. All windows were closed.</p> <p>Nighttime operation is expected.</p>		<p>9m</p>

Fixed Noise Source	Activities identified	Photo	Shortest Distance
S11- CLP Substation of Ching Chung C&AH	<p>A substation was found between the building block of Ching Chung C&AH and the Application Site.</p> <p>Full-day operation is expected. No noticeable noise is observed from the NSRs in the Application Site.</p> <p>The ventilation louvre is facing away from Application Site.</p>		17m

Fixed Noise Source	Activities identified	Photo	Shortest Distance
S12 Container System Ltd Storage Depot	<p>Based on desktop study, there are 4 forklifts on site. Yet, no loading and unloading were observed during the site visits.</p> <p>As a conservative approach, the noise due to the loading and unloading of forklifts has been included in the quantitative assessment.</p> <p>There is no nighttime operation and no direct line of sight from the NSRs.</p>		99m

7.4.8. According to the HSK NDA Planning and Engineering Study – Investigation Report, the R(A)2 and R(A)3 zones to the east of the Application Site are proposed as public housing development with a tentative intake year of 2030. The existing fixed noise sources identified in the site inspections (S1-4, S6-S8) will no longer exist when the proposed redevelopment comes into operation. As such, the existing open storage workshops will not interface with the proposed redevelopment. Potential noise impact for these existing industrial uses in the vicinity to the proposed development is not expected. During site inspection, the carpark (S9) is mainly for private cars and no light and heavy vehicles were observed, it is a low capacity carpark and no obvious noise was observed, noise impact is not expected and a quantitative assessment is not considered for S9. Other identified sources (S5, S10-S12) will be included in the quantitative assessment.

7.4.9. The quantitative assessment results in **Appendix 7.4** revealed that the predicted industrial noise levels can meet the ANL requirements set out in the TM-IND.

Industrial noise impacts due to Project

7.4.10. Potential industrial noise to be generated from the Proposed redevelopment includes noise from the operation of air-conditioning units from the residential units, mechanical ventilation

installations of the plant rooms, as well as other fixed noise sources equipment.

7.4.11. Mechanical Equipment and Air conditioning (MVAC) and E&M plants, such as pump units, transformers, emergency generator and lift machines will be placed at enclosed plant rooms, which is at least 20 m to the nearest noise sensitive receivers at Ching Chung Care and Attention Home For The Aged. The ventilation louvres, mechanical ventilation intakes or exhausts of MVAC equipment and E&M plant rooms will be treated by silencers and enclosure, if necessary.

7.4.12. The choice of equipment and the requirement of noise control measures, such as acoustic treatments by silencers and enclosure, will be determined to ensure that noise level at potentially affected NSR will comply with the noise criteria. The cumulative noise impact on nearby NSRs shall comply with statutory requirement under Noise Control Ordinance (NCO) stipulated in IND-TM. For the design of plant noise control treatment, the plant noise 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. The prevailing background noise levels shall be determined at detailed design stage, before construction commencement, for determining the planning criteria. The design requirement for the compliance to HKPSG criteria will be stated clearly in the tender specification. The Contractor shall be responsible for the design of the MVAC and E&M plants with proper mitigation measures, if necessary.

7.5. Summary of Fixed Noise Impact Assessment

7.5.1. The potential fixed noise impact has been assessed. According to the assessment result, the Proposed redevelopment will not subject to any additional and significant adverse noise impact from fixed noise sources.

7.5.2. To ensure that the noise level at potentially affected NSRs will comply with the statutory requirement under Noise Control Ordinance stipulated in IND-TM, all on-site planned fixed plant within the Proposed redevelopment 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.

8. Water Quality Assessment

8.1. Introduction

8.1.1. 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.

8.2. Environmental Legislation, Standards and Guidelines

8.2.1. 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;
- Professional Persons Environmental Consultative Committee Practice Note 2/23 “Construction Site Drainage” (ProPECC PN2/23); and
- 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”)

8.2.2. 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 8-1**.

Table 8-1 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, should be absent. (f) Waste discharges shall not cause the water to	Whole Zone

Parameters	Objectives	Sub-Zone
	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	Yuen Long & Kam Tin (Upper and Lower) Subzones, Beas

Parameters	Objectives	Sub-Zone
	litre.	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
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 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	Outer Marine Subzone

Parameters	Objectives	Sub-Zone
	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 C ₆ H ₅ OH.	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

- 8.2.3. 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)

- 8.2.4. 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)

- 8.2.5. 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.

8.3. Assessment Area and Water Sensitive Receivers

- 8.3.1. 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 8.1**.
- 8.3.2. 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 1 no. watercourse is identified. Key WSRs within 500m from the boundary of the Project were identified in **Table 8.2** below and their respective locations are illustrated in **Figure 8.1**.

Table 8-2 Summary of Representative Water Sensitive Receivers

ID	Name	Nature	Distance(m)	Description
<i>Key Inland WSR within 500m from the boundary of the Project</i>				
WSR1	Tin Shui Wai (TSW) Main Channel	Channelised watercourse	26	Tin Shui Wai (TSW) Main Channel and its tributaries are located in the Deep Bay WCZ and are a major freshwater system. This channel system generally runs from south to north and eventually enters the marine water at inner Deep Bay. Part of the core channel is identified to the right of the Application Site. The natural stream is located near Hung Tin Road
	Small tributary stream	Channelised watercourse	314	

- 8.3.3. The water quality of TSW Main Channel and its tributaries is routinely monitored by EPD. According to the EPD's publication "River Water Quality in Hong Kong in 2022", the downstream station (TSR1), which is to the south east of the redevelopment, was 90% in compliance in 2022 as compared with 2012's 88%. The EPD station at Tin Sui Wai Catchment (TSR1 as shown in Figure 8.1) received 'Good' grading respectively in 2022. The water quality at this EPD monitoring stations in the TSW Catchment is summarised in **Table 8-3**.

Table 8-3 Summary Statistics of River Water Quality Data at TSR1 Collected by EPD in 2022

Parameters	EPD Station TSR1	WPCO WQO
Dissolved oxygen (DO) (mg/L)	7.2 (2.6-10.3)	Waste discharges shall not cause the level of dissolved oxygen to be less than 4 mg/L
pH	7.7 (7.3-9.1)	The pH of the water should be within the range of 6.0-9.0
Suspended solids (mg/L)	8.2 (1.1-32.0)	Waste discharges shall not cause the annual median of suspended solids to exceed 20mg/L
5-day Biochemical Oxygen Demand (BOD) (mg/L)	3.6 (2.3-8.5)	Waste discharges shall not cause the 5-day biochemical oxygen demand to exceed 5mg/L

Parameters	EPD Station TSR1	WPCO WQO
Chemical Oxygen Demand (COD) (mg/L)	14 (8-19)	Waste discharges shall not cause the chemical oxygen demand to exceed 30mg/L
Oil & grease (mg/L)	<0.5	N/A
E. coli (cfu/100mL)	27000 (10000-150000)	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
Faecal Coliforms (cfu/100mL)	98 000 (28 000 - 290 000)	
Ammonia-Nitrogen (mg/L)	1.400 (0.630 - 4.800)	The un-ionized ammoniacal nitrogen level should not be more than 0.021 milligram per litre, calculated as the annual average (arithmetic mean).
Nitrate-Nitrogen (mg/L)	0.750 (0.410 - 0.950)	Nutrients shall not be present in quantities sufficient to cause excessive or nuisance growth of algae or other aquatic plants. 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.
Total Kjeldahl Nitrogen (mg/L)	2.00 (1.20 - 6.00)	-
Orthophosphate Phosphorus (mg/L)	0.120 (0.074 - 0.210)	-
Total Phosphorus (mg/L)	0.19 (0.13 - 0.51)	-
Sulphide (mg/L)	<0.02 (<0.02-0.03)	-
Aluminium (µg/L)	60 (<50-160)	-
Cadmium (µg/L)	<0.01 (<0.01-0.01)	-
Chromium (µg/L)	<1 (<1-1)	-
Copper (µg/L)	2 (<1-3)	-
Lead (µg/L)	<1 (<1-1)	-
Zinc (µg/L)	<10 (<10-24)	-
Flow (m ³ /s)	No measurement taken	-

Note:

[1]Data Source: River Water Quality in Hong Kong in 2022 (EPD)

[2]Data presented are in annual medians of monthly samples; except for E. coli which are in annual geometric means.

8.3.4. The level of E.Coli measured in TSR1 (downstream of TSW Nullah) was high (i.e. 27000

cfu/100mL). The E.coli levels discharges from the river was high, which is subject to domestic discharge of the expedient connections and unsewered villages in the area. However, the level decreased when compared to previous years.

8.4. Construction Phase Assessment

Construction Site Runoff

8.4.1. 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

8.4.2. Construction site runoff may cause physical, biological and chemical effects. The physical effects include potential blockage of watercourses and drainage channels and increase of SS levels. Local flooding risk may be increased in heavy rainfall situations. The chemical and biological effects caused by the construction runoff are highly dependent upon its SS levels and pH values. Runoff containing significant amounts of concrete and cement-derived material may cause primary chemical effects e.g. increasing turbidity and discoloration, elevation in pH, and accretion of solids. A number of secondary effects may also result in toxic effects to water biota due to elevated pH values, and reduced decay rates of faecal micro-organisms and photosynthetic rate due to the decreased light penetration. Construction site runoff comprises:

- Surface run-off may be contaminated and turbid water may enter adjacent stream and stormwater drainage system as excavated material is delivered to ground surface;
- Runoff and erosion from site surfaces, drainage channels, earth working areas and stockpiles, release of concrete washing with construction runoff and stormwater. Effluent discharge from temporary site facilities should be controlled to prevent direct discharge to the neighbouring drainage system. Such wastewater may include wastewater resulting from dust suppression sprays and wheel washing of site vehicles at site entrances; and

- Fuel, oil, solvents and lubricants from maintenance of construction machinery and equipment: The use of engine oil and lubricants, and their storage as waste materials has the potential to create impacts on the water quality of adjacent water courses if spillage occurs and enters watercourses. Waste oil may infiltrate into the surface soil layer, or run-off into local water courses, increasing hydrocarbon levels;

Mitigation Measures and Good Site Practice

8.4.3. 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

- 8.4.4. 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

- 8.4.5. 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.
- 8.4.6. 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

- 8.4.7. 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

- 8.4.8. 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.
- 8.4.9. 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.

8.5. Potential Impacts During Operation Phase

8.5.1. 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

8.5.2. The Application Site is a gently flat land 100% paved with concrete. It is currently a site used as Care and Attention Home. According to the latest design, some areas of greening/landscaping are recommended to create buffer area around the Application Site. The landscape will be managed and maintained in accordance with standard landscape practice and ArchSD General Specification. A Drainage Impact Assessment (DIA) report is prepared to review the public storm drain facilities and catering non-point source pollution/surface runoff.

8.5.3. The Project Site is currently a gentle flat land paved with concrete surface. There will be no major changes in surface properties and gradient, which will not significantly alter the overall catchment characteristics.

8.5.4. Surface runoff within the Project Site will be collected and discharged to existing public stormwater drainage network at terminal manhole SMH1012065 and SMH1012064. Surface runoff will also be collected at the catchpit SCH1006385 and the tapping point STH1001940 before discharging to the Tin Shui Wai Main Channel. The Project consists of redevelopment on a 100% paved site. Reduction of non-paved area is not expected. Additional discharge to the public drainage system is not expected.

Sewage Generated from Population of Proposed redevelopment

8.5.5. An estimated average dry weather flow of 137.2 m³/day will be discharged to the existing sewer arrangement to the West of the Application Site at FMH1009620. The sewage is discharged into a series of public sewers with diameters ranged from 150mm to 300mm were found along service lane to the south of the Project Site at the unnamed access road to the west, then conveyed to 300 mm sewer along Sha Chau Lei Road to Ha Tsuen Pumping Station and eventually to San Wai Sewage Treatment Plant.

8.5.6. The hydraulic calculation of the sewerage flow are shown in Sewerage Impact Assessment

(SIA) report. The pathway of the connection pipe to public drainage will also be shown in **Figure 8.2** and in the DSIA report.

Mitigation Measures during Operation Phase

8.5.7. In order to minimize the pollution loading, silt/sand traps should be provided for the drainage systems of open areas. 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.

8.6. Conclusion

8.6.1. Tin Shui Wai Main Channel (WSR 1) is at the east of the Proposed redevelopment with a minimum separation distance of 26m. 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.

8.6.2. 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.

8.6.3. 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.

8.6.4. For operation phase, with implementation of proper pre-treatment facilities and good management measures, the potential water quality impact is anticipated to be insignificant.

9. Land Contamination Assessment

9.1. Guidelines

9.1.1. 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.

9.2. Objectives

9.2.1. 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, etc);
- and to propose forthcoming actions in case the potential land contamination identified.

9.3. Review of Historical Aerial Photos and Past Land Use

9.3.1. The earliest aerial record obtained from Lands Department showed that the Application Site was a vegetated land in 1975, which was turned into an empty paved ground in 1982. Building Block was found towards the centre of the site in 1984. As Confirmed by Project Team, the Application Site was operated as Pok Oi Yeung Chun Pui Care and Attention Home from 1985 to the present. At 1987, the northern areas of the Application Site are covered by vegetation. Part of the vegetation at the corner was found to be removed in 1998 whereas greeneries at the northern boundary of the site were removed in 2007. In 2022, planters were added to the north of the building block. No significant changes in land use are observed since 1984

9.3.2. The aerial photos are attached in **Appendix 9.1**. A summary of the land use of the Application Site is given in **Table 9-1**.

Table 9-1 Summary Table of Land Use

Period / Year	Land Use / Description	Sources of Information
1975, 1981	The Application Site was a vegetated land	Aerial photo from Lands Department(LandsD)
1982	The ground is empty and paved.	Aerial photo from LandsD
1984	One building structure at the centre is occupied by Pok Oi Hospital. Greeneries were found to the northeast corner. Ching Chung Care and Attention Home for the Aged was built to the south of the Application Site	Aerial photo from LandsD

Period / Year	Land Use / Description	Sources of Information
1987	Condition at site similar to that in 1984 Village settlements (Sha Chau Lei Tseun) found to the West of the Application Site.	Aerial photo from LandsD
1991	No significant changes in land use are observed within the Application Site. Car park to the North of the Application Site established	Aerial photo from LandsD
1998	Some greeneries at the northern corner within the Application Site became paved, no significant change observed within the Application Site.	Aerial photo from LandsD
2007	Greeneries at the northern boundary of the Application Site paved, no significant change observed within the Application Site.	Aerial photo from LandsD
2015	No significant changes in land use are observed within the Application Site.	Aerial photo from LandsD
2022	A planter found to north of the building block, no significant change observed within the Application Site and the surrounding.	Aerial photo from LandsD

9.3.3. In view of the activities observed from the aerial photos, there is no significant changes in land use, land contamination is expected to be unlikely.

9.4. Information from Government Departments

9.4.1. 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 8.2** below. Copy of the letters replied from various Government Departments are included in **Appendix 9.2** for reference.

Table 9-2 Enquiries and Responses on Land Contamination Related Records in the Application Site

Consultant's Letter Ref.	Department	Response Letter Ref.	Response Date	Summary
819.4524/23-0001	Environmental Protection Department (EPD)	Nil. Through Email	10 Nov 2023	no record of reported accidents of spillage / leakage of chemicals at the area specified
819.4524/23-0002	Fire Services Department (FSD)	(205) in FSD GR 6-5/4 R Pt.49	10 Nov 2023	The case is being handled. The following information will be furnished as soon as possible: <ul style="list-style-type: none"> • Dangerous Goods License Record: from the year of 1990 to present moment. • Incident Record: Past three years

Consultant's Letter Ref.	Department	Response Letter Ref.	Response Date	Summary
				of fire and special services incidents. Consultant's follow up action has been taken and appointment letter was submitted in 29 November 2023.
		(91) in FSD GR 6-5/4 R Pt.50	13 Dec 2023	Neither records of dangerous goods license, fire accidents nor incidents of spillage/ leakage of dangerous goods were found in connection with the given conditions of your request at the subject location.
		(81) in FSD GR 6-5/4 R Pt. 54	30 Jul 2024	Neither records of dangerous goods license, fire incidents nor incidents of spillage / leakage of dangerous goods were found in connection with the given conditions of your request at the subject location.
819.4524/23-0003	Planning Department	Nil. Through Email	3 Nov 2023	The subject Sha Chau Lei Tsuen Pok Oi Hospital Yeung Chun Pui Care and Attention Home was completed in 1984, and no development/redevelopment proposal at the site has been approved since then
819.4524/23-0004	Lands Department	Nil. Through Email	25 Oct 2023	The subject site is held under Lot 2273 and the Extension thereto in D.D. 125 ("the Lot") which was granted to Pok Oi Hospital under New Grant No. 2882 dated 21.5.1980 by way of Private Treaty Grant at nil premium and an Extension Letter dated 8.6.1984 registered by Memorial No. YL289856. The Lot was also varied or modified by two modification letters dated 1.3.1982 and 4.7.1983 registered by Memorial No. YL259362 and YL279198 respectively. The user of the subject site is a non-profit making residential care and attention home for the aged and such ancillary and amenity purposes. No information/record on spillage accidents, illegal/contaminating land uses or uncontrolled dumping uses of the subject site.
819.4524/233-0005	Hong Kong Police Force	Nil. Through Email	1 Nov 2023	We do not hold record of any current and historical explosive storage locations for the mentioned site, as well as any explosive spillage and incident reports.

- 9.4.2. Based on the information available, there is no record of any reported chemical spillage/leakage in the past 5 years. The consultant visited the territory-wide register of chemical waste producers maintained at the Territory Control Office in Wan Chai on 3 May 2024. There is one registered chemical waste producer at the Project Site (as “Yeung Chun Pui Care & Attention Home(Pok Oi Hospital)”). Details of the chemical waste producer is provided in **Appendix 9.3**. As advised by EPD, one valid chemical waste producers were found. Given the nature of the business of care and attention services on the registry, dangerous goods are not anticipated to be generated on-site.
- 9.4.3. Also, there are neither records of dangerous good license, fire incidents nor incidents of spillage/ leakage of dangerous goods were found in the Application Site based on FSD’s record.
- 9.4.4. As refer to PlanD’s response, the site is occupied by Sha Chau Lei Tsuen Pok Oi Hospital Yeung Chun Pui Care and Attention Home since 1984 with no further site proposal. LandsD supplemented that the only user of the Application Site is a non-profit making residential care and attention home for the aged and such ancillary and amenity purposes. No information/record on spillage accidents, illegal/contaminating land uses or uncontrolled dumping uses of the subject site are recorded.
- 9.4.5. Given the nature of the site usage as a Care and Attention Home, no uses of chemicals and dangerous goods, chemical spillage and contamination is expected. Therefore, no adverse land contamination impacts were expected from the Application Site based on the previous land uses.
- 9.5. Site Visit and Observation
- 9.5.1. Site visit was conducted on 23 February 2023 to identify potential sources of land contamination.
- 9.5.2. Upon the site visit, the Application Site was observed to be consistent with the abovementioned available information and it is observed that the whole Application Site was a Care and Attention Home with one building block. The Application Site was completely paved.
- 9.5.3. Photo records of the Application Site taken during the site visit are presented in **Appendix 9.3**. A Site Walkover Checklist has been completed as required in the EPD’s Practice Guide and attached in **Appendix 9.4**.

Store Rooms Outside Block (Photo 1-3)

- 9.5.4. Store rooms were inspected for any potential signs of land contamination. Photo 1-3 were gas cylinder store and switch room previously and have been used as store rooms after the adoption of electricity for power. No chemicals/gas cylinder are found. These rooms are situated in bund floors with no cracks observed.

Store rooms within Block (Photo 4-7)

- 9.5.5. These store rooms were also observed to be in good condition without signs of chemical storage nor any chemical leakage/spillage. The flooring was observed to be in good condition without any observable cracks. Dishwashing Detergents are found in the storeroom in Photo 6, no observable crack, stain and unidentified odour is found.

Pavement Area (Photo 8-10, 13-15)

- 9.5.6. The Pavement is paved with concrete in good condition, with no observable crack, oil stain and no unidentified odour of any sort. No chemical storage is identified. Buckets found in Photo 10 are confirmed food compost.

Temporary Structures (Photo 11-12)

- 9.5.7. Temporary storage structures are found. Electrical Appliance (Photo 11), Operation and Maintenance (O&M) Facilities are found in these structures. The ground of these structures are paved in good condition. No chemical is stored inside these structures.

Car Park Space (Photo 9)

- 9.5.8. No oil stain was found on the paved ground in the car park space.
- 9.5.9. During the site visit, it was observed that there were no other signs of obvious/ suspected contamination such as abnormal odour and/or distressed vegetation, and no aboveground/ underground storage tank and pipe works within the whole Application Site.

9.6. Summary

- 9.6.1. According to the desktop study, the Application Site was occupied by Pok Oi Yeung Chun Pui Care and Attention Home upon establishment in 1984. There was one building block. No chemical manufacturing and dangerous goods storage were expected. Since the building block and the pavement area are not identified as potential hotspots regarding their land uses, no potential contamination sources were expected. Therefore, no potential contamination issues are anticipated from the previously occupied building.

- 9.6.2. Based on the response from various government departments, there is no record of chemical waste disposal record, accidental spillage record nor submission relating to land contamination assessment, no records of dangerous goods license, fire incidents nor incidents of spillage / leakage of dangerous goods were found at the Application Site according to the available records. The response verified the collected information from the review of aerial historical photographs, hence it is not anticipated that there would be any land contamination impact due to past land uses.
- 9.6.3. During the site visit, it is observed that the entire Application Site was paved with good condition and no observable cracks are observed. Considering no other signs of obvious/ suspected contamination such as abnormal odour and/or distressed vegetation, and no aboveground/ underground storage tank and pipe works within the Application Site, it is believed that the Application Site is unlikely contaminated and further site investigation is considered as not necessary.

10. Waste Management Implications

10.1. Legislation and Standards on Waste Management

Waste Disposal Ordinance (WDO) (Cap. 354)

- 10.1.1. 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)

- 10.1.2. 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)

- 10.1.3. 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, 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)

- 10.1.4. 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.

10.1.5. 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

10.2. Assessment Approach and Criteria

10.2.1. 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, packing 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.

10.3. Potential Impacts during Construction Phase

- 10.3.1. The construction works of the Project mainly include demolition, clearance and mobilization, excavation and foundation works, superstructure and fitting out works. 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. Tuen Mun Area 38 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.
- 10.3.2. 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 before disposal. Surplus non-inert C&D materials are proposed to be disposed at West New Territories (WENT) Landfill at Nim Wan.
- 10.3.3. 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.
- 10.3.4. 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.
- 10.3.5. 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

- 10.3.6. The majority of C&D materials will be generated from the key construction activities

mentioned in Section 10.3.1. Inert C&D materials will be re-used on site and the remaining materials will be sent to public fill reception facilities.

10.3.7. 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.

10.3.8. 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 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. It is targeted that about 20% of the inert materials can be reused onsite.

Chemical Waste

10.3.9. 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.

10.3.10. 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.

10.3.11. 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.

10.3.12. 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 m³ 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

10.3.13. General refuse such as waste papers, plastic packaging, food wastes, etc. will be generated by the construction workforce during construction phase of the Project.

10.3.14. 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 70 workers will work simultaneously at the Project site during the construction phase of the Project. The quantity of general refuse to be generated per day is therefore estimated to be 45.5 kg (assuming a waste generation rate of 0.65 kg per person per day and the density of the general refuse is 1029 kg/ m³).

10.3.15. 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 WENT Landfill. 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.

10.3.16. Types and quantities of waste arise from various construction activities and the corresponding handling arrangement and outlets are identified and summarized in **Table 10-1**.

Table 10-1 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]	2,320m ³	- Delivered to the public fill reception facilities	/
Inert C&D Materials For Onsite Reused	580m ³	- Onsite reused before delivery to public fill reception facilities	/
Non-inert C&D Materials (or C&D waste) Generated [2]	4,122m ³	- Recycled and reused (e.g. Timber and Woody material to Y-Park etc.) before disposed of at the landfill	GFA:17,922m ² 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
General Refuse	45.5 kg/day	-Recycling bins for waste papers, plastic packaging should be provide - Collected by waste collector for the disposal of at WENT	/
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)	/

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.

*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

10.4. Mitigation Measures to Control Construction Waste Impact

General

10.4.1. Inert C&D materials will be reused on-site and the remaining materials will be sent to public fill reception facilities. 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;
- Timber and woody materials will be segregated and delivered to Y-Park
- Materials suitable for disposal at public fill reception facilities, sorting facilities and landfills

10.4.2. 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).

10.4.3. 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

10.4.4. 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.

10.4.5. 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

10.4.6. 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.

10.4.7. 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

10.4.8. 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.

10.4.9. 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.

10.4.10. 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.

10.5. Potential Impacts and Mitigation Measures during Operation Phase

10.5.1. The major type of waste generated from the operation phase is general refuse. 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 domestic uses will be 512kg/day, assuming a residential population of 551. The estimated general refuse generated by commercial uses will be 122 kg/day with an estimated population of 207 person.

10.5.2. 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. No chemical waste is anticipated to be produced during the operation phase. Waste generated will be disposed of at government waste disposal facilities such as WENT Landfill or refuse transfer station. Hence, adverse waste management implication is not anticipated during the operation phase.

10.6. Conclusion

10.6.1. 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.

10.6.2. During the operation phase, the key waste types generated will be general refuse. Provided

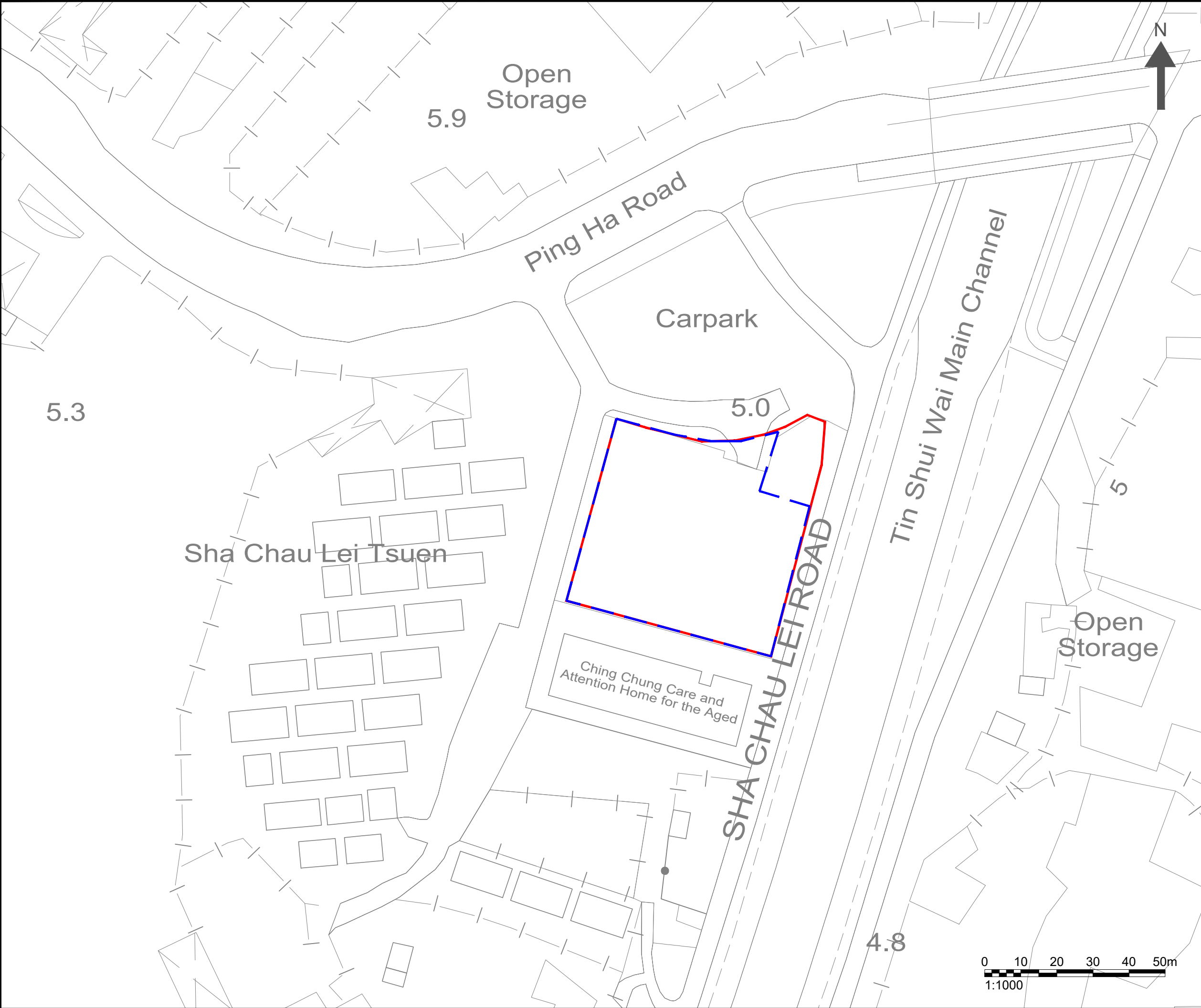
that all these wastes are reused and recycled if appropriate, handled, transported and disposed of in strict accordance with the relevant legislative requirements and the recommended mitigation measures are properly implemented, no adverse environmental impact is expected during the operation phase.

11. Conclusion

- 11.1.1. 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.
- 11.1.2. No active chimneys and SP License record identified within 200m from the Proposed Amendment. Setback from Ping Ha Road, openable windows for ventilation would comply with the recommended buffer distance for air sensitive use. Therefore, no unacceptable air impact subject to the Proposed redevelopment is anticipated.
- 11.1.3. The potential environmental noise impacts from nearby road traffic and fixed noise sources on the Proposed redevelopment have been evaluated.
- 11.1.4. For traffic noise impact assessment, all NSRs in the Proposed redevelopment will comply with the relevant traffic noise standard stipulated in HKPSG. The Proposed redevelopment would not be subject to significant adverse traffic noise impact.
- 11.1.5. Fixed noise impact assessment has been carried out for the Proposed redevelopment. The results of the assessment have indicated that the predicted fixed noise levels of all NSRs should be acceptable under the Noise Control Ordinance.
- 11.1.6. 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.
- 11.1.7. The site is currently used as Pok Oi Hospital Yeung Chun Pui Care and Attention Home. No significant change in land use within the Application Site has been observed. According to replies from HKSAR Departments, no records of chemical storage/spillage accidents, fire accidents or submissions relating to land contamination at the Application Site were found. During Site inspection, the floor is paved in good condition with no observable crack. Thus, no contamination activities are anticipated for the current use and no potential sources and signs of contamination have been discovered. No land contamination impact is anticipated.
- 11.1.8. 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 :
- DEVELOPMENT SITE BOUNDARY
 - REZONING SITE BOUNDARY

Consultant



AEC

Allied Environmental Consultants Limited

Project No. : 2164EA

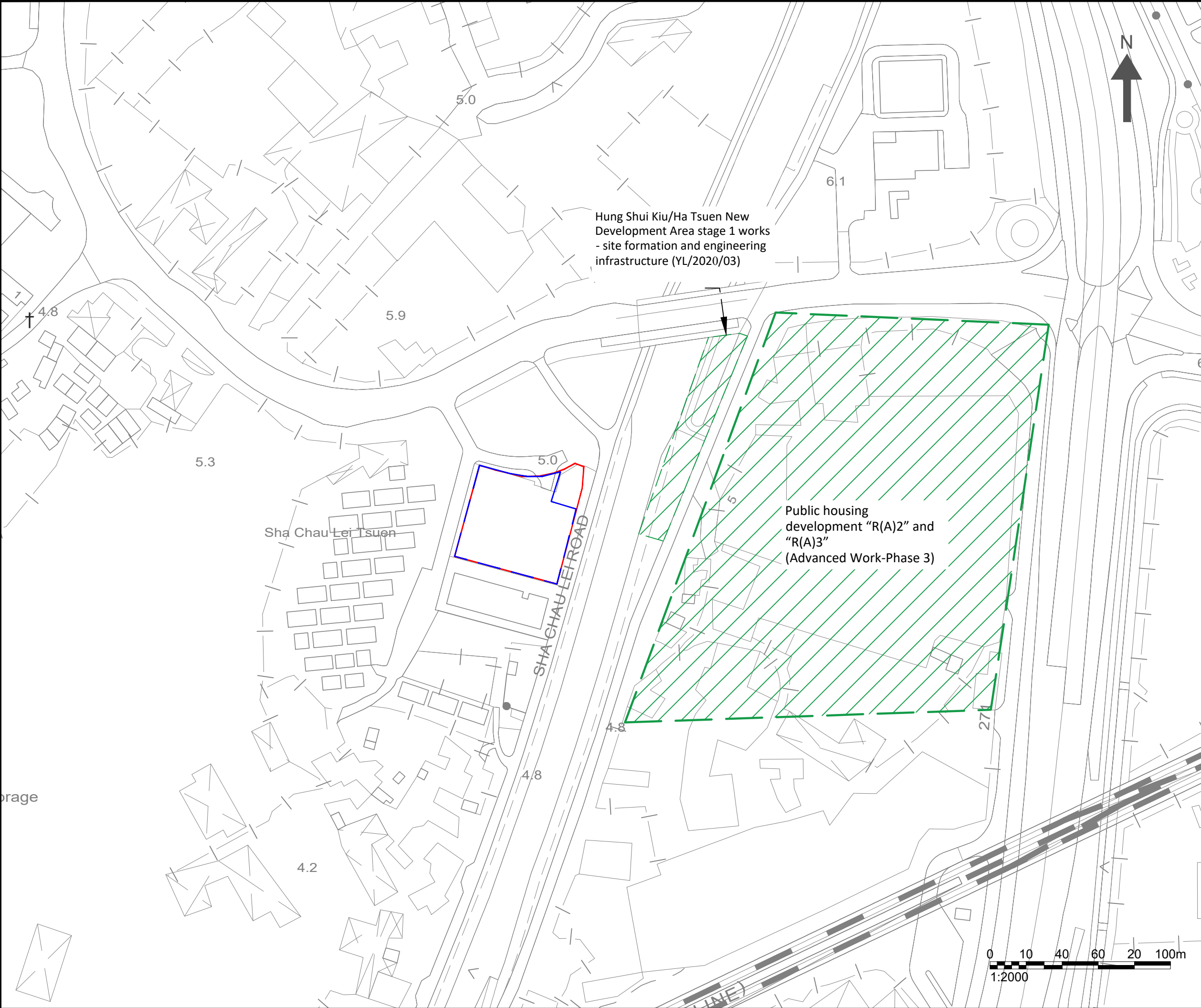
Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
PROJECT SITE LOCATION

Drawing No : Fig3.1	Revision : 1
Scale : AS SHOWN	Date : SEP 2023

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NOTES :

DEVELOPMENT SITE BOUNDARY

REZONING SITE BOUNDARY

CONCURRENT PROJECT

Consultant



AEC

Allied Environmental Consultants Limited

Project No. : 2162EA

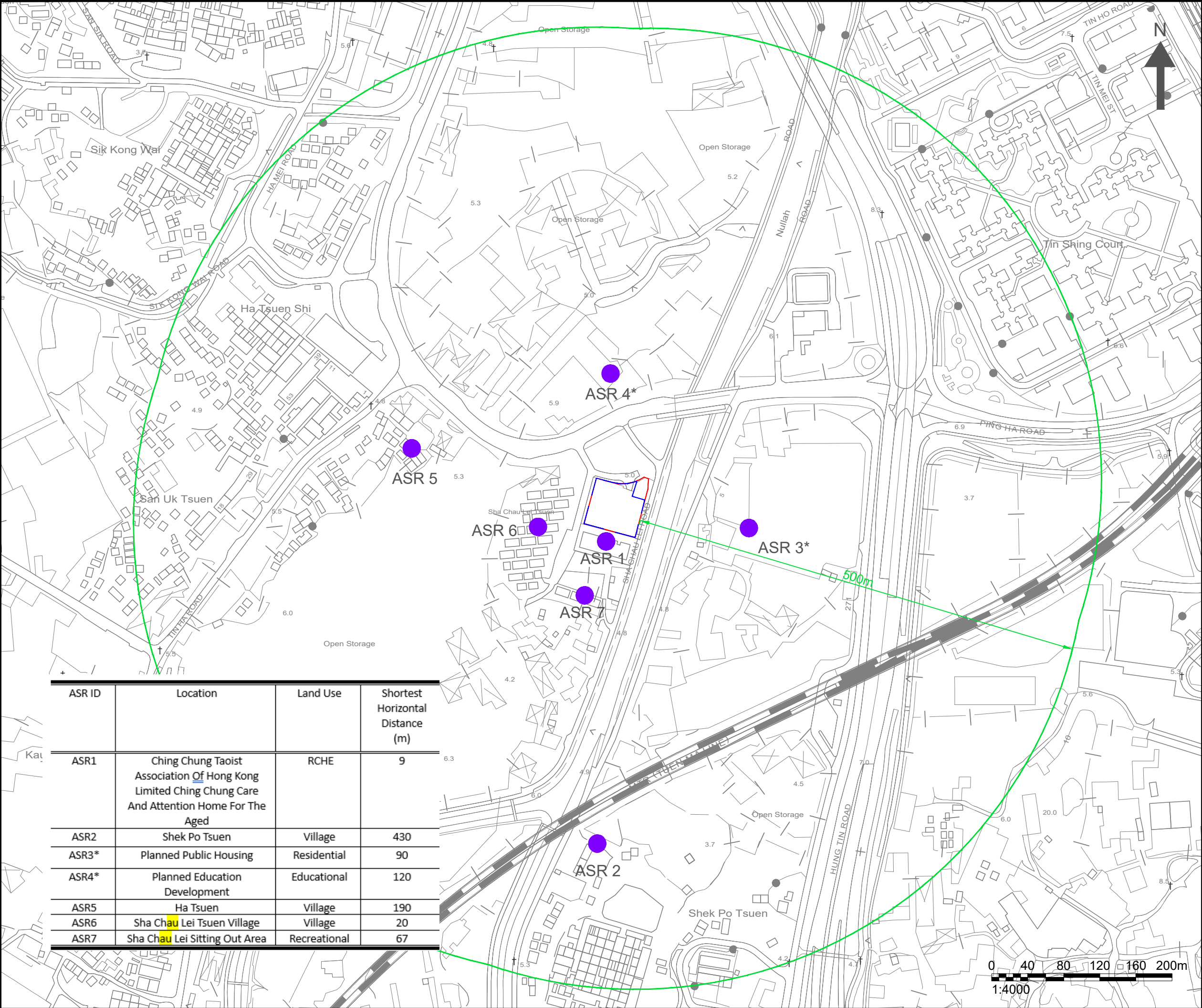
Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
LOCATION OF CONCURRENT PROJECT

Drawing No : FIGURE 4.1	Revision : 0
Scale : AS SHOWN	Date : APR 2024

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ASR ID	Location	Land Use	Shortest Horizontal Distance (m)
ASR1	Ching Chung Taoist Association Of Hong Kong Limited Ching Chung Care And Attention Home For The Aged	RCHE	9
ASR2	Shek Po Tsuen	Village	430
ASR3*	Planned Public Housing	Residential	90
ASR4*	Planned Education Development	Educational	120
ASR5	Ha Tsuen	Village	190
ASR6	Sha Chau Lei Tsuen Village	Village	20
ASR7	Sha Chau Lei Sitting Out Area	Recreational	67

- NOTES :
- DEVELOPMENT SITE BOUNDARY
 - REZONING SITE BOUNDARY
 - 500m ASSESSMENT AREA
 - AIR SENSITIVE RECEIVER

Consultant



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Project No. : 2164

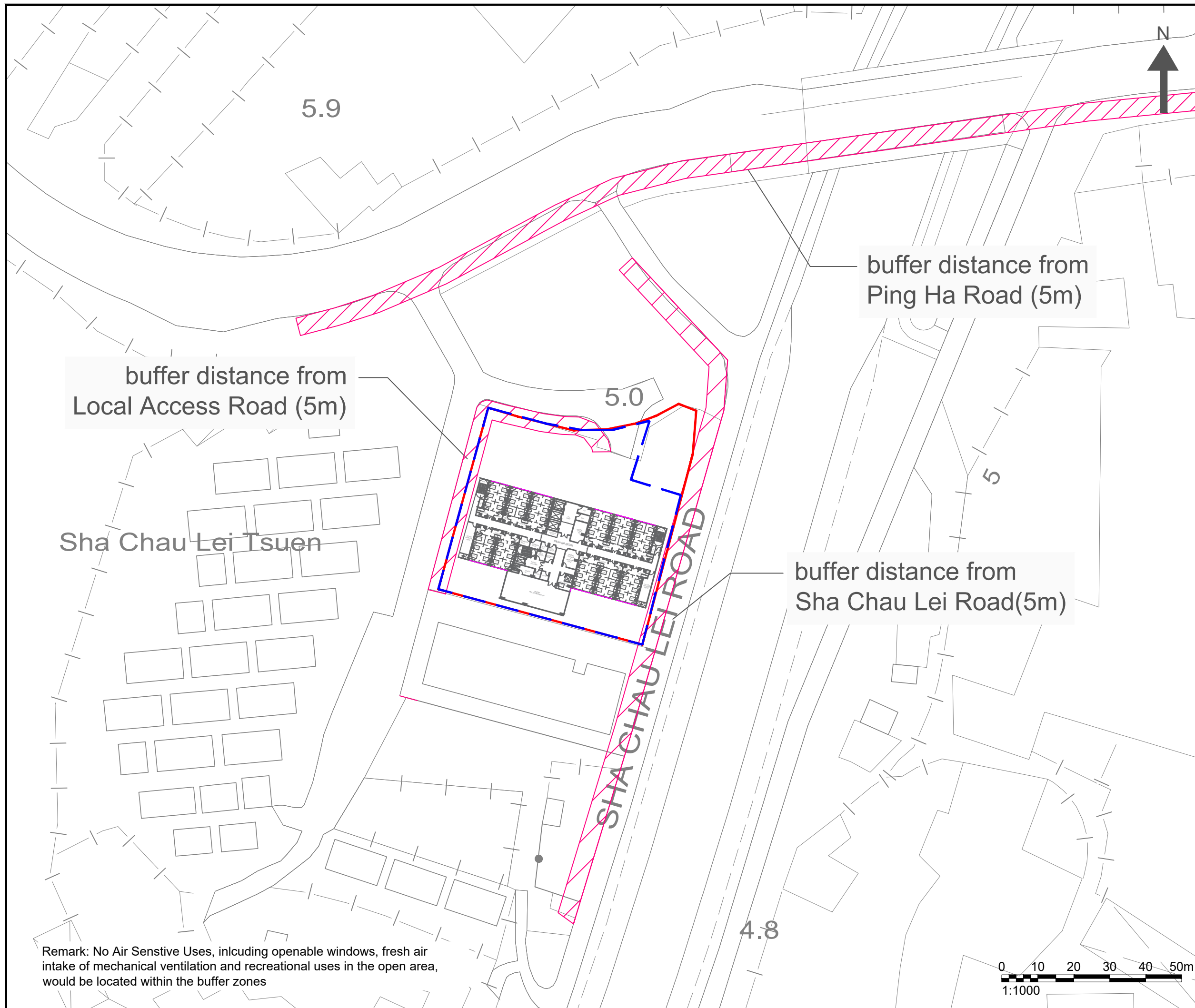
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Project :
PROPOSED REDEVELOPMENT OF POK OI HOSPITAL YEUNG CHUN PUI CARE AND ATTENTION HOME IN YUEN LONG

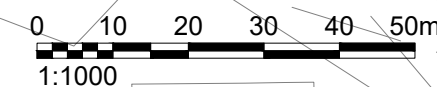
Drawing Title :
500M ASSESSMENT AREA AND LOCATION OF AIR SENSITIVE RECEIVERS

Drawing No : FIGURE 6.1	Revision : 0
Scale : AS SHOWN	Date : SEP 2023




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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 zones



NOTES :

-  DEVELOPMENT SITE BOUNDARY
-  REZONING SITE BOUNDARY
-  BUFFER DISTANCE OF ADJACENT ROADS

Consultant



Allied Environmental Consultants Limited

Project No. : 2162

Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
BUFFER DISTANCE BETWEEN ADJACENT
ROADS AND PROJECT SITE

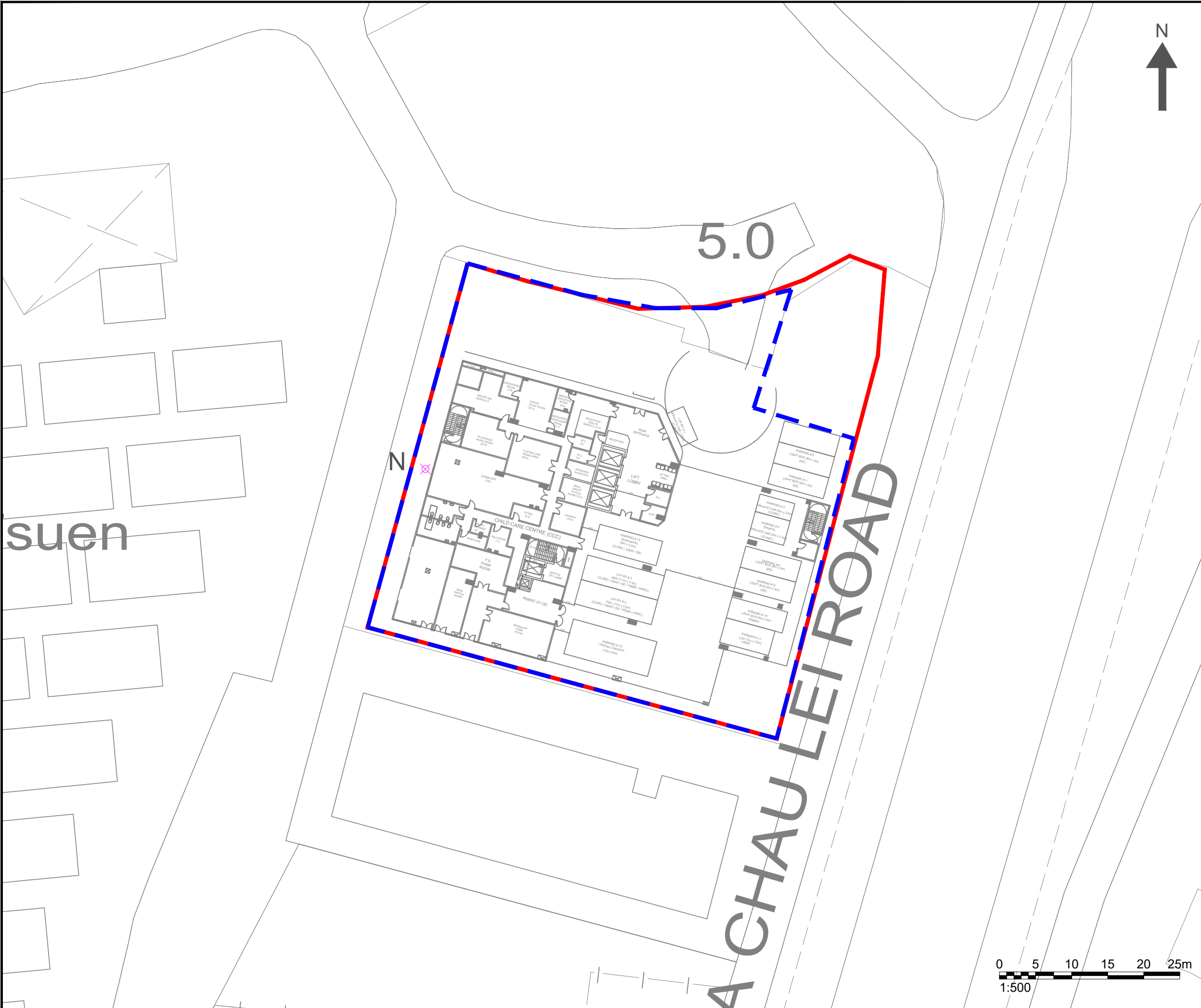
Drawing No :
FIGURE 6.2

Revision :
0

Scale :
AS SHOWN

Date :
SEP 2023

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- NOTES :
- DEVELOPMENT SITE BOUNDARY
 - REZONING SITE BOUNDARY
 - NOISE SENSITIVE RECEIVER

Consultant



AEC

Allied Environmental Consultants Limited

Project No. : 2164

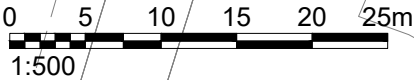
Drawing By : LL

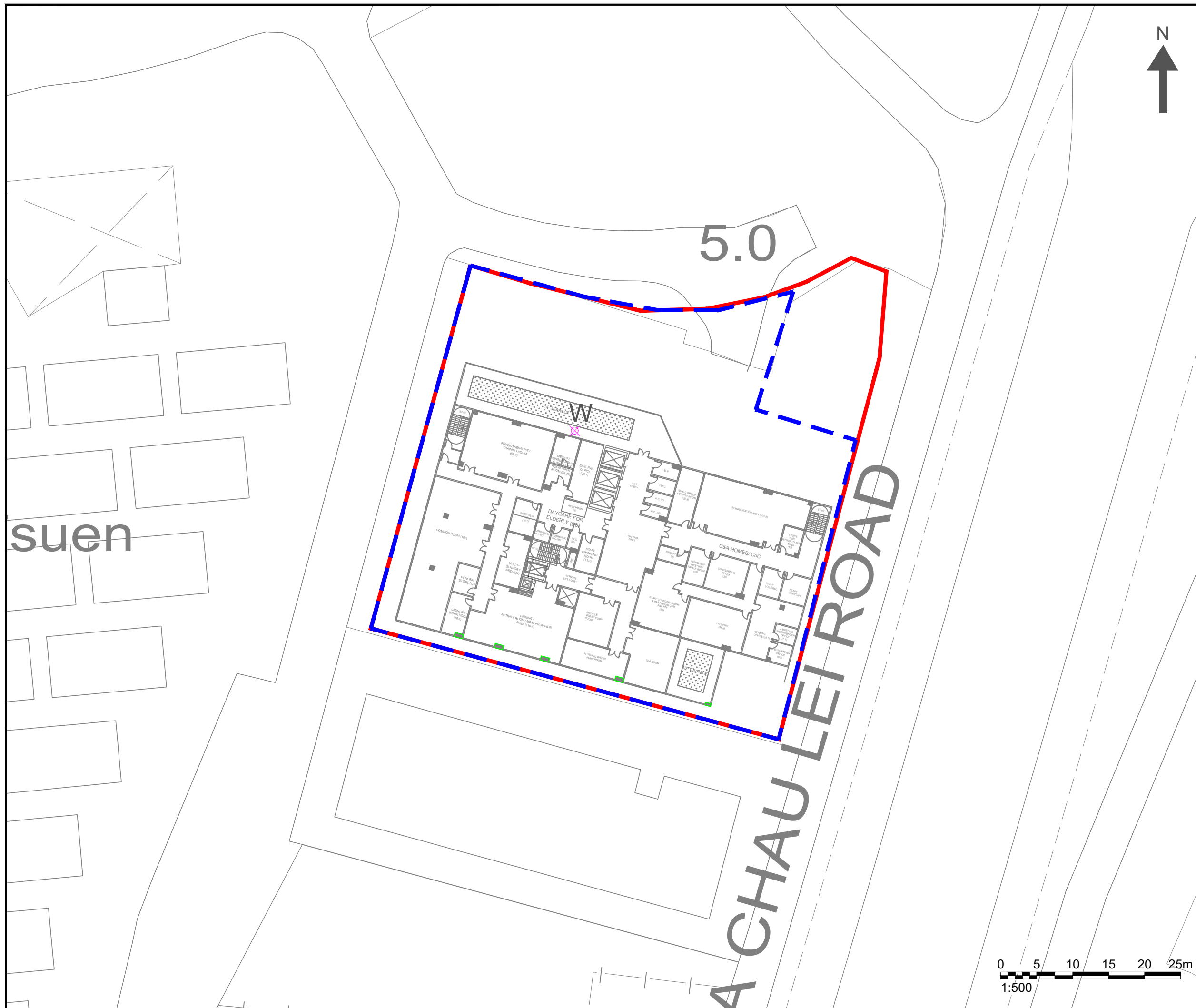
Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
NOISE ASSESSMENT POINTS(NAP)
FOR TRAFFIC
NOISE IMPACT ASSESSMENT(GF)

Drawing No : FIGURE 7.1a	Revision : 0
Scale : AS SHOWN	Date : MAY 2024

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NOTES :



DEVELOPMENT SITE
BOUNDARY



REZONING SITE
BOUNDARY

NOISESENSITIVE RECEIVER

Consultant

**Allied Environmental Consultants Limited**

Project No. : 2164

Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
NOISE ASSESSMENT POINTS(NAP)
FOR TRAFFIC
NOISE IMPACT ASSESSMENT(1F)

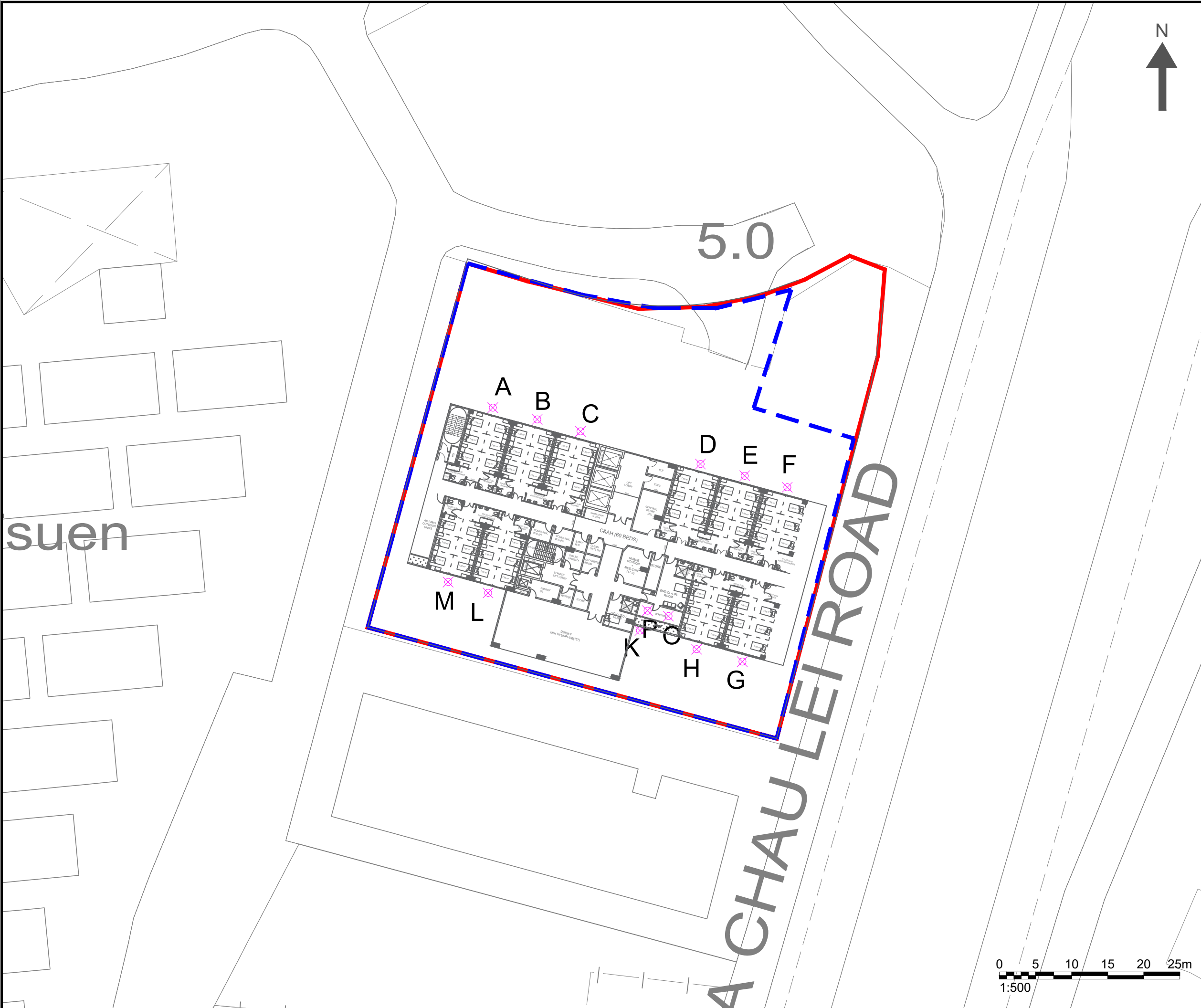
Drawing No :
FIGURE 7.1b

Revision :
0

Scale :
AS SHOWN

Date :	MAY 2024
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- NOTES :
- DEVELOPMENT SITE BOUNDARY
 - REZONING SITE BOUNDARY
 - NOISE SENSITIVE RECEIVER

Consultant

AEC

Allied Environmental Consultants Limited

Project No. : 2164

Drawing By : LL

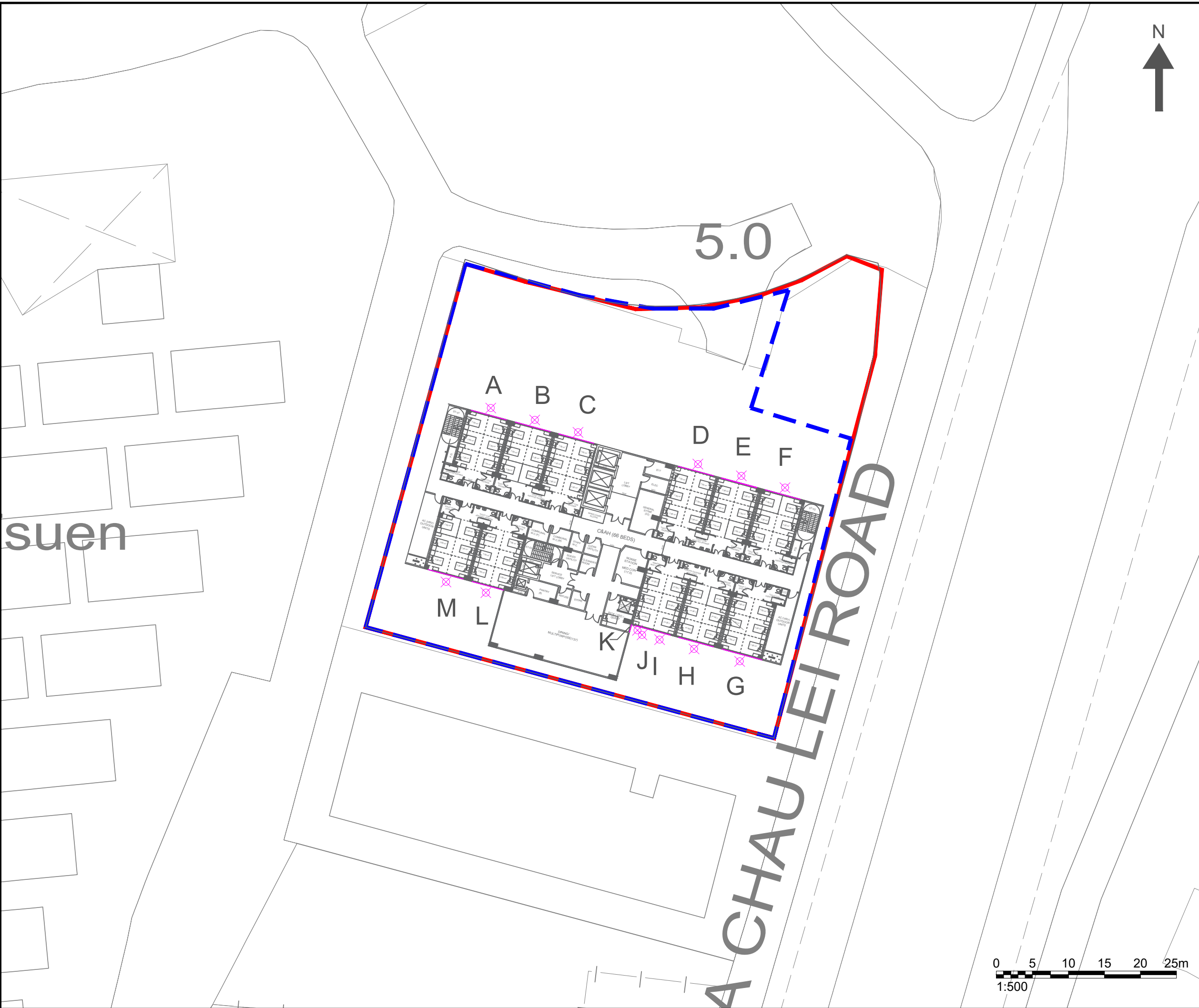
Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
NOISE ASSESSMENT POINTS(NAP)
FOR TRAFFIC
NOISE IMPACT ASSESSMENT(2F)

Drawing No : FIGURE 7.1c	Revision : 0
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Scale : AS SHOWN	Date : FEB 2024
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- NOTES :
- DEVELOPMENT SITE BOUNDARY
 - REZONING SITE BOUNDARY
 - NOISE SENSITIVE RECEIVER

Consultant

AEC

Allied Environmental Consultants Limited

Project No. : 2164

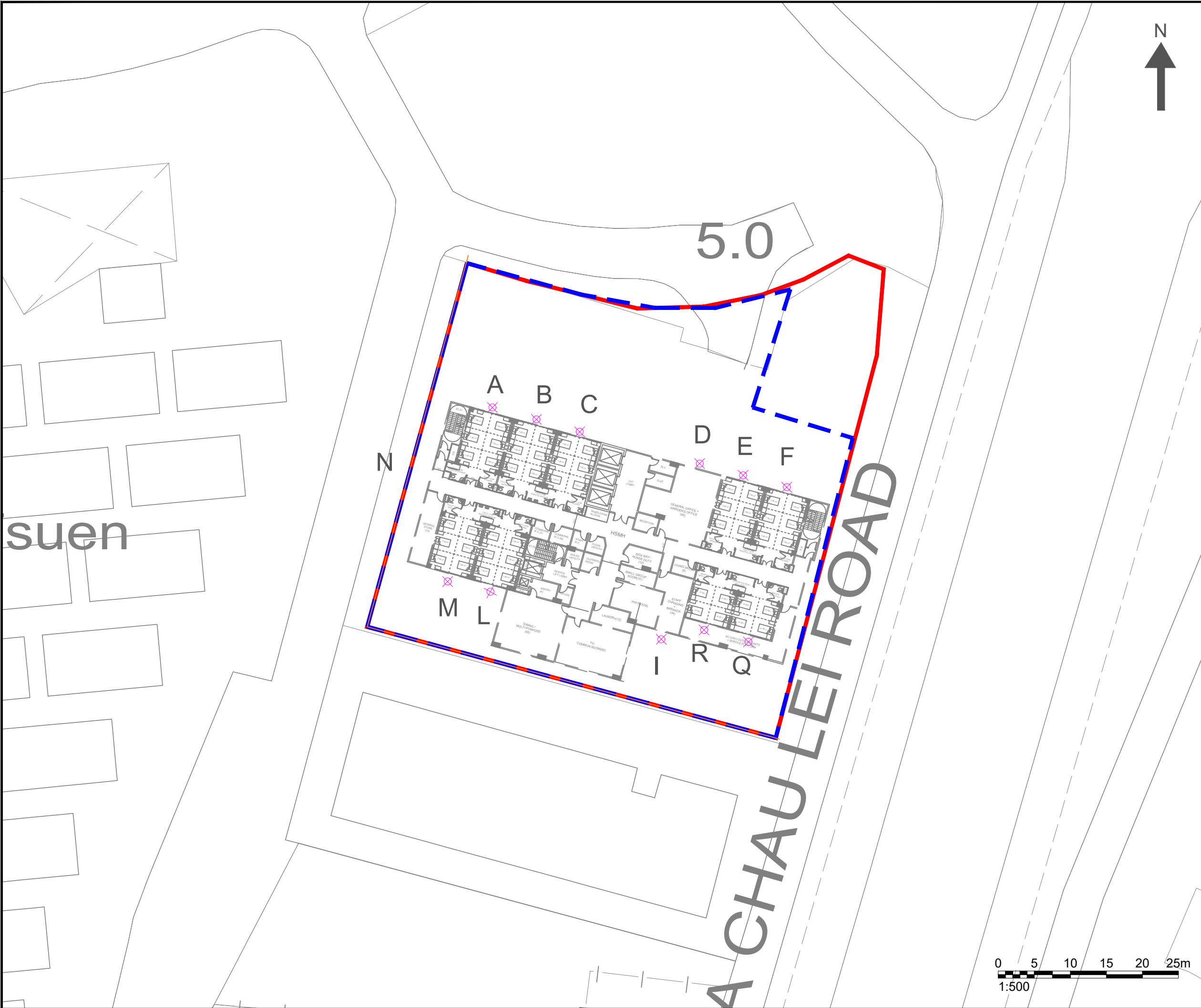
Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
REPRESENTATIVE NSRs FOR TRAFFIC
NOISE IMPACT ASSESSMENT(3-4F)

Drawing No : FIGURE 7.1c	Revision : 0
Scale : AS SHOWN	Date : FEB 2024

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- NOTES :
- DEVELOPMENT SITE BOUNDARY
 - REZONING SITE BOUNDARY
 - NOISESENSITIVE RECEIVER

Consultant



AEC

Allied Environmental Consultants Limited

Project No. : 2164

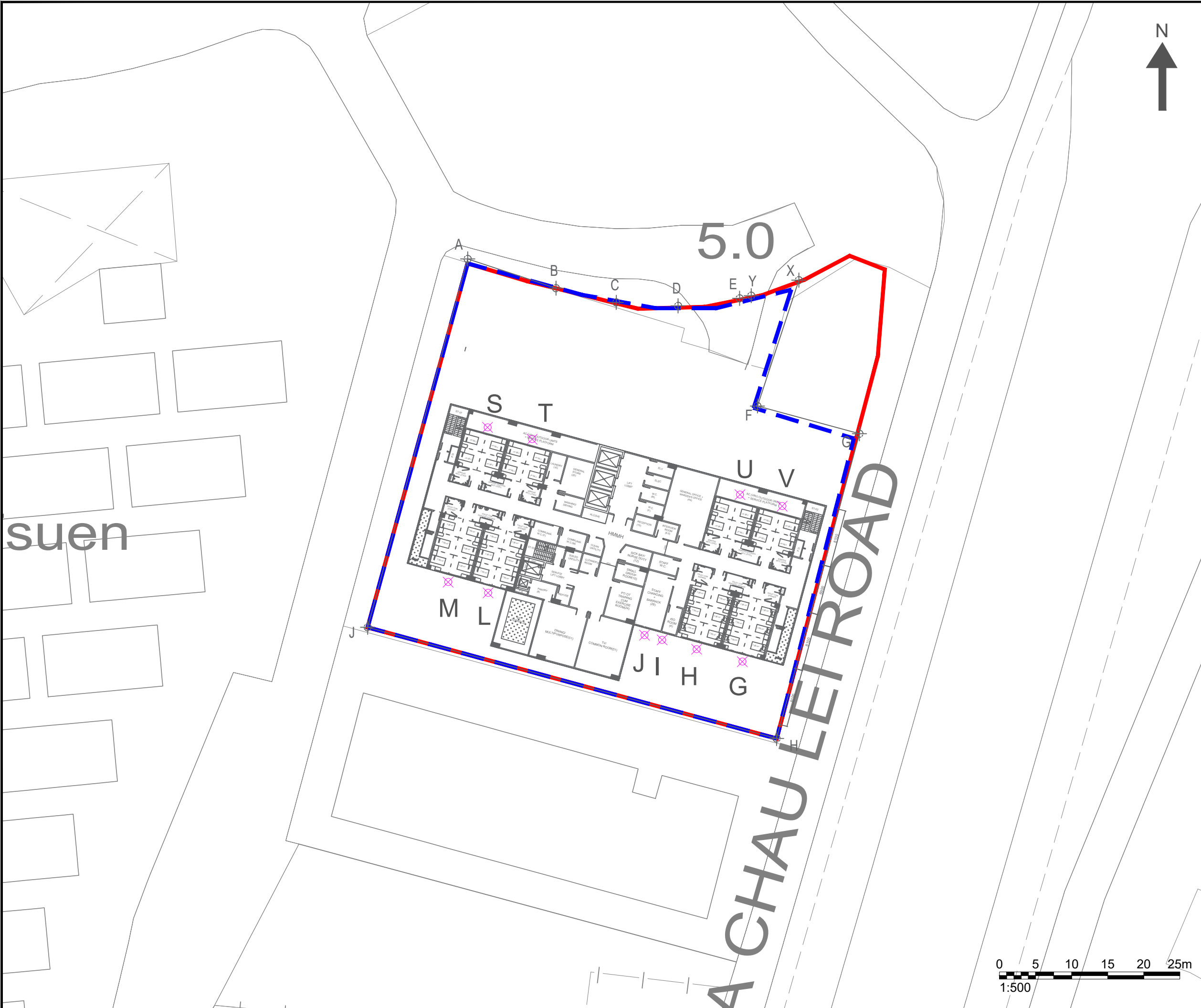
Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
NOISE ASSESSMENT POINTS(NAP)
FOR TRAFFIC
NOISE IMPACT ASSESSMENT(5F)

Drawing No : FIGURE 7.1d	Revision : 0
Scale : AS SHOWN	Date : FEB 2024

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- NOTES :
- DEVELOPMENT SITE BOUNDARY
 - REZONING SITE BOUNDARY
 - NOISESENSITIVE RECEIVER

Consultant

AEC

Allied Environmental Consultants Limited

Project No. : 2164

Drawing By : LL

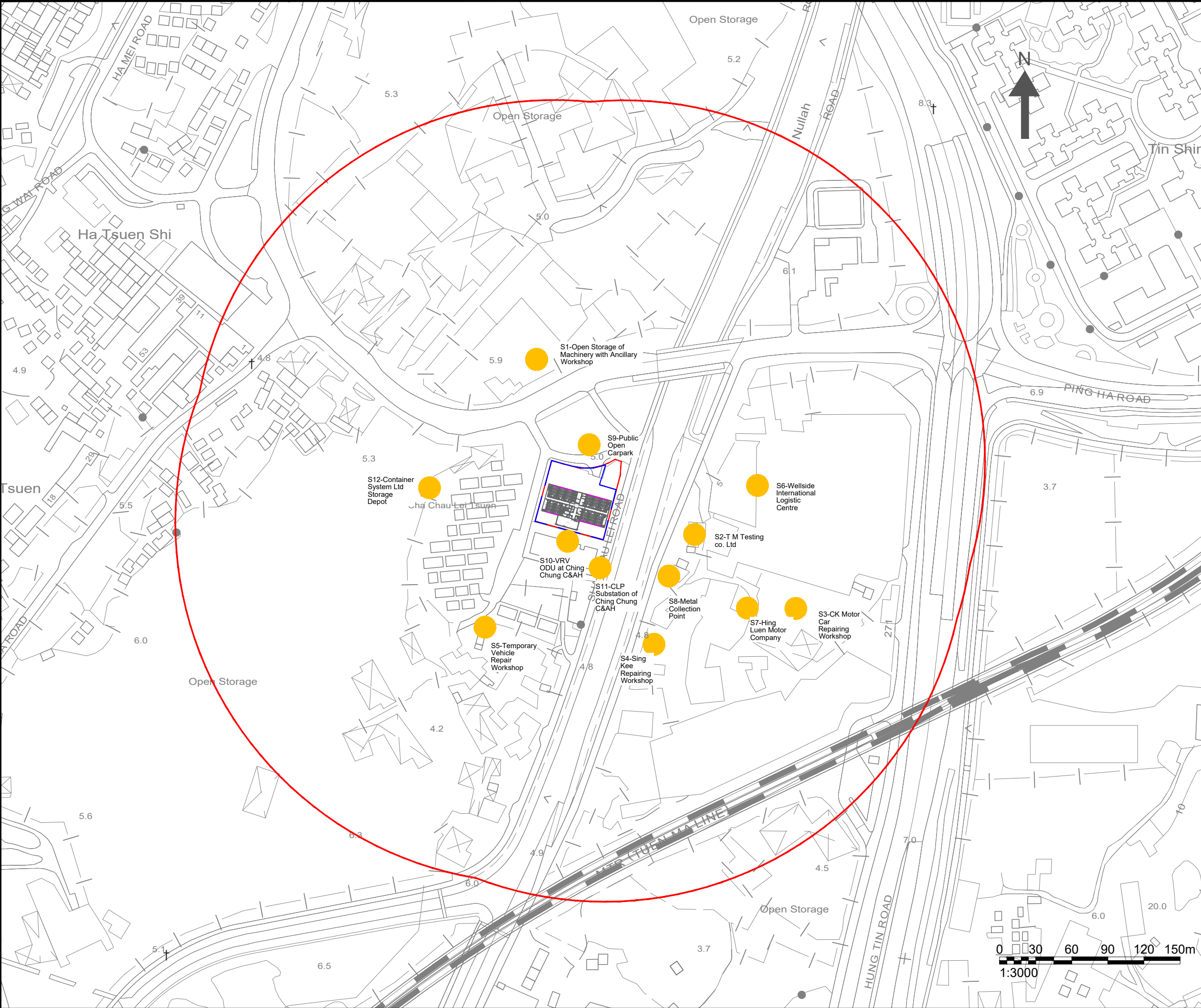
Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
NOISE ASSESSMENT POINTS(NAP)
FOR TRAFFIC
NOISE IMPACT ASSESSMENT(6F)




Drawing No : FIGURE 7.1e	Revision : 0
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Scale : AS SHOWN	Date : FEB 2024
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NOTES :

-  PROJECT SITE
-  ASSESSMENT AREA
-  POTENTIAL FIXED NOISE SOURCE

Consultant



Allied Environmental Consultants Limited

Project No. : 2162EA

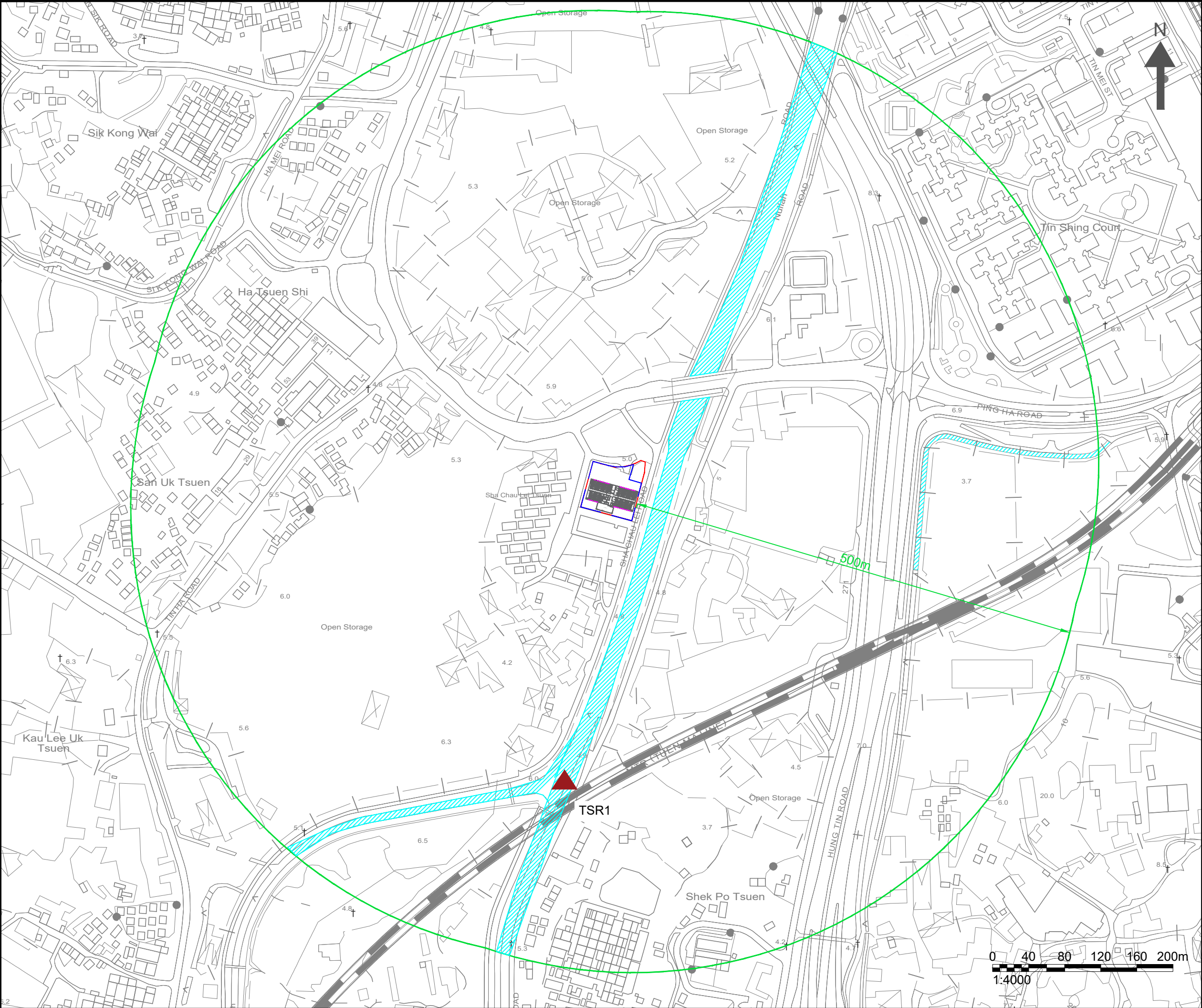
Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
LOCATION OF POTENTIAL FIXED NOISE
SOURCES

Drawing No : FIGURE 7.2	Revision : 0
Scale : AS SHOWN	Date : MAY 2024

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- NOTES :
- DEVELOPMENT SITE BOUNDARY
 - REZONING SITE BOUNDARY
 - 500m ASSESSMENT AREA
 - WATERCOURSE
 - TSR1 RIVER MONITORING STATION

Consultant



Allied Environmental Consultants Limited

Project No. : 2162EA

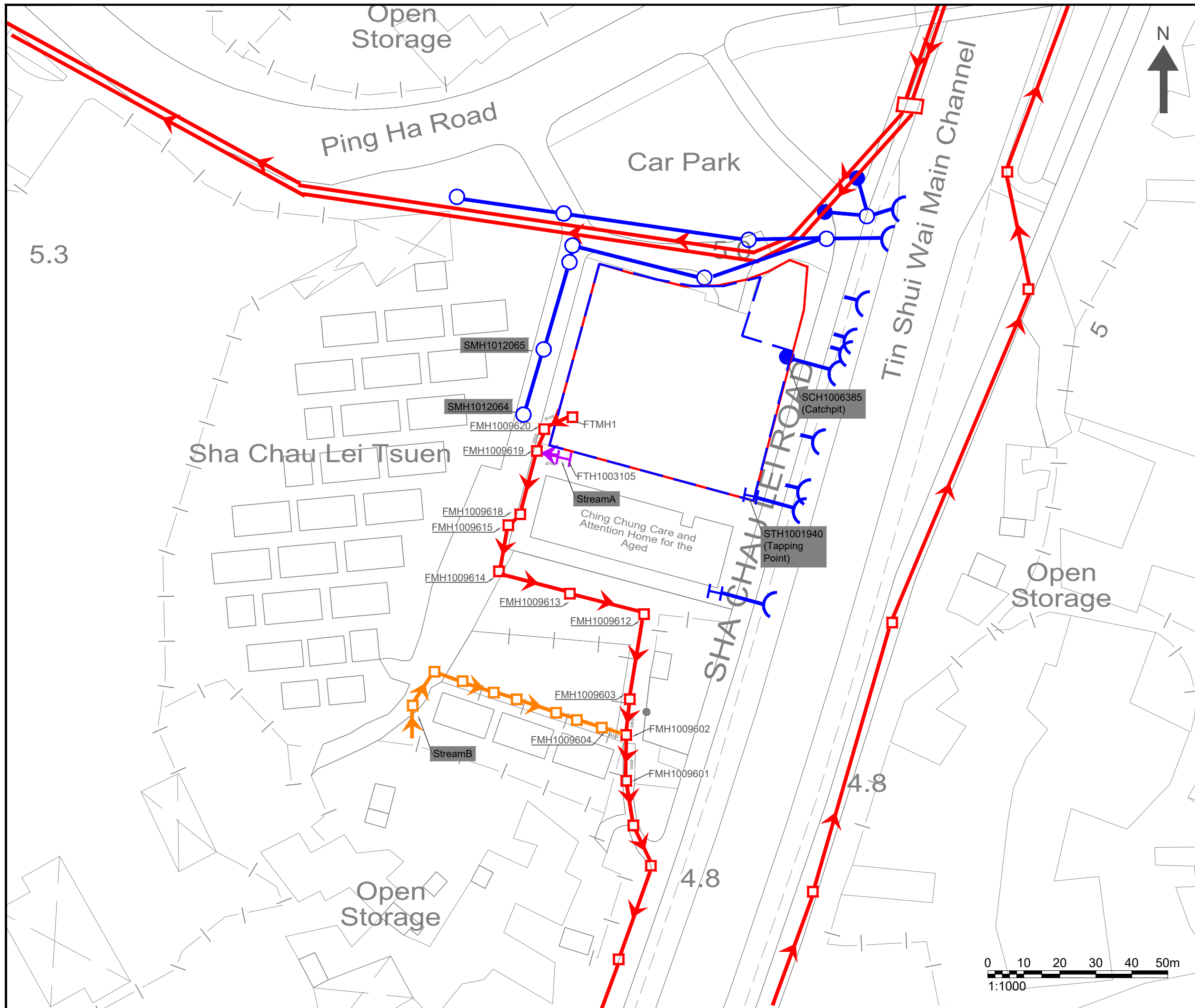
Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
500M ASSESSMENT AREA AND LOCATION
OF WATER SENSITIVE RECEIVERS

Drawing No : FIGURE 8.1	Revision : 0
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.



- NOTES :
- DEVELOPMENT SITE BOUNDARY
 - REZONING SITE BOUNDARY
 - EXISTING SEWER AND MANHOLE
 - STREAM A (SEWAGE)
 - STREAM B (SEWAGE)
 - EXISTING DRAINAGE AND MANHOLE

Consultant

AEC

Allied Environmental Consultants Limited

Project No. : 2164EA

Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI HOSPITAL YEUNG CHUN PUI CARE AND ATTENTION HOME IN YUEN LONG

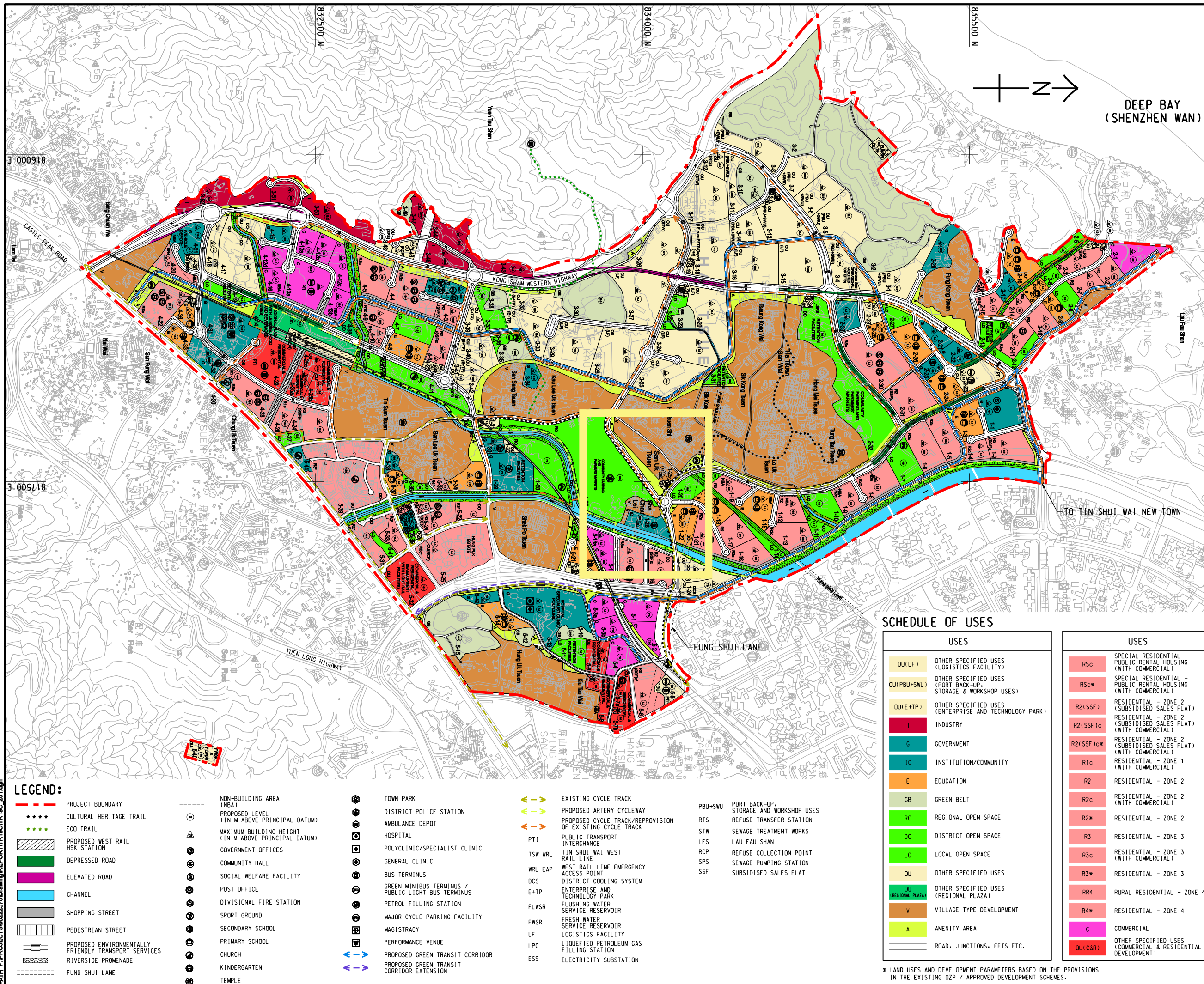
Drawing Title :
OVERVIEW OF PROPOSED AND EXISTING SEWAGE NETWORK AND CATCHMENT

Drawing No : Fig3.1	Revision : 1
Scale : AS SHOWN	Date : Jan 2024

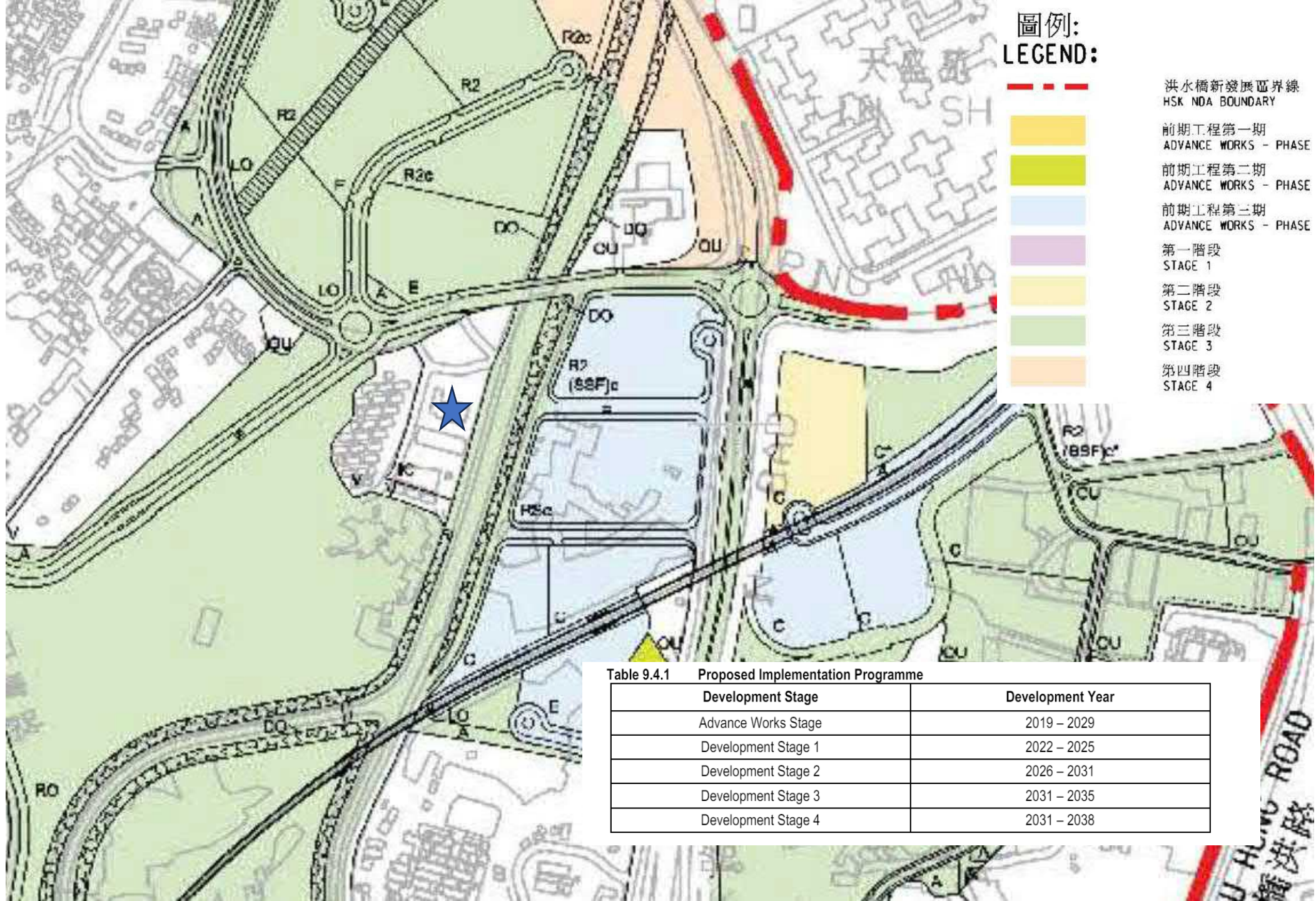
DO NOT SCALE OFF DRAWING. THIS DRAWING IS NOT FOR CONSTRUCTION PURPOSES UNLESS EXPRESSLY STATED. ALL RIGHTS RESERVED AND REPRODUCTION IN ANY FORM MUST BE APPROVED BY ALLIED ENVIRONMENTAL CONSULTANTS LIMITED.

Appendix 3.1

Master Layout Plan and Programme of the HSK NDA(extracted)

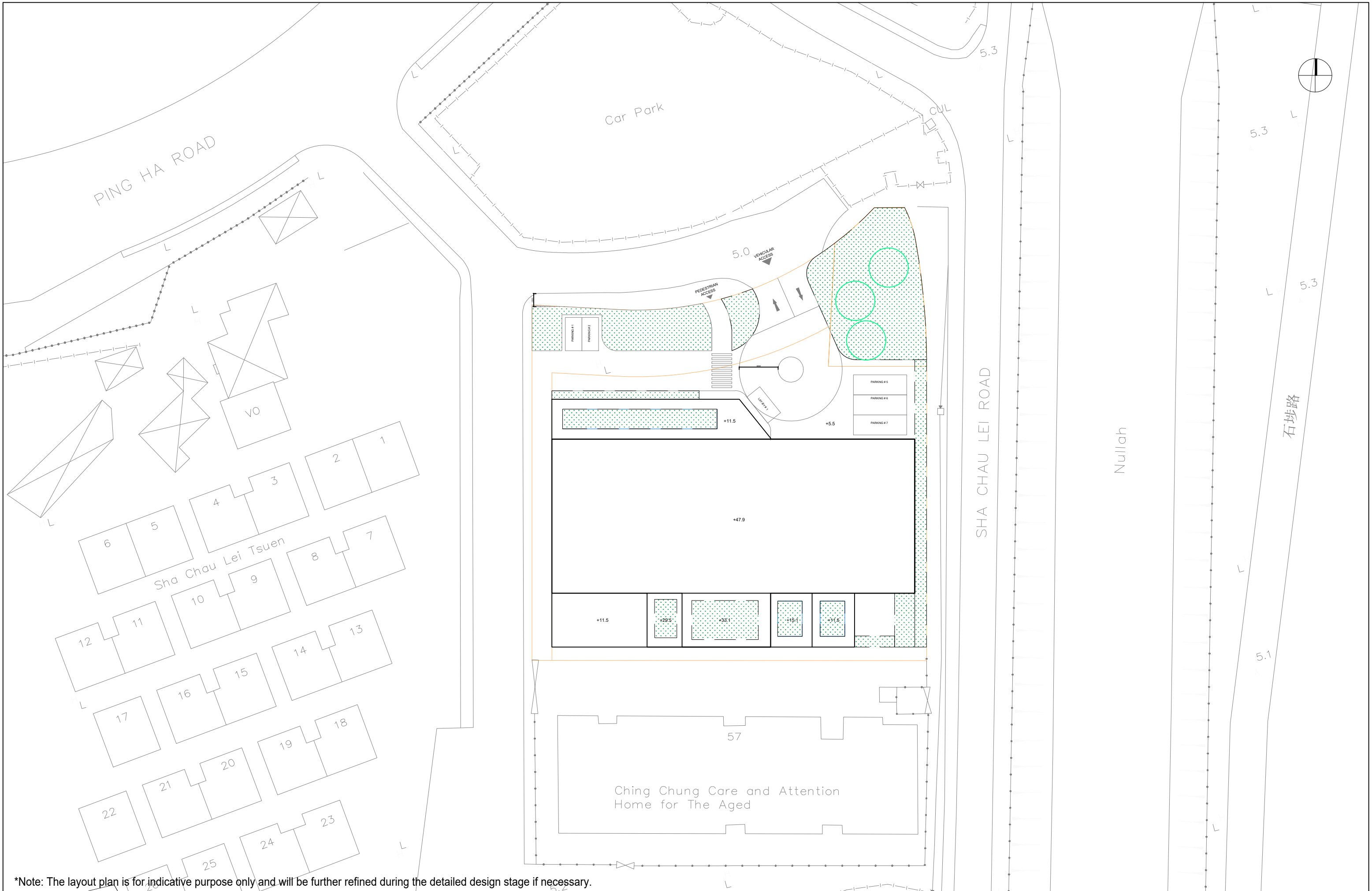


* LAND USES AND DEVELOPMENT PARAMETERS BASED ON THE PROVISIONS IN THE EXISTING QZP / APPROVED DEVELOPMENT SCHEMES.



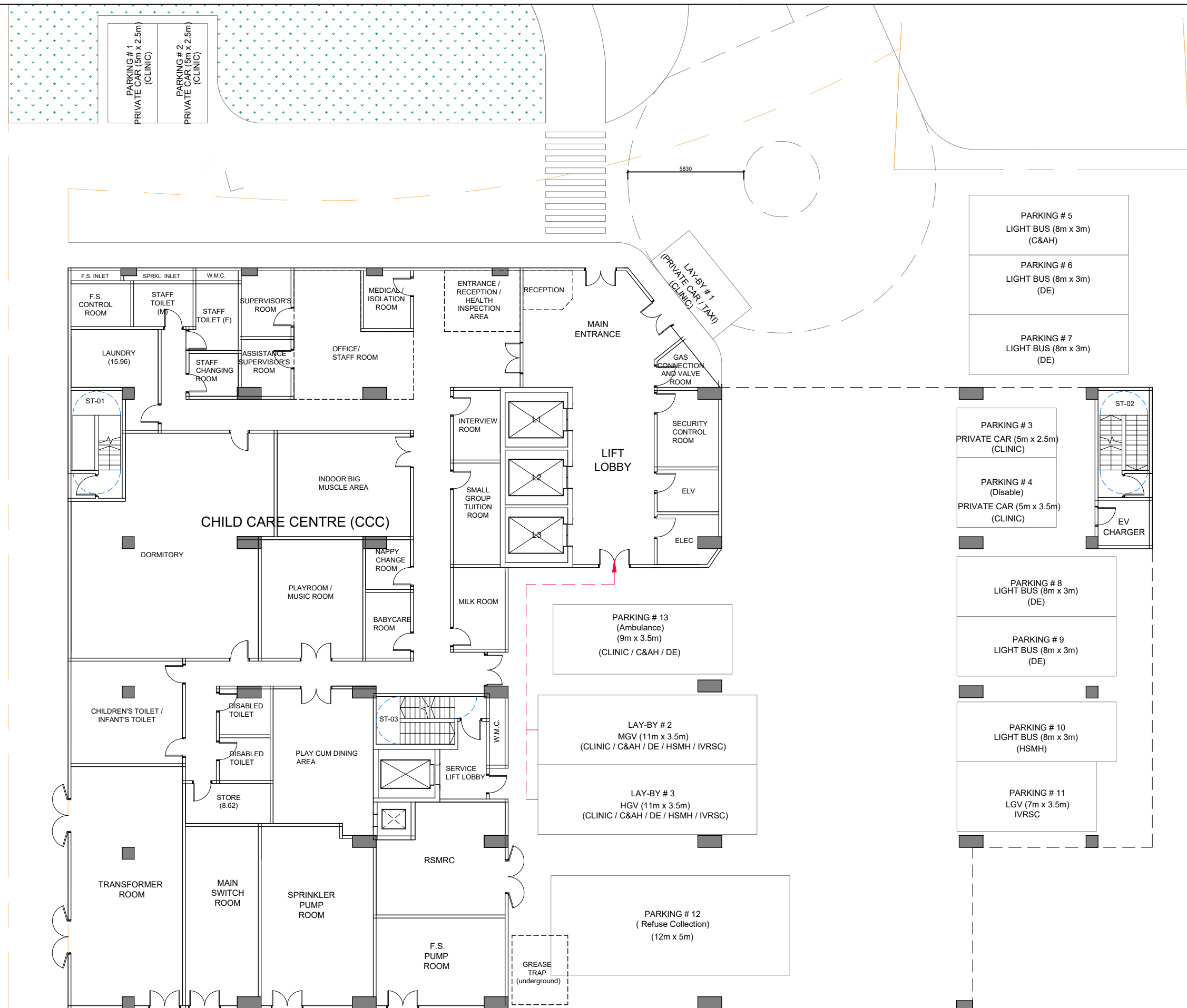
Appendix 3.2

Master Layout Plan of the Proposed Redevelopment



*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





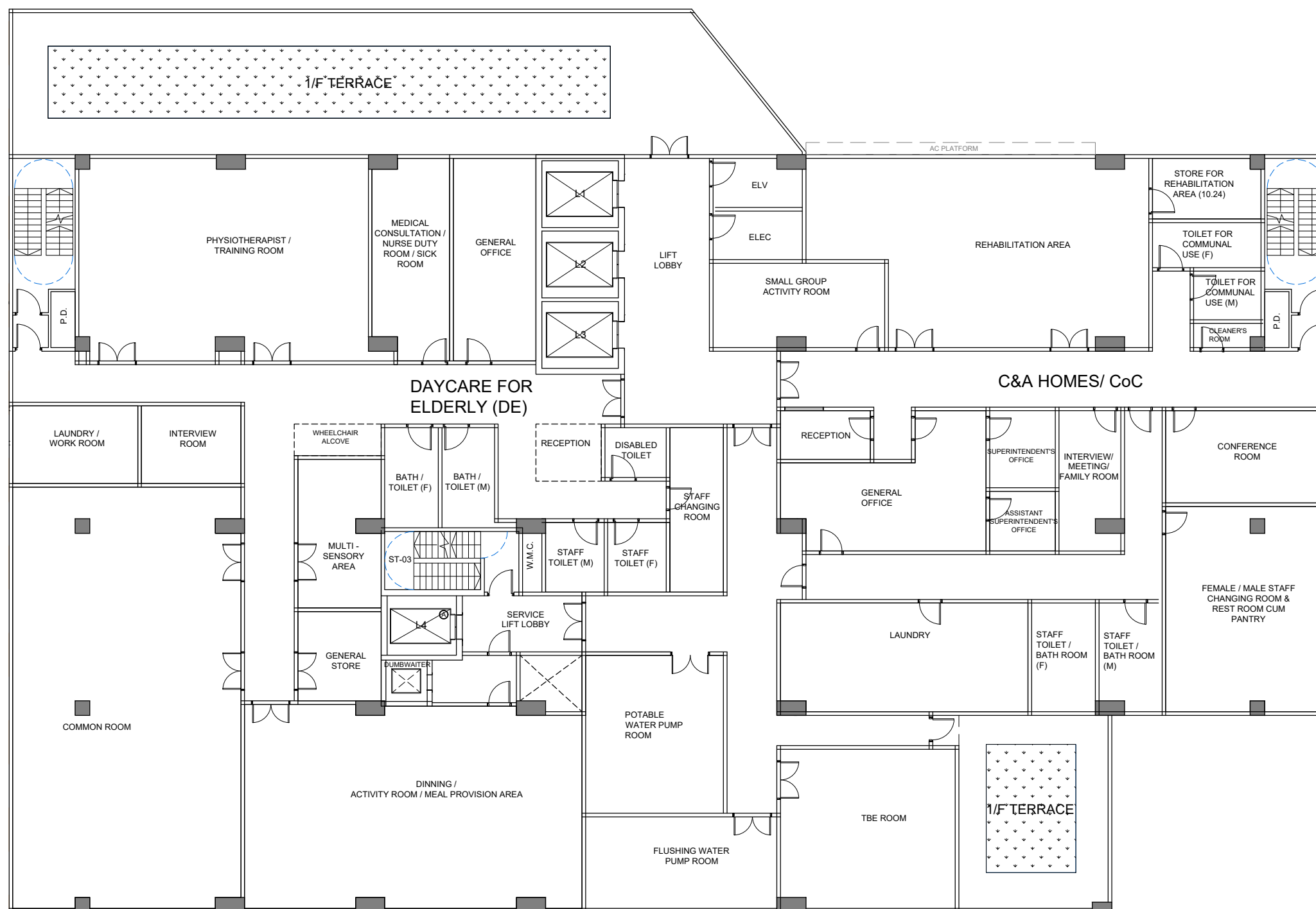
SHA CHAU LEI ROAD

*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





SHA CHAU LEI ROAD

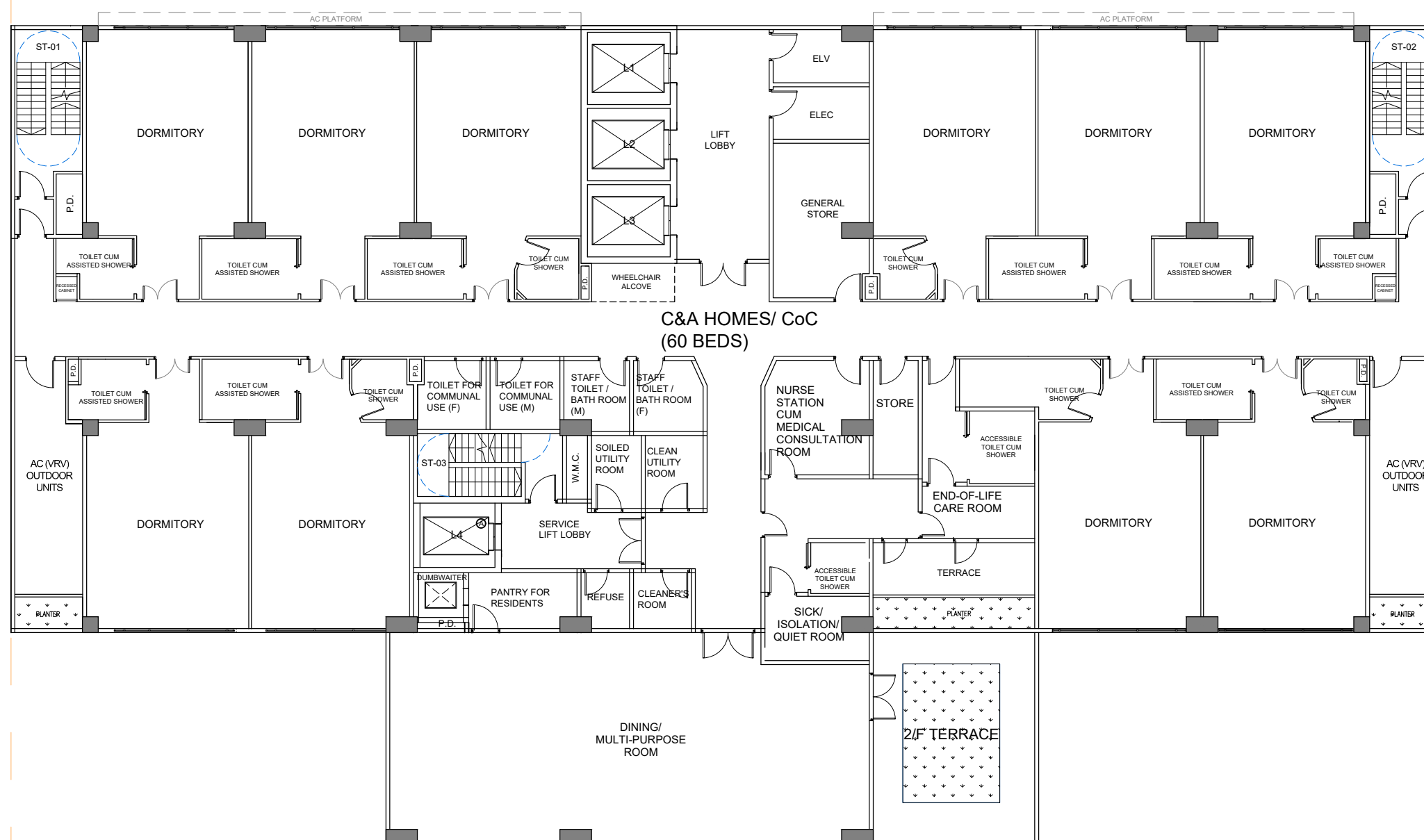


*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





SHA CHAU LEI ROAD

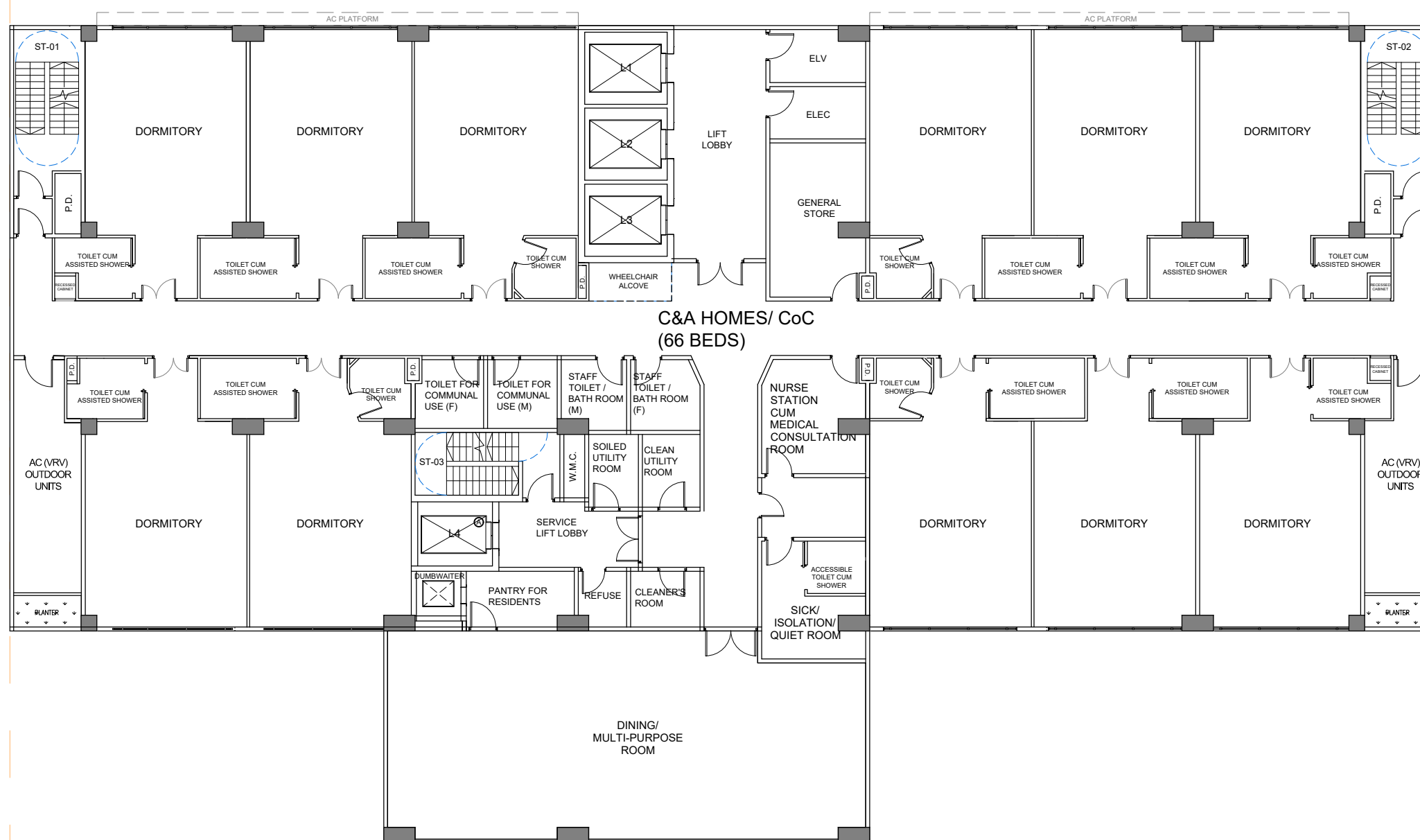


*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





SHA CHAU LEI ROAD



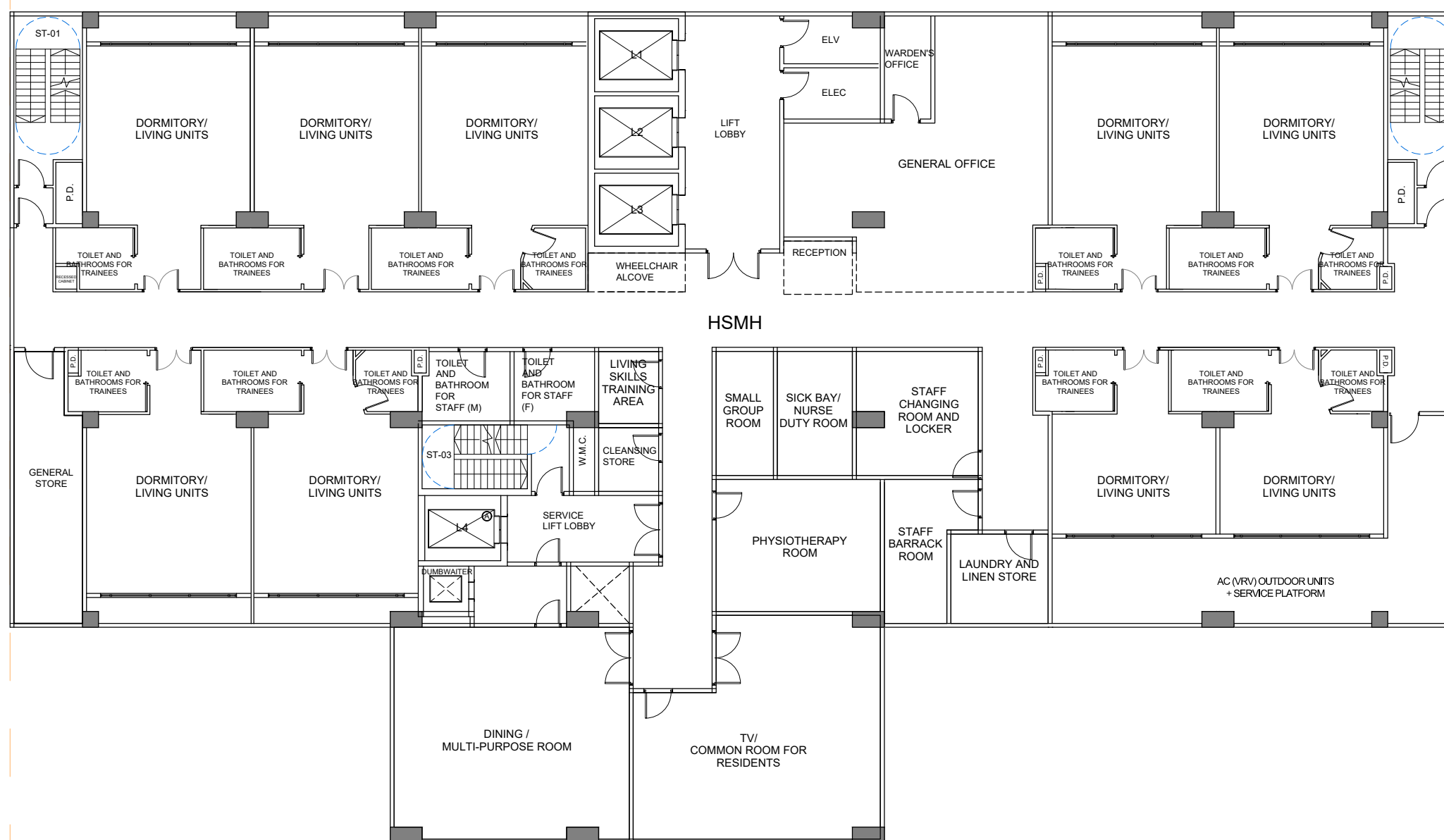
C&A HOMES/ CoC
(66 BEDS)

*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





SHA CHAU LEI ROAD

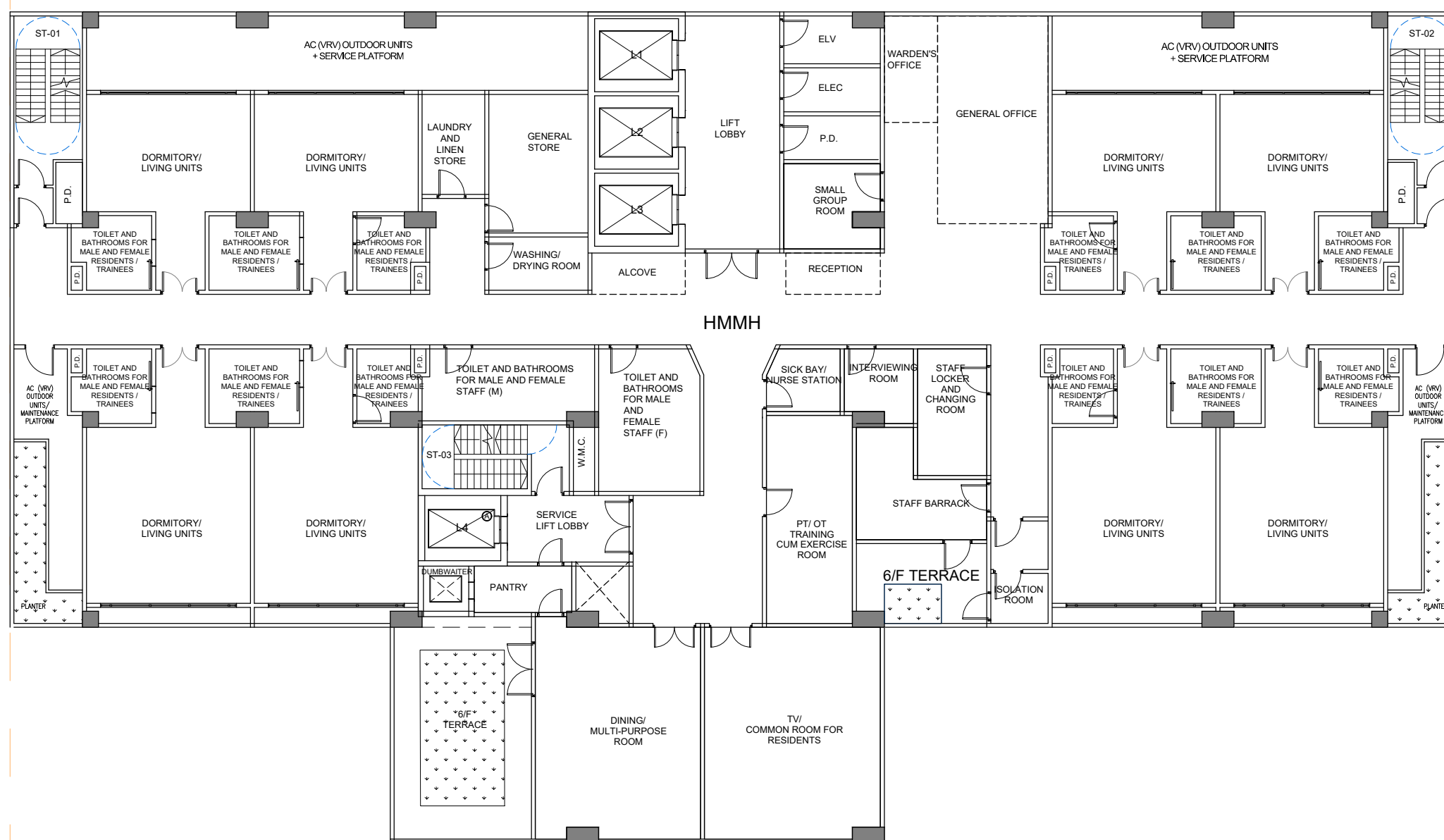


*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





SHA CHAU LEI ROAD

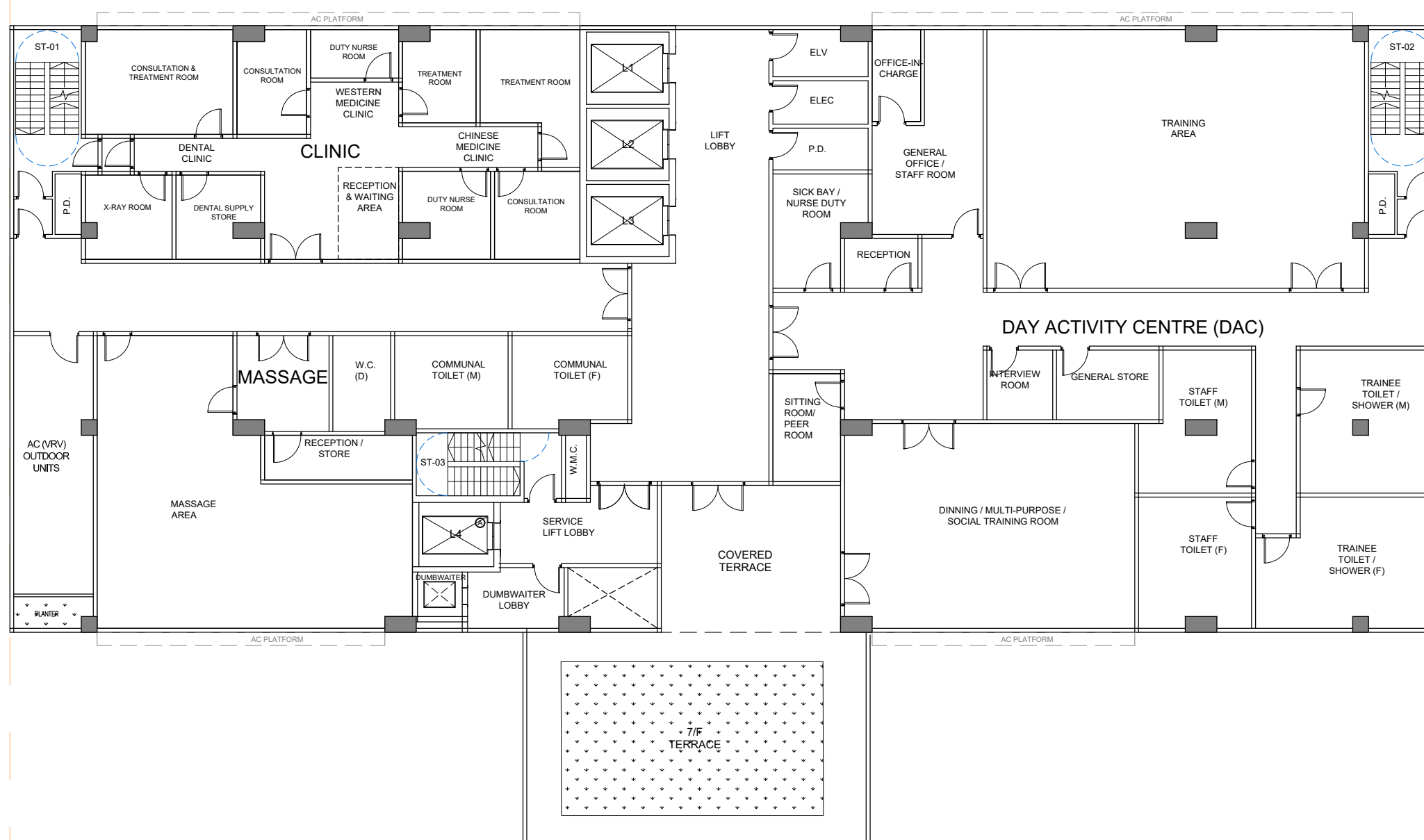


*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.



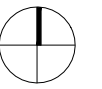


SHA CHAU LEI ROAD

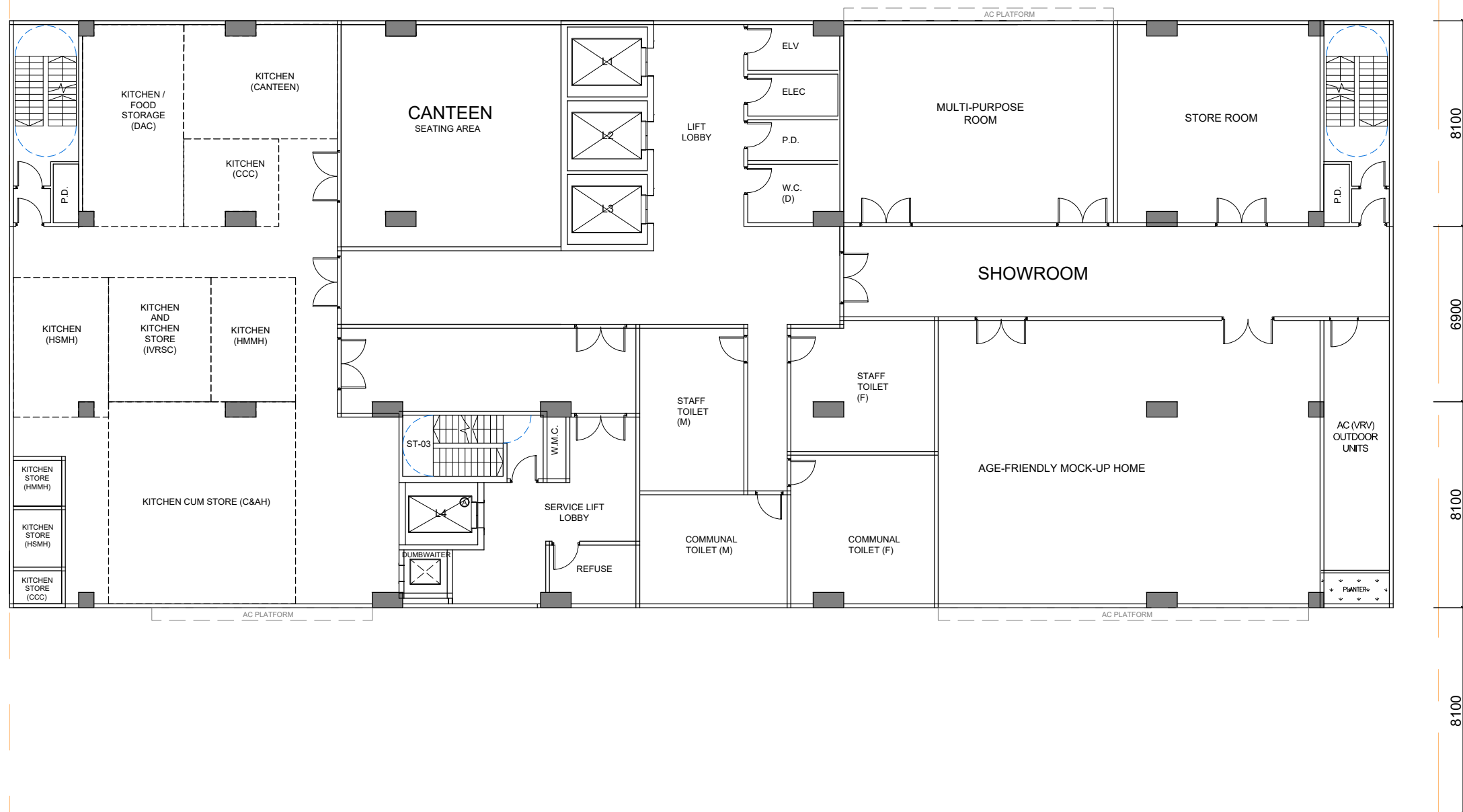


*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





SHA CHAU LEI ROAD

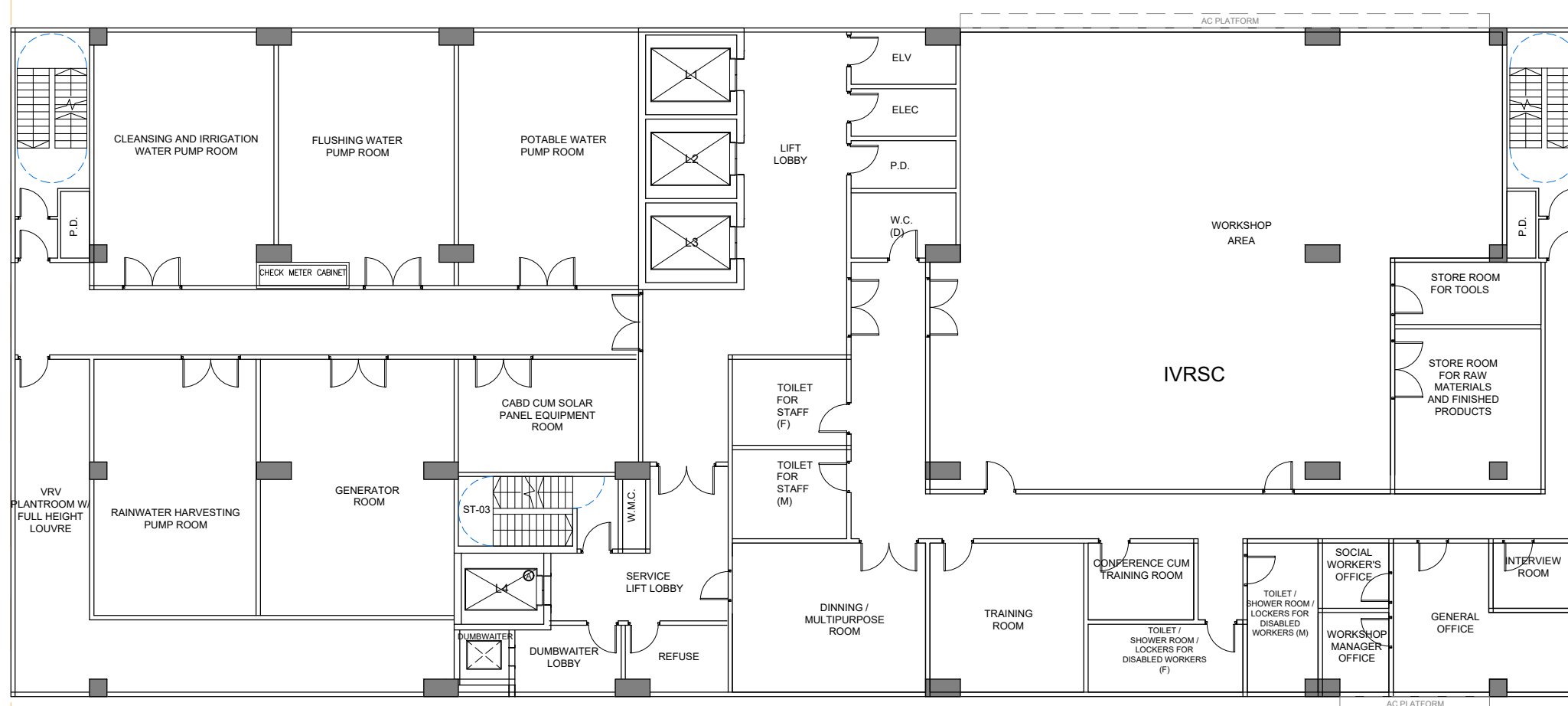


*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





SHA CHAU LEI ROAD

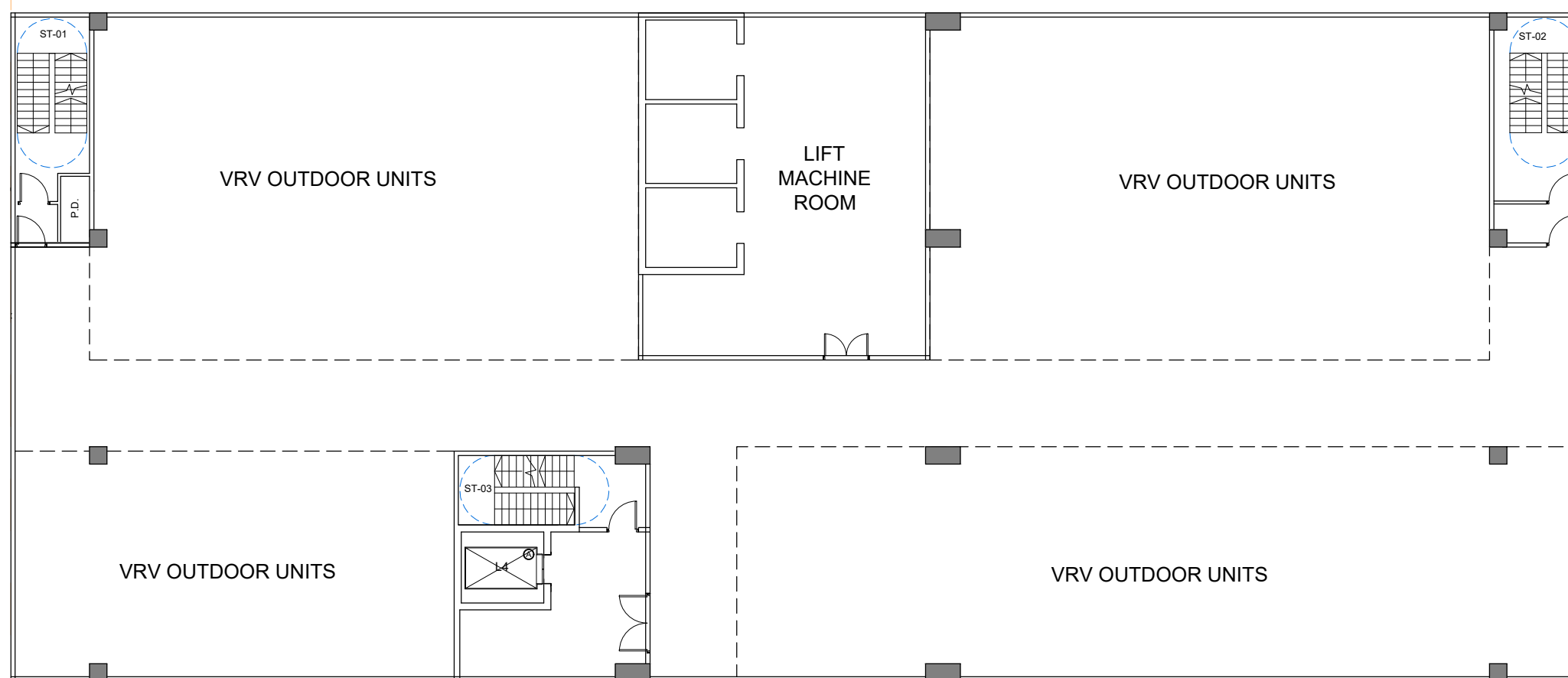


*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.



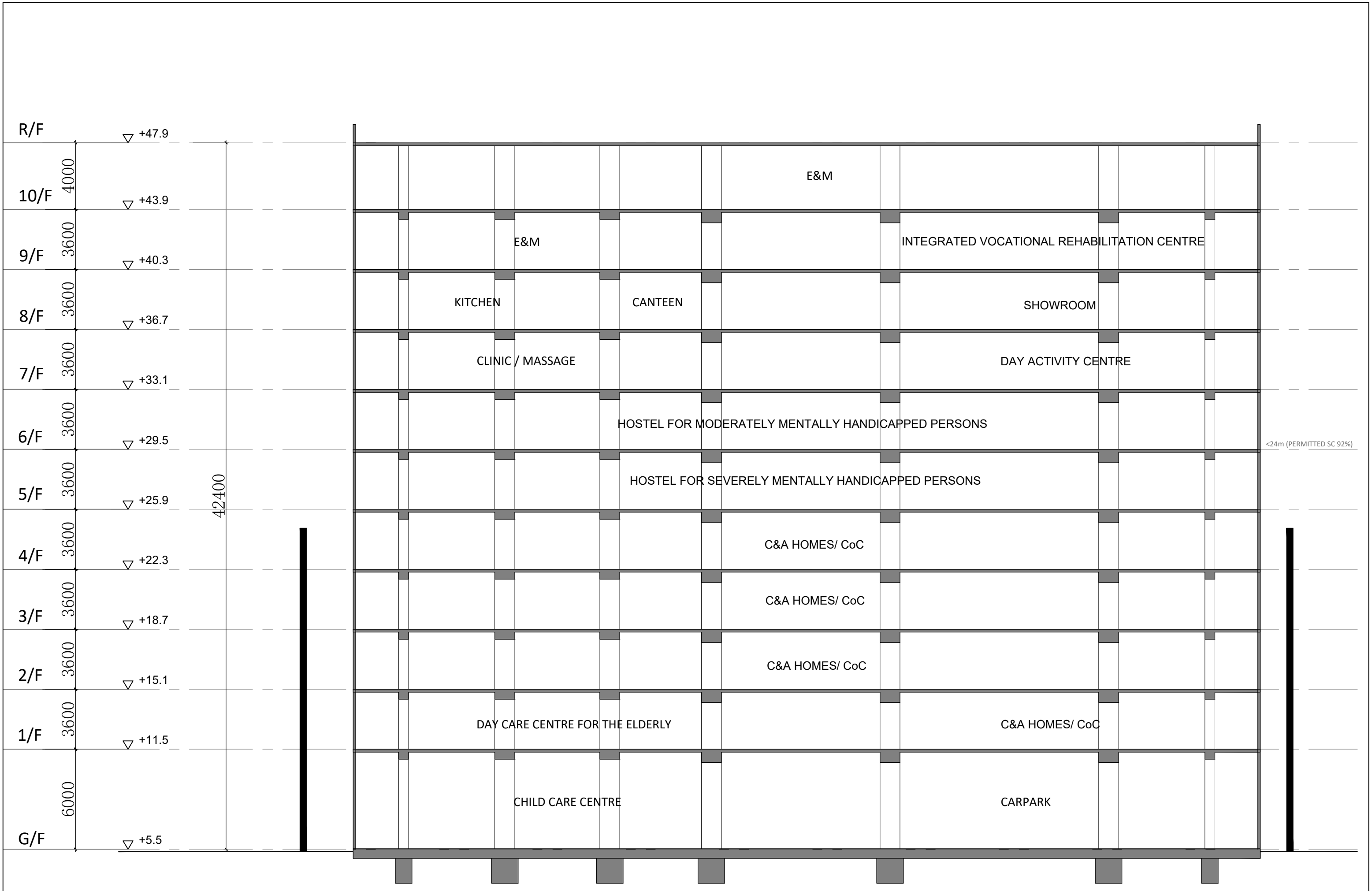


SHA CHAU LEI ROAD



*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





Appendix 7.1

Traffic Forecast of Year 2047 from Project Traffic

Consultant

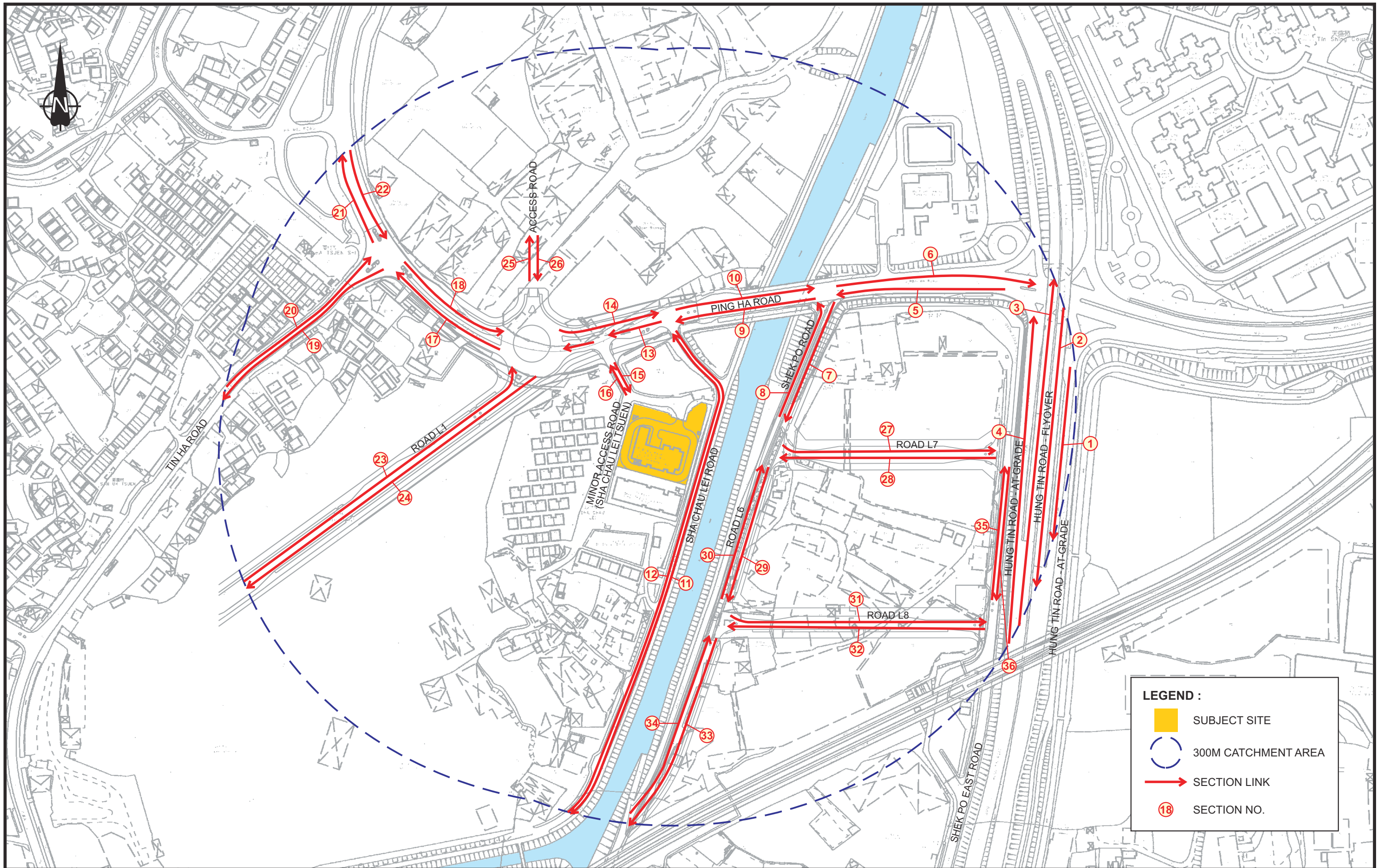
Table 1 Estimated Traffic Flows in Design Year 2047

Section No. ⁽¹⁾	Road	Direction	Peak Hour Traffic Volume (veh/hr) ⁽²⁾	Heavy Vehicles (%)	Speed Limit (km/h)
1	Hung Tin Road- at grade	SB	260	12%	50
2	Hung Tin Road -Flyover	SB	1,510	27%	70
3	Hung Tin Road -Flyover	NB	1,315	40%	70
4	Hung Tin Road- at grade	NB	305	26%	50
5	Ping Ha Road	WB	1,330	21%	50
6	Ping Ha Road	EB	1,100	26%	50
7	Shek Po Road	SB	35	10%	50
8	Shek Po Road	NB	150	10%	50
9	Ping Ha Road	WB	1,340	19%	50
10	Ping Ha Road	EB	1,025	24%	50
11	Sha Chau Lei Road	SB	90	15%	50
12	Sha Chau Lei Road	NB	150	9%	50
13	Ping Ha Road	WB	1,300	15%	50
14	Ping Ha Road	EB	995	12%	50
15	Minor Access Road (Sha Chau Lei Tsuen)	SB	75	11%	50
16	Minor Access Road (Sha Chau Lei Tsuen)	NB	65	5%	50
17	Ping Ha Road	WB	1,275	16%	50
18	Ping Ha Road	EB	985	17%	50
19	Tin Ha Road	SB	710	37%	50
20	Tin Ha Road	NB	605	30%	50
21	Ping Ha Road	WB	1,090	33%	50
22	Ping Ha Road	EB	965	32%	50
23	Road L1	NB	570	36%	50
24	Road L1	SB	755	41%	50
25	Access Road	SB	190	10%	50
26	Access Road	NB	150	10%	50
27	Road L7	EB	75	10%	50
28	Road L7	WB	60	10%	50
29	Road L6	SB	135	10%	50
30	Road L6	NB	210	10%	50
31	Road L8	EB	90	10%	50
32	Road L8	WB	95	10%	50
33	Road L6	SB	235	10%	50
34	Road L6	NB	275	10%	50

Section No. ⁽¹⁾	Road	Direction	Peak Hour Traffic Volume (veh/hr) ⁽²⁾	Heavy Vehicles (%)	Speed Limit (km/h)
35	Shek Po East Road	NB	60	10%	50
36	Shek Po East Road	SB	40	10%	50

Note: (1) Section location refers to **Drawing No. 1.1**.

(2) Numbers rounded to the nearest 5.



LEGEND :

- SUBJECT SITE
- 300M CATCHMENT AREA
- SECTION LINK
- 18 SECTION NO.

Rev.		Description	Checked	Date	Project Title		Drawing Title		Designed		Checked	Scale	Date	Drawing No.	Rev.
					ARCHITECTURAL AND ASSOCIATED CONSULTANCY SERVICES FOR TECHNICAL FEASIBILITY STUDY FOR PROPOSED REDEVELOPMENT OF POK OI HOSPITAL YEUNG CHUN PUI CARE AND ATTENTION HOME IN YUEN LONG		KEY INDEX PLAN OF TRAFFIC FORECAST FOR NOISE IMPACT ASSESSMENT IN 300M RADIUS		TAT		CYH	NTS	FEB 2024	1.1	-



Appendix 7.2

Traffic Noise Impact Assessment Result (Base Case & Mitigated Case)

Appendix 7.3

Traffic Department Endorsement on Road Classification

From: [NGAN Chun Sang](#)
To: [NGAN Chun Sang](#)
Subject: FW: FW: AOI- Traffic Impact Assessment for the Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long
Date: Thursday, 14 November, 2024 12:32:00 PM

From: Victor YK MA <ykma@td.gov.hk>
Sent: Monday, September 23, 2024 12:02 PM
To: AMBETKAR Tanvi <tambetkar@systra.com>
Cc: KWOK Edmund <ekwok@systra.com>; HO Philip <pho@systra.com>; Rosie CHENG <rosiecheng@p-t-group.com>; Wilson Man <wilsonman@ktaplanning.com>
Subject: Re: FW: AOI- Traffic Impact Assessment for the Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long

Dear Tanvi,

Please be advised that I have no objection in principle to the proposed road classification.

Regarding the parking provision, please make reference to HKPSG for the parking provision for Medical Use (e.g. Clinics). For other uses which are not stated in HKPSG, please confirm with relevant user departments to confirm whether the proposed parking provision could cater for their operational needs.

Best regards,
Victor MA
E/YLW1, TE/NTW
Transport Department
Tel: 2399 2422

From: AMBETKAR Tanvi <tambetkar@systra.com>
To: "ykma@td.gov.hk" <ykma@td.gov.hk>
Cc: Rosie CHENG <rosiecheng@p-t-group.com>, HO Philip <pho@systra.com>, KWOK Edmund <ekwok@systra.com>, "wilsonman@ktaplanning.com" <wilsonman@ktaplanning.com>
Date: 05/09/2024 11:52 AM
Subject: FW: AOI- Traffic Impact Assessment for the Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long

Dear Mr. MA,

In addition to the Technical Note, we would also like to see your comments and advice on:

EPD (Environmental Project Department) has requested to confirm the road type of the 'minor access road (Sha Chau Lei Tsuen)' road section studied for noise impact assessment. Sections no. 15 -16 is Minor Access Road (Sha Chau Lei Tsuen), which can be found in the attached road index plan for NIA. Since the road falls within a rural area, it has been considered a feeder road. Please refer to the attached document- TPDM, Volume 2, Chapter 3, page 34 for further reference.

SWD (Social Welfare Department) has requested to seek TD's agreement on the parking provision. It is our understanding that there is no explicit provision under the Hong Kong Planning Standards and Guidelines (HKPSG) governing parking requirements for welfare facilities. Hence, we have proposed a total of 16 parking lots, as shown in the table below, based on the daily operation needs of staff, paramedics, residents and visitors provided by the client. Attaching the layout plan for your reference (Please see page 2).

#	Vehicle Type	Required By	Parking Space Dimension
1	Private Car	HKPSG (CLINIC)	5m (L) X 2.5m (W) X 2.4m (H)
2	Private Car	HKPSG (CLINIC)	5m (L) X 2.5m (W) X 2.4m (H)
3	Private Car	HKPSG (CLINIC) | C&AH	5m (L) X 2.5m (W) X 2.4m (H)
4	Private Car (Disabled)	HKPSG (CLINIC)	5m (L) X 3.5m (W) X 2.4m (H)
5	16-Seater Light Bus	C&AH	8m (L) X 3m (W) X 3.3m (H)
6	16-Seater Light Bus	DE	8m (L) X 3m (W) X 3.3m (H)
7	16-Seater Light Bus	DE	8m (L) X 3m (W) X 3.3m (H)
8	16-Seater Light Bus	DE	8m (L) X 3m (W) X 3.3m (H)
9	16-Seater Light Bus	DE	8m (L) X 3m (W) X 3.3m (H)
10	24-Seater Light Bus	HSMH	8m (L) X 3m (W) X 3.3m (H)
11	5.5 Tonnes Light Goods Vehicle	IVRSC	7m (L) X 3.5m (W) X 3.6m (H)
12	Refuse Collection Vehicle	FEHB	12m (L) X 5m (W) X 4.5m (H)

13	Ambulance	HKPSG (CLINIC)	C&AH/ DE	9m (L) X 3.5m (W) X 3.3m (H)
Lay- by				
1	Private Car / Taxi	HKPSG (CLINIC)		5m (L) X 2.5m (W) X 2.4m (H)
2	Medium Goods Vehicle	HKPSG (CLINIC)	C&AH/ DE/ HSMH/ IVRSC	11m (L) X 3.5m (W) X 4.7m (H)
3	Heavy Goods Vehicle	HKPSG (CLINIC)	C&AH/ DE/ HSMH/ IVRSC	11m (L) X 3.5m (W) X 4.7m (H)

We seek your advice on the above matter and look forward to your response.

Should you have any questions or require any further information, please feel free to contact me.

Best regards,

Tanvi Ambetkar

Assistant Traffic Engineer

Tel: +852 2864 6437 (Direct Line) • Gen: +852 2529 7037 • Fax: +852 2527 8490



22nd Floor • Genesis • 33-35 Wong Chuk Hang Road • Hong Kong

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Please consider the environment before printing.

From: AMBETKAR Tanvi

Sent: Tuesday, July 9, 2024 5:59 PM

To: ykma@td.gov.hk

Cc: Rosie CHENG <rosiecheng@p-t-group.com>; HO Philip <pho@systra.com>; KWOK Edmund <ekwok@systra.com>; Leanna Lei <leannalei@aechk.com>; Leanna Lei <leannalei@aechk.com>

Subject: FW: AOI- Traffic Impact Assessment for the Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long

Dear Mr. MA,

In addition to the Technical Note that was sent today, there are a few traffic comments from other departments that we would like to seek your advice on:

EPD (Environmental Project Department) has requested to confirm the road type of the 'minor access road (Sha Chau Lei Tsuen)' road section studied for noise impact assessment. Sections no. 15 -16 is Minor Access Road (Sha Chau Lei Tsuen), which can be found in the attached road index plan for NIA. Since the road falls within a rural area, it has been considered a feeder road. Please refer to the attached document- TPDM, Volume 2, Chapter 3, page 34 for further reference.

SWD (Social Welfare Department) has requested to seek TD's agreement on the parking provision. It is our understanding that there is no explicit provision under the Hong Kong Planning Standards and Guidelines (HKPSG) governing parking requirements for welfare facilities. Hence, we have proposed a total of 16 parking lots, as shown in the table below, based on the daily operation needs of staff, paramedics, residents and visitors provided by the client. Attaching the layout plan for your reference (Please see page 2).

#	Vehicle Type	Required By	Parking Space Dimension
1	Private Car	HKPSG (CLINIC)	5m (L) X 2.5m (W) X 2.4m (H)
2	Private Car	HKPSG (CLINIC)	5m (L) X 2.5m (W) X 2.4m (H)
3	Private Car	HKPSG (CLINIC) C&AH	5m (L) X 2.5m (W) X 2.4m (H)
4	Private Car (Disabled)	HKPSG (CLINIC)	5m (L) X 3.5m (W) X 2.4m (H)

5	16-Seater Light Bus	C&AH	8m (L) X 3m (W) X 3.3m (H)
6	16-Seater Light Bus	DE	8m (L) X 3m (W) X 3.3m (H)
7	16-Seater Light Bus	DE	8m (L) X 3m (W) X 3.3m (H)
8	16-Seater Light Bus	DE	8m (L) X 3m (W) X 3.3m (H)
9	16-Seater Light Bus	DE	8m (L) X 3m (W) X 3.3m (H)
10	24-Seater Light Bus	HSMH	8m (L) X 3m (W) X 3.3m (H)
11	5.5 Tonnes Light Goods Vehicle	IVRSC	7m (L) X 3.5m (W) X 3.6m (H)
12	Refuse Collection Vehicle	FEHB	12m (L) X 5m (W) X 4.5m (H)
13	Ambulance	HKPSG (CLINIC) C&AH/ DE	9m (L) X 3.5m (W) X 3.3m (H)
Lay- by			
1	Private Car / Taxi	HKPSG (CLINIC)	5m (L) X 2.5m (W) X 2.4m (H)
2	Medium Goods Vehicle	HKPSG (CLINIC) C&AH/ DE/ HSMH/ IVRSC	11m (L) X 3.5m (W) X 4.7m (H)
3	Heavy Goods Vehicle	HKPSG (CLINIC) C&AH/ DE/ HSMH/ IVRSC	11m (L) X 3.5m (W) X 4.7m (H)

We seek your advice on the above matter and look forward to your response.

Should you have any questions or require any further information, please feel free to contact me.

Best regards,

Tanvi Ambetkar

Assistant Traffic Engineer

Tel: +852 2864 6437 (Direct Line) • Gen: +852 2529 7037 • Fax: +852 2527 8490



22nd Floor • Genesis • 33-35 Wong Chuk Hang Road • Hong Kong

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From: AMBETKAR Tanvi

Sent: Tuesday, July 9, 2024 11:01 AM

To: ykma@td.gov.hk

Cc: HO Philip <pho@systra.com>; KWOK Edmund <ekwok@systra.com>; Rosie CHENG <rosiecheng@p-t-group.com>; wilsonman@ktaplanning.com; Kitty Wong <kittywong@ktaplanning.com>; Cathy Man (<cm@aechk.com>) <cm@aechk.com>; Leanna Lei <leannalei@aechk.com>

Subject: FW: AOI- Traffic Impact Assessment for the Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long

Dear Mr. MA,

As per our conversation just now, please find a methodology on traffic forecast data for the Noise Impact Assessment for your review and comment.

We appreciate your consideration on this matter and look forward to your response.

Should you have any questions or require any further information, please feel free to contact me.

Best regards,

Tanvi Ambetkar

Assistant Traffic Engineer

Tel: +852 2864 6437 (Direct Line) • Gen: +852 2529 7037 • Fax: +852 2527 8490



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From: AMBETKAR Tanvi

Sent: Thursday, June 6, 2024 4:40 PM

To: Victor YK MA <ykma@td.gov.hk>

Cc: KWOK Edmund <ekwok@systra.com>; HO Philip <pho@systra.com>; Wilson KH MAN <wilsonkhman@td.gov.hk>;

Leanna Lei <leannalei@aechk.com>; Rosie CHENG <rosiecheng@p-t-group.com>; Kitty Wong

<kittywong@ktaplanning.com>; Cathy Man (cm@aechk.com) <cm@aechk.com>

Subject: RE: AOI- Traffic Impact Assessment for the Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long

Dear Mr. MA,

In regards to the captioned project, the Environmental Protection Department advised us to prepare a methodology on traffic forecast data for the Noise Impact Assessment, based on 1st draft of comments received on 22nd May 2024.

In response to this request, we have prepared the technical note, which is attached for your review and approval.

We appreciate your consideration on this matter and look forward to your response.

Should you have any questions or require any further information, please feel free to contact me.

Best regards,

Tanvi Ambetkar

Assistant Traffic Engineer

Tel: +852 2864 6437 (Direct Line) • Gen: +852 2529 7037 • Fax: +852 2527 8490



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From: Victor YK MA <ykma@td.gov.hk>
Sent: Thursday, October 12, 2023 3:42 PM
To: AMBETKAR Tanvi <tambetkar@systra.com>
Cc: KWOK Edmund <ekwok@systra.com>; HO Philip <pho@systra.com>; Wilson KH MAN <wilsonkhman@td.gov.hk>
Subject: Re: AOI- Traffic Impact Assessment for the Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long

Dear Tanvi,

Please be advised that we have no objection in principle to the proposed AOI from traffic engineering perspective.

As a remark, we have the following advisory comments on your assessment:

- a. Future road improvement works gazetted by CEDD for HSK/HT NDA shall be taken into account.
- b. Please check with PlanD about whether your proposed development parameters are tally with the approved planning parameters in the OZP.

Best regards,
Victor MA
E/YLW1, TE/NTW
Transport Department
Tel: 2399 2422

From: AMBETKAR Tanvi <tambetkar@systra.com>
To: "ykma@td.gov.hk" <ykma@td.gov.hk>
Cc: KWOK Edmund <ekwok@systra.com>, HO Philip <pho@systra.com>
Date: 19/09/2023 11:59 AM
Subject: AOI- Traffic Impact Assessment for the Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long

Dear Mr. MA,

As per our discussion just now, please find the attached brief summary of the proposed redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home. P&T Architects Limited has appointed Systra MVA to carry out a feasibility study for the same. The TIA is expected to be completed and submitted in Q4 2023. In order to prepare the traffic impact assessment report, we would like to confirm with you the Area of Influence and targeted junctions to be assessed in our TIA study.

We would be grateful if you could provide us with any comments after your review at your earliest convenience.

Please do not hesitate to contact me if you have any questions.

Best regards,

Tanvi Ambetkar

Assistant Traffic Engineer

Tel: +852 2864 6437 (Direct Line) • Gen: +852 2529 7037 • Fax: +852 2527 8490



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Ce message a ete verifie et ne contient pas de programme malveillant. Ce message et toutes les pieces jointes (ci-apres le "message") sont confidentiels et susceptibles de contenir des informations couvertes par le secret professionnel. Ce message est etabli a l'intention exclusive de ses destinataires. Toute utilisation ou diffusion non autorisee est interdite. Tout message electronique est susceptible d'alteration. Notre societe et ses filiales declinent toute responsabilite au titre de ce message s'il a ete altere, deforme falsifie. O

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Ce message a ete verifie et ne contient pas de programme malveillant. Ce message et toutes les pieces jointes (ci-apres le "message") sont confidentiels et susceptibles de contenir des informations couvertes par le secret professionnel. Ce message est etabli a l'intention exclusive de ses destinataires. Toute utilisation ou diffusion non autorisee est interdite. Tout message electronique est susceptible d'alteration. Notre societe et ses filiales declinent toute responsabilite au titre de ce message s'il a ete altere, deforme falsifie. O

===== [attachment "1.Road Index Plan_NIA.pdf" deleted by Victor YK MA/TD/HKSARG] [attachment "2. TPDM, Volume 2.pdf" deleted by Victor YK MA/TD/HKSARG] [attachment "3.POH_TFS_Overall layout .pdf" deleted by Victor YK MA/TD/HKSARG]

Appendix 7.4

Fixed Plant Noise Impact Assessment Calculation

Fixed Plant Noise Impact Assessment Calculation

Project No.: 2164EA
Project: Proposed Redevelopment Pok Oi Hospital Yeung Chun Pui Care and Attention Home

NSR ID Pok Oi-West

Daytime Criterion: 70 dB(A)																				% on time over 30mins							Correction							Resultant Noise Level dB(A)					
Fixed Plant Noise Source																																							
ID	Name	X-coordinate	Y-coordinate	Height of FPN (mPD)	SWL dB(A)	Remark	Quantity (nos.)	X-coordinate	Y-coordinate	Height of NSR (mPD)			Horizontal Distance (m)		Vertical Distance (m)			Slant Distance (m)			% on time over 30mins		Quantity	Facade	Tonality	Impulsive	Intermittency	Barrier	% on time										
										1F	SF	9F			1F	SF	9F	1F	SF	9F	%		(dB)	(dB)	(dB)	(dB)	(dB)	(dB)		1F	SF	9F							
S5	Temporary Vehicle Repair Workshop	817617.5144	833918.67	6	100	[3]	1	817686.2	834001.5	12.7	27.1	41.5	107.6034064	6.7	21.1	35.5	-48.7	-48.8	-49.1	100%		0	3	0	0	0	-5	0	49.3	49.2	48.9								
S10	AC Outdoor Units at Ching Chung C&AH	817687.24	833989.9	13.7	50	[1]	10	817686.2	834001.5	12.7	27.1	41.5	11.64652738	1	15.4	29.8	-29.4	-33.7	-38.1	100%		0	3	0	0	0	0	0	29.6	25.3	20.9								
S11	CLP Substation of Ching Chun C&AH-AC outdoor units	817713.9	833967.95	8	50	[1]	1	817686.2	834001.5	12.7	27.1	41.5	43.50738443	4.7	19.1	33.5	-40.8	-41.5	-42.8	100%		0	3	0	0	0	0	0	18.2	17.5	16.2								
S12	Container System Ltd Storage	817572.09	834034.5	6	91	[2]	4	817686.2	834001.5	12.7	27.1	41.5	118.7859087	6.7	21.1	35.5	-49.5	-49.6	-49.9	100%		0	3	0	0	0	-5	0	39.5	39.4	39.1								
																																		Overall	50	50	49		

Remarks for SWLs:

- [1] SWL of AC outdoor unit is referred to sound level of Mitsubishi outdoor unit model "PLY-SP48BA" (56dB(A)).
- [2] SWL of loading and unloading using forklift (91 dB(A)) is referred to the approved EIA report "AEIAR-382/2014 - 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)
- [3] SWL of hand-held pneumatic tool (100dB(A)) is referred to the approved EIA report "AEIAR-351/2015 - 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)
- [4] Correction factor for quantity = 10 log (quantity)
- [5] Distance correction for SWL = 20 log (distance) + 8
- [6] Correction for percentage on-time over 30 mins = 10 log (on-time %)
- [7] 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.
- [8] 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 Facade 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 Pok Oi-South

Daytime Criterion: 70 dB(A)

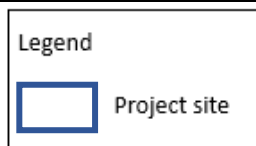
Day Criterion: 70 dB(A)																																
Fixed Plant Noise Source															% on time over 30mins										Correction							
ID	Name	X-coordinate	Y-coordinate	Height of FPN (mPD)	SWL dB(A)	Remark	Quantity	NSR Location		Height of NSR (mPD)		Horizontal Distance		Vertical Distance (m)		Slant Distance (m)		%	Quantity	Façade	Tonality	Impulsive	Intermittency	Barrier	% on time	Resultant Noise Level dB(A)						
								X-coordinate	Y-coordinate	1F	SF	SF	1F	SF	SF	1F	SF	SF	%		[dB]	[nos.]	[dB]	[dB]	[dB]	[dB]		1F	SF	SF		
S5	Temporary Vehicle Repair Workshop	817685.5146	833918.67	6	100	[1]	1	817685.7	834001.7	12.7	27.1	41.5	83.03020699	6.7	21.1	35.5	-46.4	-46.7	-47.1	100%	0	3	0	0	0	0	0	56.6	56.3	55.9		
S10	AC Outdoor Units at Ching Chung C&AH	817687.24	833889.39	13.7	56	[1]	10	817685.7	834001.7	12.7	27.1	41.5	11.9006223	1	15.4	29.8	-29.5	-33.8	-38.1	100%	0	3	0	0	0	0	0	29.5	25.2	20.9		
S11	CLP Substation of Ching Chun C&AH-AC outdoor units	817713.0	833967.95	8	56	[1]	1	817685.7	834001.7	12.7	27.1	41.5	43.980706	4.7	19.1	33.5	-40.9	-41.6	-42.9	100%	0	3	0	0	0	0	0	18.1	17.4	16.1		
S12	Container System Ltd Storage	817572.09	834034.5	6	91	[2]	4	817685.7	834001.7	12.7	27.1	41.5	118.2500406	6.7	21.1	35.5	-49.5	-49.6	-49.8	100%	0	3	0	0	0	0	0	44.5	44.4	44.2		
																										Overall	57	57	56			

Remarks for SWLs:

- [1] SWL of AC outdoor unit is referred to sound level of Mitsubishi outdoor unit model "PLY-SP48BA" (56dB(A)).
- [2] SWL of loading and unloading using forklift (51 dB(A)) is referred to the approved EIA report "AEIAR-382/2014 - 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/EIAN%20Report/Html/Appendices/App%204-7.pdf)
- [3] SWL of hand-held pneumatic tool (100dB(A)) is referred to the approved EIA report "AEIAR-351/2015 - Chai Wan Government Complex and Vehicle Depot" (website: https://www.epd.gov.hk/eia/register/report/eiareport/eia_2302015/Web/Pdf/EIAN%20Report%20-%20Appendices.pdf)
- [4] Correction factor for quantity = 10 log (quantity)
- [5] Distance correction for SWL = 20 log (distance) + 8
- [6] Correction for percentage on-time over 30 mins = 10 log (on-time %)
- [7] 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.
- [8] 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 9.1

Aerial Photos



1975



1981



1982



1984



1987



1991



1998



2007



2015



2022

Appendix 9.2

Copy of Letter Replies from Various Government Departments

From: hllai@epd.gov.hk
To: [Leanna Lei](#)
Subject: Re: FW: [819.4524 Pok Oi]Request for Information for Land Contamination Assessment
Date: Friday, November 10, 2023 2:30:10 PM

Dear Ms. LEI,

Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home
in Yuen Long
Request for Information for Land Contamination Assessment

I refer your email about the captioned. Our reply is as below:-

(a) This Regional Office has no record of reported accidents of spillage / leakage of chemicals at the areas specified in your letter. You may also need to check with other parties / departments for such information as appropriate.

Please contact me should you have any questions.

Yours faithfully,
(LAI Ho-leung)
for Director of Environmental Protection

From: Leanna Lei <leannalei@aechk.com>
To: "hllai@epd.gov.hk" <hllai@epd.gov.hk>
Cc: Cathy Man <cm@aechk.com>
Date: 10/11/2023 12:46
Subject: FW: [819.4524 Pok Oi]Request for Information for Land Contamination Assessment

Dear Mr. Lai,

I am writing to follow up on the request letter I sent on 25 October 2023 via email and fax regarding the record of registered chemical waste producers on our site (please refer to the enclosure).

As this matter is time-sensitive, I would be grateful for your prompt response and the timely provision of the requested information.

Should you have any queries, please feel free to contact the undersigned at 3915 7148 or Ms. Leanna Lei (leannalei@aechk.com) at 3915 7178.

Thank you for your attention to this matter.

Best Regards,
Leanna Lei



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

27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong

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From: Leanna Lei

Sent: Wednesday, October 25, 2023 9:51 AM

To: hllai@epd.gov.hk

Cc: Cathy Man <cm@aechk.com>

Subject: [819.4524 Pok Oi]Request for Information for Land Contamination Assessment

Dear Sir,

**Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care
and Attention Home in Yuen Long
Request for Information for Land Contamination Assessment**

We are conducting a Technical Feasibility Study for Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long (Subject Site). 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 Subject Site are required as part of the vetting process.

Of particular interests is whether there are any registered chemical waste producers under your record in the Subject 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. We enclosed herewith a site map showing the location of the Subject Site for your reference.

Due to 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 **7 November 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 or Ms. Leanna Lei (leannalei@aechk.com) at 3915 7178.

Best Regards,



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

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27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong

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[attachment "Fig1 Site Location Plan.pdf" deleted by HL LAI/EPD/HKSARG]

From: [Leanna Lei](#)
To: hllai@epd.gov.hk
Cc: [Cathy Man](#)
Subject: RE: FW: [819.4524 Pok Oi]Request for Information for Land Contamination Assessment
Date: Friday, June 28, 2024 3:22:00 PM
Attachments: [RtC table_extract.docx](#)
[image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[Fig 3.1 Site location Plan_Issue 1.pdf](#)

Dear Mr. Lai,

Thank you for your reply. We are currently conducting an S12A Application for the Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long. As referred to EPD comments, information on odour emission of the nearby Tin Shui Wai Nullah is required. We would like to check on the odour complaint records in the past five years related to the nearby Tin Shui Wai Nullah and any information you could provide which might be useful to 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 Jul 2024.
Thank you very much for your kind attention and assistance.

Yours Sincerely,
Leanna Lei



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

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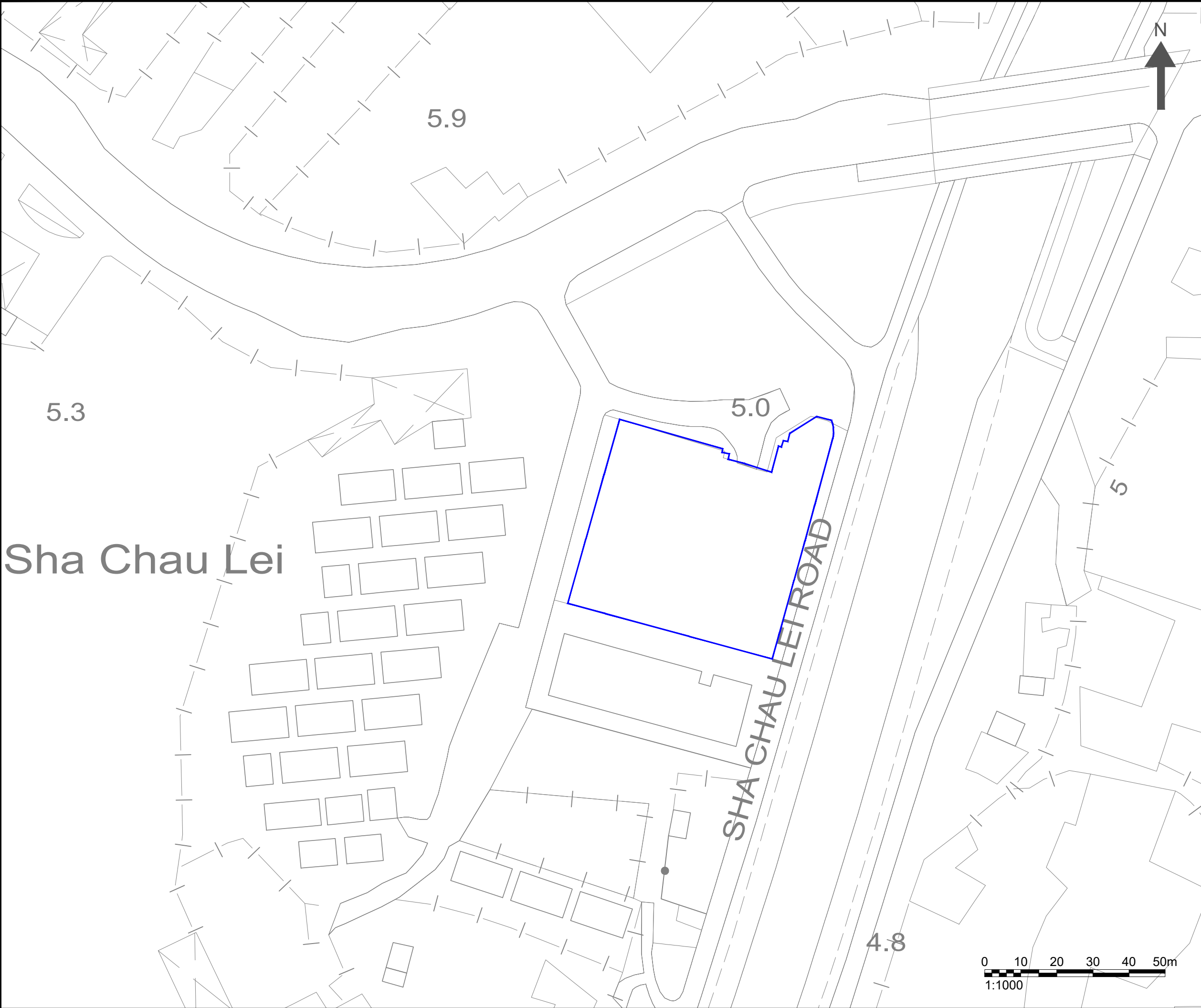
From: hllai@epd.gov.hk <hllai@epd.gov.hk>
Sent: Friday, November 10, 2023 2:30 PM
To: Leanna Lei <leannalei@aechk.com>
Subject: Re: FW: [819.4524 Pok Oi]Request for Information for Land Contamination Assessment

Dear Ms. LEI,

Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home
in Yuen Long
Request for Information for Land Contamination Assessment

I refer your email about the captioned. Our reply is as below:-


(a) This Regional Office has no record of reported accidents of spillage / leakage of



NOTES :

PROJECT SITE

Consultant



AEC

Allied Environmental Consultants Limited

Project No. : 2164EA

Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
PROJECT SITE LOCATION

Drawing No : Fig3.1	Revision : 1
Scale : AS SHOWN	Date : SEP 2023

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Our Ref. [819.4524/23-0002]



Fire Services Department / Management Group
9/F, Fire Services Headquarters Building
1 Hong Chong Road
Tsim Sha Tsui East
Kowloon

27/F, Overseas Trust Bank Building
160 Gloucester Road
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Hong Kong
T: +852 2815 7028
F: +852 2815 5399
info@aechk.com
www.asecg.com

19 October 2023

By Fax (2739 5879)

Dear Sir/Madam,

**Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care
and Attention Home in Yuen Long
Request for Information for Land Contamination Assessment**

We are conducting a Technical Feasibility Study for Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long (Subject Site). 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 Subject Site are required as part of the vetting process.

Of particular interests are spill and incident reports (including records of fire at the Subject Site) that we believe your Department might have record of. Furthermore, we would also like to know whether anywhere of the subject site had applied or possessed license for dangerous goods storage. We enclosed herewith a site map showing the location of the Subject Site for your reference.

Due to 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 2 November 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 or Ms. Leanna Lei (leannalei@aechk.com) at 3915 7178.

Yours sincerely,

Cathy Man

Associate Director
CM/II

Encl. Site Location Plan

Allied Environmental Consultants Limited

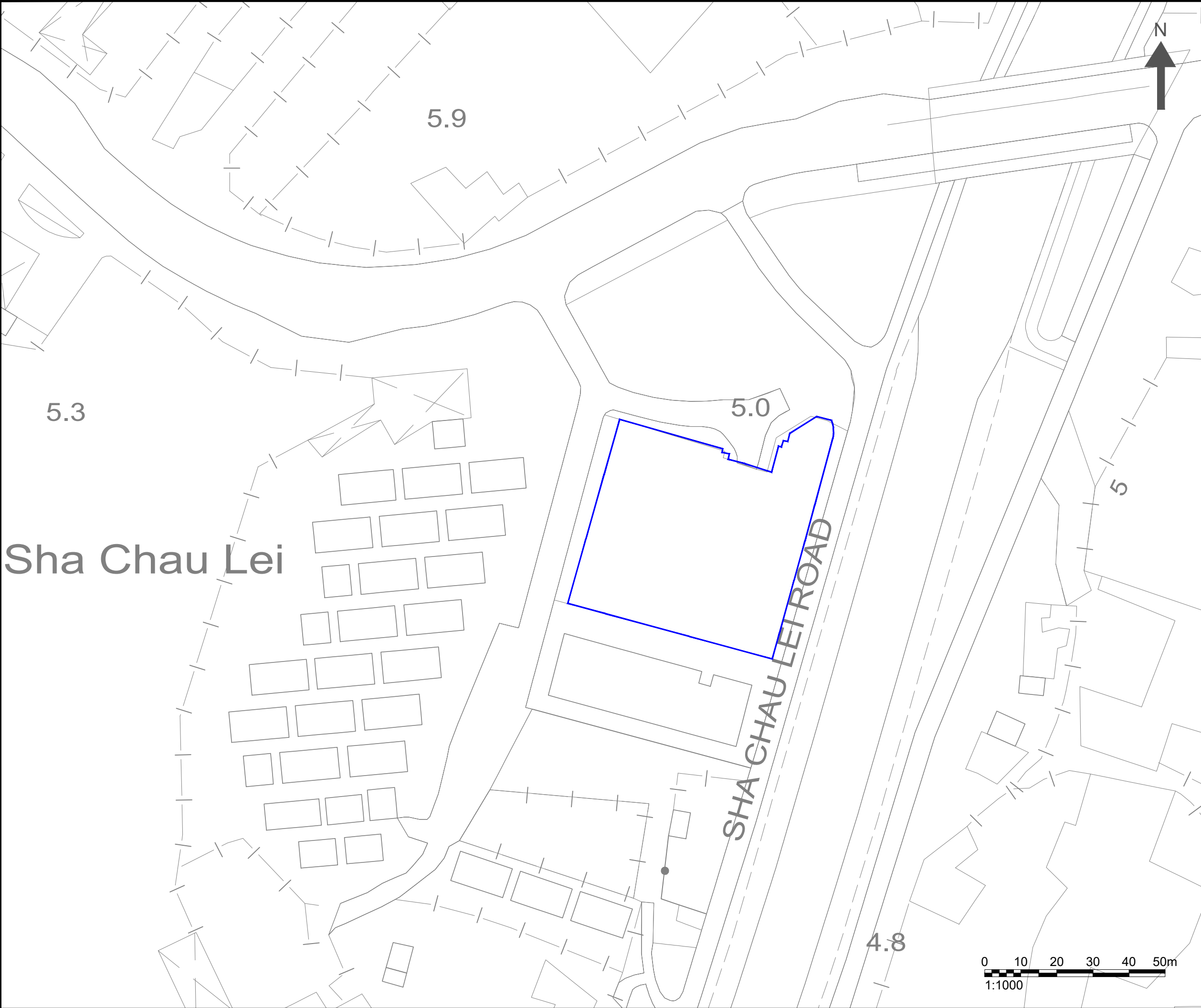
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27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong

沛然環境評估工程顧問有限公司

沛然環保集團成員 (港交所股份代號: 8320.HK)


香港灣仔告士打道 160 號海外信託銀行大廈 27 樓



NOTES :

PROJECT SITE

Consultant



Allied Environmental Consultants Limited

Project No. : 2164EA

Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
PROJECT SITE LOCATION

Drawing No : Fig3.1	Revision : 1
Scale : AS SHOWN	Date : SEP 2023

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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. : (81) in FSD GR 6-5/4 R Pt. 54
來函檔號 YOUR REF. : 819.4524/23-0002
電子郵件 E-mail : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX NO. : 2988 1196
電話 TEL NO. : 2733 7570

30 July 2024

Allied Environmental Consultants Limited
27/F, Overseas Trust Bank Building,
160 Gloucester Road,
Wan Chai, Hong Kong.
(Attn: Ms. Leanna LEI, Assistant Consultant)

Dear Ms. LEI,

**Proposed Development of Pok Oi Hospital
Yeung Chun Pui Care and Attention Home in Yuen Long_
Request for Information of Dangerous Goods & Incident Records**

I refer to your letter of 3.7.2024 regarding the captioned request and reply below in response to your questions:-

Please be advised that neither records of dangerous goods license, fire incidents nor incidents of spillage / leakage of dangerous goods were found in connection with the given conditions of your request at the subject location.

If you have further questions, please feel free to contact the undersigned.

Yours sincerely,

(LAI Kin-man)
for Director of Fire Services

消防處
香港九龍尖沙咀東部服務道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. : (22) in FSD GR 6-5/4 R Pt. 54
來函檔號 YOUR REF. : 819.4524/23-0002
電子郵件 E-mail : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX NO. : 2988 1196
電話 TEL NO. : 2733 5848

10 July 2024

Allied Environmental Consultants Limited
27/F, Overseas Trust Bank Building,
160 Gloucester Road,
Wan Chai, Hong Kong.
(Attn: Ms. Leanna LEI, Assistant Consultant)

By fax (2815 5399) only

Dear Ms. LEI,

**Proposed Development of Pok Oi Hospital
Yeung Chun Pui Care and Attention Home in Yuen Long
Request for Information of Dangerous Goods & Incident Records**

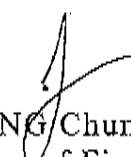
I refer to your email of 3.7.2024 regarding the captioned subject.

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,


(TSANG Chun-hei)
for Director of Fire Services

From: [Leanna Lei](#)
To: hkfsdenq@hkfsd.gov.hk
Cc: [Cathy Man](#); [NGAN Chun Sang](#)
Subject: RE: [819.4524-230002 Pok Oi Hospital] Submission of Appointment Letter
Date: Wednesday, July 3, 2024 3:52:00 PM
Attachments: [23-0002 FSD reply \(2\).pdf](#)
[image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[23-0002 FSD enquiry.pdf](#)
[Fig 3.1 Site location Plan Issue 1.pdf](#)
[819.4524 Appointment letter 1.pdf](#)
[RtC table extract fsd.docx](#)

Dear Mr Lai,

To follow up on your reply dated 13 December 2023 (ref no. (91) in FSD GR6-5/4 R Pt.50), we received comments from EPD on the latest status of the dangerous goods and incident records. We would like to check on the latest information, particularly the relevant records in 2024, for our study. We enclosed herewith a site map showing the location of the Project Site and an appointment letter for your reference.

Due to the tight schedule, it would be highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by 9 Jul 2024.
Thank you very much for your kind attention and assistance.

Best Regards,
Leanna



Leanna Lei – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 2815 7028 | D: (852) 3915 7178 | F: (852) 2815 5399 | E: leannalei@aecchk.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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From: Leanna Lei
Sent: Wednesday, November 29, 2023 5:40 PM
To: hkfsdenq@hkfsd.gov.hk
Cc: [Cathy Man <cm@aecchk.com>](mailto:cm@aecchk.com); [NGAN Chun Sang <nganchunsang@aecasia.io>](mailto:nganchunsang@aecasia.io)
Subject: [819.4524-230002 Pok Oi Hospital] Submission of Appointment Letter

Proposed Development of Pok Oi Hospital
Yeung Chun Pui Care and Attention Home in Yuen Long
Submission of Appointment Letter

Dear Mr NG,

Regarding your letter (Ref.:(205) in FSD GR6-5/4 R Pt.49) dated 10 November 2023 regarding the information request of dangerous goods and incident records, we are pleased to submit an Appointment Letter for your record.

Due to the tight schedule, it would be highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by **13 December 2023**.

Thank you very much for your attention and assistance. Should you have any queries, please contact me at 3915 7178.

Encl. Site Location Plan, Appointment Letter

Best Regards,
Leanna Lei



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

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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.** : (205) in FSD GR 6-5/4 R Pt. 49
來函檔號 **YOUR REF.** : [819.4524/23-0002]
電子郵件 **E-mail** : hkfsdenq@hkfsd.gov.hk
圖文傳真 **FAX NO.** : 2739 5879
電 話 **TEL NO.** : 2733 7741

10 November 2023

Allied Environmental Consultants Limited
27/F, Overseas Trust Bank Building,
160 Gloucester Road,
Wan Chai, Hong Kong.
(Attn: Ms. Cathy Man, Associate Director)

By fax (2815 5399) only

Dear Ms. MAN,

Proposed Development of Pok Oi Hospital
Yeung Chun Pui Care and Attention Home in Yuen Long
Request for Information of Dangerous Goods & Incident Records

I refer to your letter of 19.10.2023 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

From: [Leanna Lei](#)
To: hkfsdenq@hkfsd.gov.hk
Cc: [Cathy Man](#); [NGAN Chun Sang](#)
Subject: [819.4524-230002 Pok Oi Hospital] Submission of Appointment Letter
Date: Wednesday, November 29, 2023 5:40:00 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[819.4524 Appointment letter 1.pdf](#)
[23-0002 FSD reply.pdf](#)
[Fig1 Site Location Plan.pdf](#)

Proposed Development of Pok Oi Hospital
Yeung Chun Pui Care and Attention Home in Yuen Long
Submission of Appointment Letter

Dear Mr NG,

Regarding your letter (Ref.:(205) in FSD GR6-5/4 R Pt.49) dated 10 November 2023 regarding the information request of dangerous goods and incident records, we are pleased to submit an Appointment Letter for your record.

Due to the tight schedule, it would be highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by **13 December 2023**.

Thank you very much for your attention and assistance. Should you have any queries, please contact me at 3915 7178.

Encl. Site Location Plan, Appointment Letter

Best Regards,
Leanna Lei



Leanna Lei – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 2815 7028 | D: (852) 3915 7178 | F: (852) 2815 5399 | E: leannalei@aecg.com

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27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong

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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.** : (91) in FSD GR 6-5/4 R Pt. 50
來函檔號 **YOUR REF.** : [819.4524/23-0002]
電子郵件 **E-mail** : hkfsdenq@hkfsd.gov.hk
圖文傳真 **FAX NO.** : 2988 1196
電話 **TEL NO.** : 2733 7570

13 December 2023

Allied Environmental Consultants Limited
27/F, Overseas Trust Bank Building,
160 Gloucester Road,
Wan Chai, Hong Kong.
(Attn: Ms. Cathy MAN, Associate Director)

Dear Ms. MAN,

Proposed Development of Pok Oi Hospital
Yeung Chun Pui Care and Attention Home in Yuen Long
Request for Information of Dangerous Goods & Incident Records

I refer to your letter of 19.10.2023 regarding the captioned request and reply below in response to your questions:-

Please be advised that neither records of dangerous goods license, fire incidents nor incidents of spillage / leakage of dangerous goods were found in connection with the given conditions of your request at the subject location.

If you have further questions, please feel free to contact the undersigned.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Lai Kin-man', written over a horizontal line.

(LAI Kin-man)
for Director of Fire Services

From: ccylam@pland.gov.hk
To: [Leanna Lei](#)
Cc: [Cathy Man](#); sphchan@pland.gov.hk
Subject: Re: [819.4524 Pok Oi]Request for Information for Land Contamination Assessment
Date: Friday, November 3, 2023 9:54:45 AM
Attachments: [ATT00001.png](#)
[ATT00002.png](#)
[ATT00003.png](#)
[ATT00004.png](#)

Dear Ms. Lei,

I refer to your email dated 26.10.2023 regarding the captioned request.

According to our record, the subject Sha Chau Lei Tsuen Pok Oi Hospital Yeung Chun Pui Care and Attention Home was completed in 1984, and no development/redevelopment proposal at the site has been approved since then.

The consultant should be advised to refer to the adopted Hung Shui Kiu and Ha Tsuen (HSK/HT) Outline Development Plan for the development proposals of the surrounding areas in the HSK/HT area.

Regards,
Charlotte Lam
for TM&YLW DPO, PlanD
Tel: 2158 6294

From: Leanna Lei <leannalei@aechk.com>
To: "ccylam@pland.gov.hk" <ccylam@pland.gov.hk>
Cc: Cathy Man <cm@aechk.com>
Date: 26/10/2023 10:07
Subject: Re: [819.4524 Pok Oi]Request for Information for Land Contamination Assessment

Dear Ms. LAM,

**Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care
and Attention Home in Yuen Long
Request for Information for Land Contamination Assessment**

We are conducting a Technical Feasibility Study for Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long (Subject Site). 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 Subject Site are required as part of the vetting process.

Of particular interests 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. We enclosed herewith a site map

showing the location of the subject site for your reference.

Due to 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 **7 November 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 or Ms. Leanna Lei (leannalei@aechk.com) at 3915 7178.

Best Regards,



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

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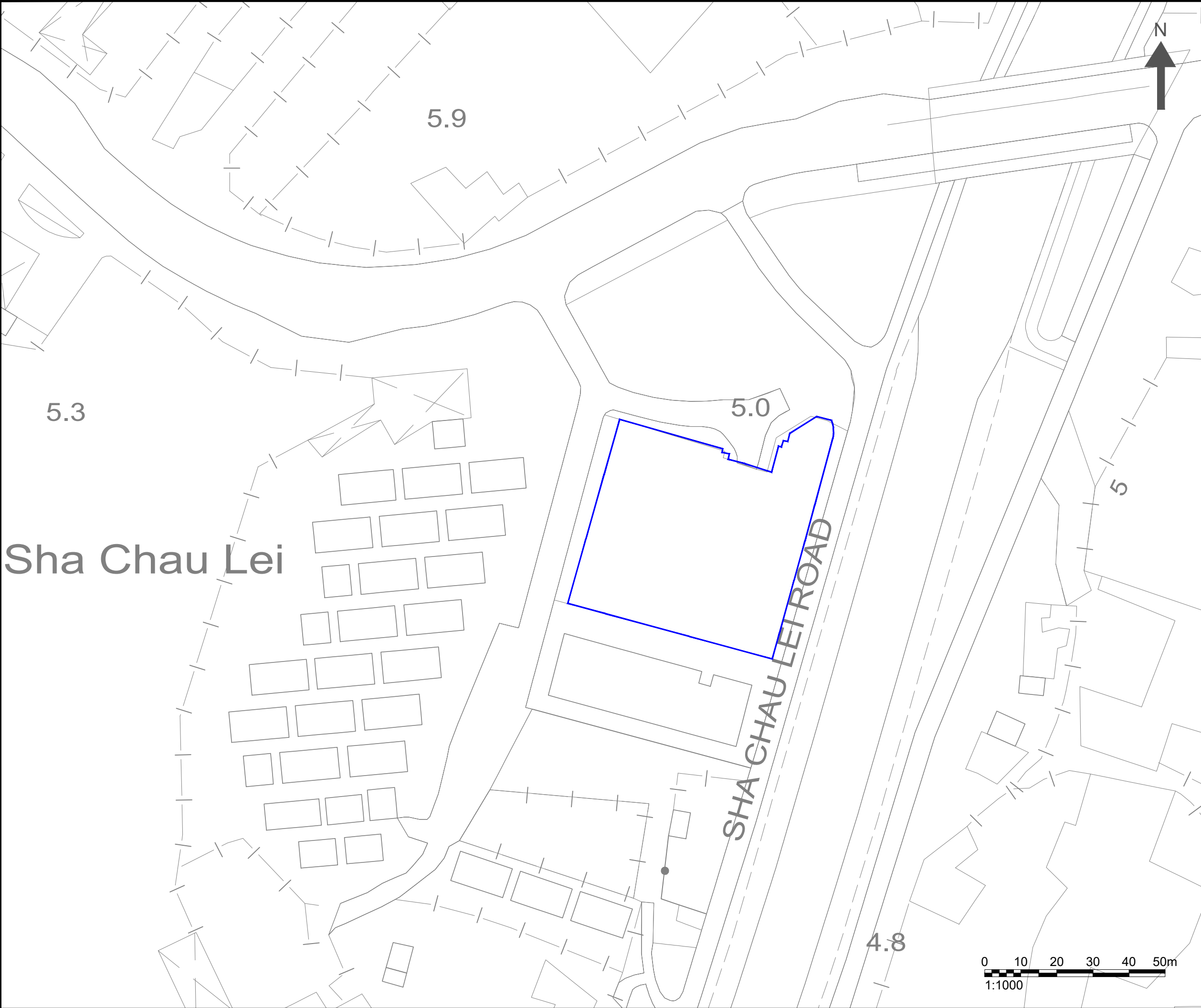
27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong

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[attachment "Fig1 Site Location Plan.pdf" deleted by Charlotte Cheuk Ying LAM/PLAND/HKSARG]



NOTES :

PROJECT SITE

Consultant



AEC

Allied Environmental Consultants Limited

Project No. : 2164EA

Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
PROJECT SITE LOCATION

Drawing No : Fig3.1	Revision : 1
Scale : AS SHOWN	Date : SEP 2023

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From: lmeylw3@landsd.gov.hk
To: [Leanna Lei](#)
Cc: esylw3@landsd.gov.hk
Subject: Fw: [819.4524 Pok Oi]Request for Information for Land Contamination Assessment (DLOYL 467/YPT/62 Pt.2)
Date: Wednesday, October 25, 2023 2:27:49 PM
Attachments: [ATT00001.png](#)
[ATT00002.png](#)
[ATT00003.png](#)
[ATT00004.png](#)

Dear Ms. Lei,

I refer to your preceding mail below.

The subject site is held under Lot 2273 and the Extension thereto in D.D. 125 ("the Lot") which was granted to Pok Oi Hospital under New Grant No. 2882 dated 21.5.1980 by way of Private Treaty Grant at nil premium and an Extension Letter dated 8.6.1984 registered by Memorial No. YL289856.

The Lot was also varied or modified by two modification letters dated 1.3.1982 and 4.7.1983 registered by Memorial No. YL259362 and YL279198 respectively. The user of the subject site is a non-profit making residential care and attention home for the aged and such ancillary and amenity purposes.

We have no information/record on spillage accidents, illegal/contaminating land uses or uncontrolled dumping uses of the subject site.

Regards

(TH LAW)

LME/W3

DLOYL

Tel: 3529 1114

Fax: 2473 3134

From: Leanna Lei <leannalei@aechk.com>
To: "lmeylw1@landsd.gov.hk" <lmeylw1@landsd.gov.hk>
Cc: Cathy Man <cm@aechk.com>
Date: 25/10/2023 09:52
Subject: [819.4524 Pok Oi]Request for Information for Land Contamination Assessment

Dear Sir,

Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care

and Attention Home in Yuen Long
Request for Information for Land Contamination Assessment

We are conducting a Technical Feasibility Study for Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long (Subject Site). 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 Subject Site are required as part of the vetting process.

Of particular interests are information on spillage accidents, illegal/contaminating land uses or uncontrolled dumping uses, current and historical land use information, and any information you could provide which might be useful for our study. We enclosed herewith a site map showing the location of the subject site for your reference.

Due to 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 **7 November 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 or Ms. Leanna Lei (leannalei@aechk.com) at 3915 7178.

Best Regards,



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

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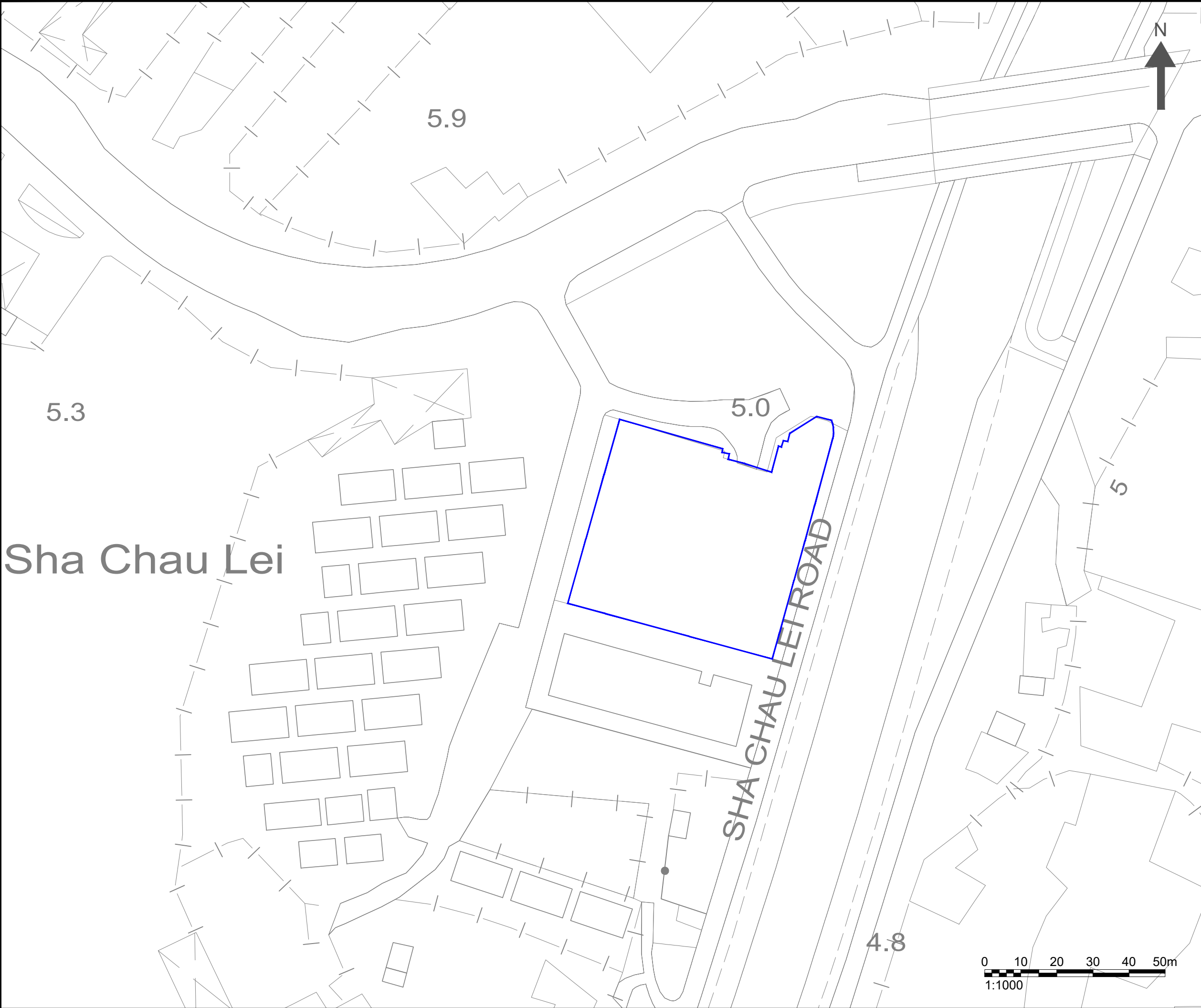
27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong

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[attachment "Fig1 Site Location Plan.pdf" deleted by Carmen Tat Huen LAW/LAO/LANDSD/HKSARG]



NOTES :

PROJECT SITE

Consultant



AEC

Allied Environmental Consultants Limited

Project No. : 2164EA

Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
PROJECT SITE LOCATION

Drawing No : Fig3.1	Revision : 1
Scale : AS SHOWN	Date : SEP 2023

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Hong Kong Police Force
Explosive Ordinance Disposal Bureau
EOD Mount Butler Depot,
150 Mount Butler Road,
Jardine's Lookout
Hong Kong

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160 Gloucester Road
Wan Chai
Hong Kong
T: +852 2815 7028
F: +852 2815 5399
info@aechk.com
www.asecg.com

19 October 2023

By Fax (2203 4273)

Dear Sir/Madam,

Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long
Request for Information for Land Contamination Assessment

We are conducting a Technical Feasibility Study for Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long (Subject Site). 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 Subject Site are required as part of the vetting process.

Of particular interests are current and historical explosive storage locations and records at the Subject Site, and any explosive spillage and incident reports that we believe your Department might have records of. We enclosed herewith a site map showing the location of the Subject Site for your reference.

Due to 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 **2 November 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 or Ms. Leanna Lei (leannalei@aechk.com) at 3915 7178.

Yours sincerely,

Cathy Man
Associate Director
CM/II

Encl. Site Location Plan

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

沛然環境評估工程顧問有限公司

沛然環保集團成員 (港交所股份代號: 8320.HK)

香港灣仔告士打道 160 號海外信託銀行大廈 27 樓

From: abdo-2-eod@police.gov.hk
To: [Leanna Lei](#)
Subject: RE: Land Contamination Assessment (Ref: 819.4524/23-0005)
Date: Wednesday, November 1, 2023 9:29:25 AM

Dear Ms Leanna Lei,

The letter with the above captioned reference number refers.

We do not hold record of any current and historical explosive storage locations for the mentioned site, as well as any explosive spillage and incident reports.

Please contact the undersigned if you have further query.

Best Regards,

LEUNG Kin-yip, Tommy
Assistant Bomb Disposal Officer 2
Explosive Ordnance Disposal Bureau
Hong Kong Police Force

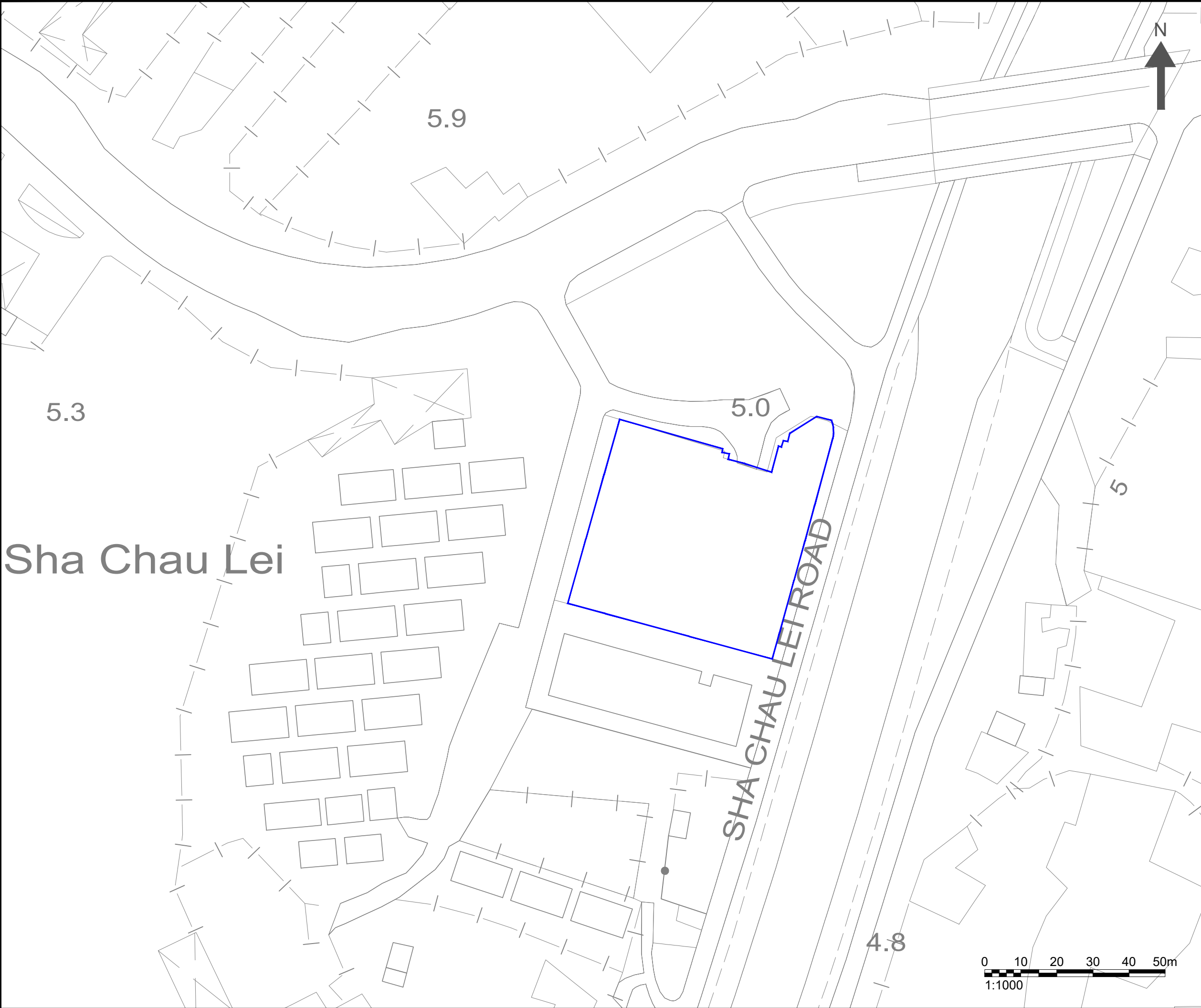
Tel: +852 2203 4297 (direct) / +852 2203 4290 (24-hour Depot Control Room)

Fax: +852 2203 4273

Address: EOD Depot, No. 150, Mount Butler Road, Jardine's Lookout, Hong Kong.

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NOTES :

PROJECT SITE

Consultant



AEC

Allied Environmental Consultants Limited

Project No. : 2164EA

Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
PROJECT SITE LOCATION

Drawing No : Fig3.1	Revision : 1
Scale : AS SHOWN	Date : SEP 2023

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Appendix 9.3

Chemical Waste Producer Record

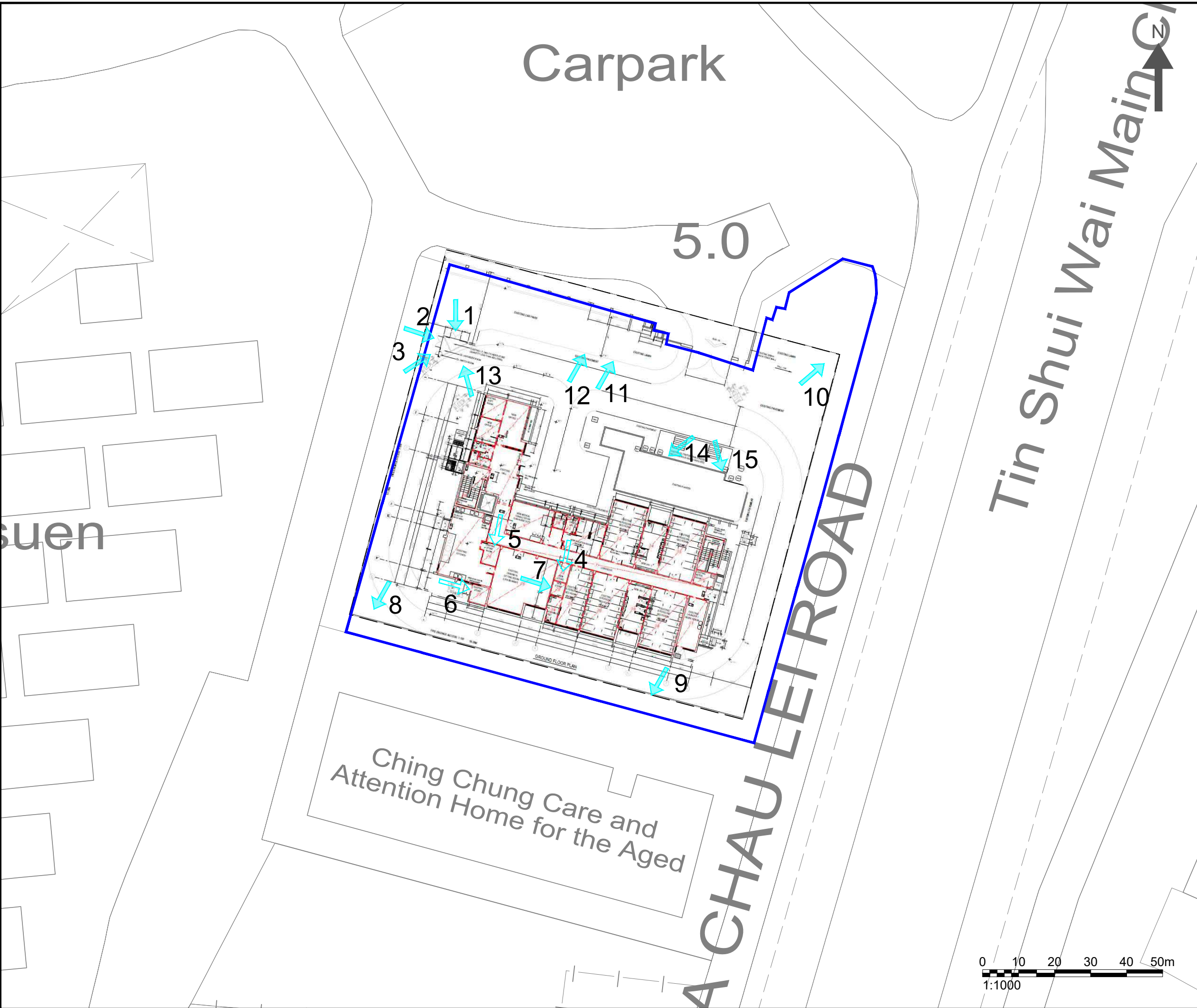
No Invalid WPN as of 03.05.2024

Valid WPN as of 03.05.2024

Waste Producer Name	Premises Address	Nature of Business
Yeung Chun Pui Care & Attention Home (pok Oi Hospital)	The Pok Oi Hospital Yeung Chun Pui Care and Attention Home, 58 Sha Chau Lei, Yuen Long, NT	Care and Attention Services

Appendix 9.4

Site Visit Photo Records



NOTES :

PROJECT SITE

PHOTOLOG TAKEN DIRECTION

Consultant



AEC

Allied Environmental Consultants Limited

Project No. : 2164EA

Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
PHOTOLOG MAP INDICATION

Drawing No : Fig9.3	Revision : 1
Scale : AS SHOWN	Date : FEB 2024

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Photo1



Photo2



Photo3



Photo4



Photo5



Photo6



Photo7



Photo8



Photo9



Photo10



Photo11



Photo12



Photo13



Photo14



Photo15

Appendix 9.5

Site Walkover Checklist

Annex C1

Site Walkover Checklist (23th Feb 2024)

GENERAL SITE DETAILS

SITE OWNER/CLIENT Pok Oi Hospital Yeung Chun Pui Care and Attention Home

PROPERTY ADDRESS 58 SHA CHAU LEI TSUEN, HA TSUEN, YUEN LONG, N.T.

PERSON CONDUCTING THE QUESTIONNAIRE

NAME Leanna Lei

POSITION Assistant Consultant (Allied Environmental Consultants Limited)

AUTHORIZED OWNER/CLIENT REPRESENTATIVE (IF APPLICABLE)

NAME Mr. Siu

POSITION Site representative

TELEPHONE 2472 1334

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: 41

Part-time: 7

Temporary/Seasonal: /

Maximum no. of people on site at any time:

48

Typical hours of operation:

Open hour: 9:15-5:30

Number of shifts:

3

Days per week:

7

Weeks per year:

52

Scheduled plant shut-down:

N/A

Detail the main sources of energy at the site:

Gas	Yes /No
Electricity	Yes/ No
Coal	Yes /No
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: 3,090 sq.m

What area of the site is covered by buildings (%): 25%

Please list all current and previous owners/occupiers if possible. Pok Oi Hospital Yeung Chun Pui
Care and Attention Home (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: N/A

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North: Open public car park

South: Ching Chung Care and Attention Home for the Aged

East: Tin Shui Wai Main Channel and open storage to the further east

West: Sha Chau Lei Tsuen

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.

Sha Chau Lei village houses in the west with a separation distance of approximately 30m

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	Residential Care Home for the Elderly
2.	How long have you been occupying the site?	Since 1984	
3.	Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy?)	Yes	The land was vacant before 1984
4.	Prior to your occupancy, who occupied the site?	N/A	
5.	What were the main activities/operations during their occupancy?	N/A	Residential Care Home for the Elderly
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	
11.	Are any chemicals used in your daily operations? (If yes, please provide details.)	Yes	Gas cylinder
	• Where do you store these chemicals?	Yes	In store room
12.	Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	N/A	
13.	Has the facility produced a separate hazardous substance inventory?	N/A	
14.	Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes,	No	

	please provide details.)		
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)?	N/A	
16.	Do you have any underground storage tanks? (If yes, please provide details.)	No	
	<ul style="list-style-type: none"> ▪ How many underground storage tanks do you have on site? 	N/A	
	<ul style="list-style-type: none"> ▪ What are the tanks constructed of? 	-	
	<ul style="list-style-type: none"> ▪ What are the contents of these tanks? 	-	
	<ul style="list-style-type: none"> ▪ Are the pipelines above or below ground? 	-	
	<ul style="list-style-type: none"> ▪ If the pipelines are below ground, has any leak and integrity testing been performed? 	-	
	<ul style="list-style-type: none"> ▪ 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?	N/A	
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	
	<ul style="list-style-type: none"> • When did the spill occur? 	-	
	<ul style="list-style-type: none"> • What were the substances spilled? 	-	
	<ul style="list-style-type: none"> • What was the quantity of material spilled? 	-	
	<ul style="list-style-type: none"> • Did you notify the relevant departments of the spill? 	-	
	<ul style="list-style-type: none"> • What were the actions taken to clean up the spill? 	-	
	<ul style="list-style-type: none"> • 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	

Observations

1.	Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	N/A	
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	General Refuse
5.	Is there a storage site for the wastes?		Yes, in bins/buckets (Photo 9 & 13)
6.	Is there an on-site landfill?	No	
7.	Were any stressed vegetation noted on-site during the site reconnaissance? (If yes, please indicate location and approximate size.)	No	
8.	Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	No	
9.	Are there any potential off-site sources of contamination?	Yes	Car park to the work of application site is what potential off-site source of catchment. Only car park can with vehicle monitoring works.
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?	No	

Appendix 6

Drainage and Sewerage Impact Assessment

Issue No. : 6
Issue Date : January 2025
Project No. : 2162EA



DRAINAGE AND SEWERAGE IMPACT ASSESSMENT

FOR

APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A FOR PROPOSED REDEVELOPMENT OF POK OI HOSPITAL YEUNG CHUN PUI CARE AND ATTENTION HOME IN YUEN LONG

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

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Document Verification



Project Title	Proposed Redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long	Project No.	2162EA
Document Title	Drainage and Sewerage Impact Assessment		

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Issue 3	Jul 2024	3rd Submission	Leanna Lei	Cathy Man	Grace Kwok
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Issue 5	Nov 2024	5th Submission	NGAN Chun Sang	Cathy Man	Grace Kwok
Issue 6	Jan 2024	6th Submission	NGAN Chun Sang	Cathy Man	Grace Kwok

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Appendix C2	Calculation of Flow Capacity of Proposed Redevelopment

1. Introduction

1.1. Background

- 1.1.1. The Applicant intends to redevelop Pok Oi Hospital Yeung Chun Pui Care and Attention Home at 58 Sha Chau Lei Tsuen, Ha Tsuen, Ping Ha Road, Yuen Long at Lot No. 2273 and the Extension thereto in Demarcation District 125 (hereafter as “the Project Site”).
- 1.1.2. The Project Site is currently zoned as “G/IC” under approved Hung Shui Kiu and Ha Tsuen Outline Zoning Plan No.S/HSK/2. The Proposed Redevelopment will involve the demolition of the existing 3-storey building and the construction of a new block with 11-storey to cater for the increasing demand for elderly, rehabilitation and child care services (thereafter as “Proposed Redevelopment”).
- 1.1.3. Allied Environmental Consultants Limited (AEC) is commissioned to conduct a drainage and sewage impact assessment (DSIA) in support of the Section 12(A) Planning Application for the proposed redevelopment.

1.2. Objectives of the DSIA

- 1.2.1. The objectives of this DSIA are to review the existing/proposed sewage and drainage facilities in the vicinity of the Proposed Redevelopment and to evaluate the potential impacts on the current sewage and drainage system due to the additional discharge from the proposed redevelopment, and proposed mitigation measures where appropriate to mitigate potential impacts.

1.3. Report Structure

- 1.3.1. The remaining chapters of this report are shown below:

Chapter 2 – Legislation, Standards and Guidelines

Chapter 3 – Proposed Redevelopment and Site Context

Chapter 4 – Sewage Impact Assessment

Chapter 5 – Drainage Impact Assessment

Chapter 6 – Overall Conclusion

2. Legislation, Standards and Guidelines

- 2.1.1. 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.
- 2.1.2. With reference to Table 7 of the Technical Memorandum, as the Proposed Redevelopment 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 2-1 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

- 2.1.3. With reference to ProPECC PN 1/23 Drainage Plans Subject to Comment by the Environmental Protection Department ("EPD"), foul water should be discharged to a foul sewer under the Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations 40(1) and 41(1).
- 2.1.4. 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 5/93, 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.
- 2.1.5. The following standards and guidelines are adopted for estimation, assessment and evaluation of sewerage implication of the proposed redevelopment:
- "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 (WPCO-TM)";

- “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;
- Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (WPCO-TM); and
- Guidelines for the Design of Small Sewage Treatment Plants issued by EPD.

3. The Proposed Redevelopment

3.1. Site Location and Its Environs

- 3.1.1. The Project Site is bounded by Ping Ha Road to its north, Sha Chau Lei Road to its east and an access road to its west. The Rezoning Site Area is about 3,388.7 m² while the Development Site Area (for calculation of plot ratio and site coverage) is about 3,090 m².
- 3.1.2. The Project Site is currently zoned as “G/IC” under approved Hung Shui Kiu and Ha Tsuen Outline Zoning Plan No. S/HSK/2 with an existing building height of 3 storeys. The surrounding area of the Applicant Site is characterized by a mixture of various land uses, including “OS” “R(A)2”, “V” and “G/IC”.
- 3.1.3. The following uses or buildings are located adjacent to the Site:
- North: Open storage across Ping Ha Road ;
 - East: Open storage across Sha Chau Lei Road/Tin Shui Wai Main Channel ;
 - South: Ching Chung Care and Attention Home for the Aged; and
 - West: Sha Chau Lei Tsuen across the access road
- 3.1.4. **Figure 2.1** shows the Site location and its environs.

3.2. Proposed Redevelopment Scheme

- 3.2.1. The proposed redevelopment comprises of demolition of the existing 3-storey-Pok Oi Hospital Yeung Chun Pui Care and Attention Home and the construction of a new block of 11-storey. The schedule of the existing and proposed redevelopment is listed in **Table 3-1** and **Table 3-2**. The redevelopment plan is shown in **Appendix A**. The proposed redevelopment is expected to be completed by Year 2032.
- 3.2.2. Upon completion by 2032, a total of 282-bed spaces (i.e. 192 for Care and Attention Home(C&AH),50 for Hostel for Severely Mentally Handicapped Persons (HSMH) and 40 for Hostel for Moderately Mentally Handicapped Persons (HMMH)), will be provided to meet the needs of the community. The Proposed Redevelopment will provide about 20% greenery area, i.e. achieve 20% required under the Hong Kong Planning Standards and Guidelines (HKPSG).

Table 3-1 Existing Development

Floor	Major Uses
G/F	Kitchen, Car Park, E&M Facilities, Care & Attention Home(C&A)
1/F	Care & Attention Home (C&A)
2/F	Care & Attention Home(C&A)

Table 3-2 Redevelopment Schedule

Floor	Major Uses
G/F	Child Care Centre(CCC) , Car Park, E&M Facilities
1/F	Day Care Centre for the Elderly (DE)
1/F-4/F	Care & Attention Home(C&A) (192 nos of bed)
5/F	Hostel for Severely Mentally Handicapped Persons (HSMH) (50 nos of bed)
6/F	Hostel for Moderately Mentally Handicapped Persons (HMMH) (40 nos of bed)
7/F	Day Activity Centre (DAC), clinic, massage
8/F	Showroom, Kitchen, Canteen
9/F	Integrated Vocational Rehabilitation Services Centre (IVRSC), E&M Facilities
R/F	E&M Facilities

3.3. Existing Sewerage Condition

- 3.3.1. Drainage information was obtained from the GeoInfo Map services of the Lands Department in February 2024 to gather the background information on sewerage infrastructure in the vicinity of the Project Site. Concerned sewage network was identified for estimation of the potential sewage impact to the downstream sewers associated with the proposed redevelopment. A series of public sewers with diameters ranged from 150mm to 300mm were found along service lane to the south of the Project Site at the unnamed access road to the west, then conveyed to 300 mm sewer along Sha Chau Lei Road to Ha Tsuen Pumping Station and eventually to San Wai Sewage Treatment Plant. Sewage generated from the Project Site is currently discharged to an existing Government foul water manhole (FMH1009620). The existing sewer connecting FTMH1 to the public manhole FMH1009620 will be upgraded from 150mm to 200mm by the Project Proponent.

4. Sewage 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]
Residents/overnight staff in C&A, HSMH & HMMH	0.190 m ³ /person/day	Domestic(Housing type specific)- Institutional and special class in Table T-1 of GESF.
Employee from CCC,C&A,HSMH, HMMH,DE, DAC & IVRSSC	0.280 m ³ /person/day	Commercial Employee + Commercial Activities (J11 Community, Social & Personal Services)
Kitchen & Canteen	1.580 m ³ /person/day	Commercial Employee + Restaurants & Hotels (J10)

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.

4.2. Estimation of Sewage Flow from Existing and Proposed Redevelopment

- 4.2.1. According to the existing sewer arrangement, foul water from the Project Site will be discharged into FTMH1 and connected to FMH1009620 located at the access road to the west of the Project Site.
- 4.2.2. The total floor area of the existing development is 2,351m², while that of the proposed redevelopment will be 17,922m². Comparing the existing and proposed redevelopment, there will be an increased flow from increased residents and staffs. Toilet flushing and kitchen wastewater are the major sewage arising from the Proposed Redevelopment. The estimated sewerage flow for the both the existing and proposed redevelopments of the Project Site is given in **Table 4.2** and **Appendix B**.
- 4.2.3. With reference to **Table 4.2**, the total estimated Average Dry Weather Flow (“ADWF”) from the existing development and the proposed redevelopment for the Project Site is 49.5 m³/day and 137.2m³/day.
- 4.2.4. In comparison to the estimated sewage flow generated from the existing and proposed developments, it is observed that the estimated sewage flow generated from the proposed redevelopment is increased by 87.7 m³/day compared with the existing development.

Table 4-2 Sewage Flow Estimation for the Existing and Proposed Redevelopment

Existing Development		
Care & Attention Home (G/F-2/F)		Remarks
Generation from Staff		
Total Floor Area	1707 m ²	
Worker Density (in 100m ²)	3.3 person/100 m ²	Refer to worker density for "Community, Social & Personal Services" in Table 8 of CIFSUS.
Total number of person	57 persons	
Unit Flow Factor	0.28 m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.
ADWF	16.0 m ³ /day	
Generation from Residents		
Total number of residents	143 persons	Full capacity of subsidised places (https://www.elderlyinfo.swd.gov.hk/en/content/pok-oi-hospital-yeung-chun-pui-care-and-attention-home)
Unit Flow Factor	0.19 m ³ /person/day	Referred to the planning unit flow for Domestic (housing type specific) - Institutional and special class in Table T-1 of GESF.
ADWF	27.2 m ³ /day	
Kitchen		
Total Floor Area	61.5 m ²	
Worker Density (in 100m ²)	5.1 person/100 m ²	Refer to worker density for "Restaurants" in Table 8 of CIFSUS.
Total number of person	4 persons	
Unit Flow Factor	1.58 m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J10 Restaurants & Hotels" in Table T-2 of GESF.
Average Sewage Discharge	6.3 m ³ /day	
Total Average dry weather flow of the Existing Development	<u>49.5 m³/day</u>	
Contributing Population	183	
Catchment Inflow Factor	1.0	
Revised Total Average Dry Weather Flow	49.5 m³/day	
Peaking Factor	8	Referred to the Peaking Factor (including stormwater allowance) for facility with existing upstream sewerage in Table T-5 of GESF.
Peak Flow	<u>0.0046 m³/s</u>	
Proposed Redevelopment		
Child Care Centre (G/F)		
Generation from Staff		
Total Floor Area	324 m ²	
Worker Density (in 100m ²)	3.3 person/100 m ²	Refer to worker density for "Community, Social & Personal Services" in Table 8 of CIFSUS.
Total number of persons	11 persons	

Unit Flow Factor	0.28 m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.
Average Sewage Discharge	3.0 m ³ /day	
Elderly Day Care (1/F)		
Generation from Staff		
Total Floor Area	510 m ²	
Worker Density (in 100m ²)	3.3 person/100 m ²	Refer to worker density for "Community, Social & Personal Services" in Table 8 of CIFSUS.
Total number of persons	17 persons	
Unit Flow Factor	0.28 m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.
Average Sewage Discharge	4.7 m ³ /day	
Care & Attention Home (1/F-4/F)		
Generation from Staff		Remarks
Total Floor Area	2557 m ²	
Worker Density (in 100m ²)	3.3 person/100 m ²	Refer to worker density for "Community, Social & Personal Services" in Table 8 of CIFSUS.
Total number of persons	85 persons	
Unit Flow Factor	0.28 m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.
Average Sewage Discharge	23.8 m ³ /day	
Generation from Residents		
Total number of residents	192 persons	full capacity of 192-place residential care home for elderly
Unit Flow Factor	0.19 m ³ /person/day	Referred to the planning unit flow for Domestic (housing type specific) - Institutional and special class in Table T-1 of GESF.
Average Sewage Discharge	36.5 m ³ /day	
Hostel for Severely Mentally Handicapped Persons (5/F)		
Generation from Staff		
Total Floor Area	682 m ²	
Worker Density (in 100m ²)	3.3 persons	
Total number of persons	33 persons	Refer to SWD staffing establishment for HSMH, around 0.66 workers/resident (i.e.50 nos of bed).
Unit Flow Factor	0.28 m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.
Average Sewage Discharge	9.2 m ³ /day	
Generation from Residents		
Total number of residents	50 persons	full capacity of 50 place for HSMH
Unit Flow Factor	0.19 m ³ /person/day	Referred to the planning unit flow for Domestic (housing type specific) - Institutional and special class in Table T-1 of GESF.
Average Sewage Discharge	9.5 m ³ /day	
Hostel for Moderately Mentally Handicapped Persons (6/F)		
Generation from Staff		Remarks
Total Floor Area	537 m ²	
Worker Density (in 100m ²)	3.3 persons	
Total number of persons	16 persons	Refer to SWD staffing establishment for HSMH, around 0.38 workers/resident.

Unit Flow Factor	0.28 m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.
Average Sewage Discharge	4.5 m ³ /day	
Generation from Residents		
Total number of residents	40 persons	full capacity of 40 place for HMMH
Unit Flow Factor	0.19 m ³ /person/day	Referred to the planning unit flow for Domestic (housing type specific) - Institutional and special class in Table T-1 of GESF.
Average Sewage Discharge	7.6 m ³ /day	
Day Activity Unit, Clinic, Massage, Showroom (7/F&8/F)		
Generation from Staff		
Total Floor Area	1168 m ²	
Worker Density (in 100m ²)	3.3 person/100 m ²	Refer to worker density for "Community, Social & Personal Services" in Table 8 of CIFSUS.
Total number of persons	39 persons	
Unit Flow Factor	0.28 m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.
Average Sewage Discharge	10.8 m ³ /day	
Kitchen(8/F)		
Total Floor Area	200 m ²	
Worker Density (in 100m ²)	5.1 person/100 m ²	Referred to the worker density of Restaurants (All Types) in Table 8 of CIFSUS
Total number of persons	11 persons	
Unit Flow Factor	1.58 m ³ /person/day	Referred to the planning unit flow for Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
Average Sewage Discharge	17.4 m ³ /day	
Canteen(8/F)		
Total Floor Area	77 m ²	
Worker Density (in 100m ²)	5.1 person/100 m ²	Referred to the worker density of Restaurants (All Types) in Table 8 of CIFSUS
Total number of persons	4 persons	
Unit Flow Factor	1.58 m ³ /person/day	Referred to the planning unit flow for Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
Average Sewage Discharge	6.3 m ³ /day	
Integrated Vocational Rehabilitation Services Centre (9/F)		
Generation from Staff		
Total Floor Area	416 m ²	
Worker Density (in 100m ²)	3.3 person/100 m ²	Refer to worker density for "Community, Social & Personal Services" in Table 8 of CIFSUS.
Total number of persons	14 persons	
Unit Flow Factor	0.28 m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.
Average Sewage Discharge	3.9 m ³ /day	
Total Average dry weather flow of the Proposed redevelopment	<u>137.2 m³/day</u>	
Contributing Population	508	
Catchment Inflow Factor	1.0	

Revised Total Average Dry Weather Flow	137.2 m³/day	
Peaking Factor	6	Referred to the Peaking Factor (excluding stormwater allowance) for facility with new upstream sewerage in Table T-5 of GESF.
Peak Flow	0.0095 m³/s	
Difference of the proposed and existing development		
Difference in ADWF and peak flow of proposed redevelopment and existing development	ADWF: +87.7 m³/day Peak flow: +0.0049 m³/s	

4.3. Estimation of Sewage Flow from Streams

- 4.3.1. Different streams (i.e. Stream A and B) are defined as shown in **Figure 3.1** to consider existing sewage generation. Stream A consists of discharge from Ching Chung Care and Attention Home for the Aged while Stream B consists of discharge from Sha Chau Lei Tsuen. The sewage is discharged into the existing 150 - 300mm public sewerage pipes along the access road to the west. Stream A is discharged at FMH1009619 to join the discharge from Project Site while Stream B joins further downstream at FMH1009602.
- 4.3.2. Both Stream A and B are assumed to have 100% capacity at the convergent sewer of all discharge to the stream to estimate the total average day flow generated from the surrounding of the Project Site.

4.4. Estimation of Peak Discharge

- 4.4.1. Catchment inflow factor ("P_{CIF}") caters for the net overall ingress of wastewater to the sewerage system. They are catchment-dependent and applicable to major sewerage facilities of a catchment.
- 4.4.2. In accordance with Table T-4 of the GESF, P_{CIF} of 1.00 is adopted for existing sewerage as concerned sewerage system is identified in "Yuen Long".
- 4.4.3. Revised average dry weather flow ("revised ADWF") is determined by production of average dry weather flow and catchment inflow factor. Contributing population is then calculated by dividing the revised ADWF by 0.27. The calculated contributing population is finally used for selection of peaking factors.
- 4.4.4. Based on **Table 4-3** which is also presented in Table T-5 in GESF, the peaking factors for each sewer are chosen in the hydraulic calculation for peak flow estimation. The peaking factor excluding stormwater allowance is used in the peak flow estimation of proposed development. Meanwhile the peaking factor including stormwater allowance is used in stream with existing upstream (Stream A and Stream B).

Table 4-3 Peaking Factor

Population Range for Sewers ^{[1] [2]}	Peaking Factor (including storm water allowance) for facility with existing upstream sewerage	Peaking Factor (excluding storm water allowance) for facility with new upstream sewerage
< 1000	8	6
1000 - 5000	6	5
5000 - 10000	5	4
10000 - 50000	4	3
> 50000	Max (7.3 / N ^{0.15} , 2.4)	Max (6 / N ^{0.175} , 1.6)

Notes:

[1] N is the contributing population in thousands.

[2] According to Section 12.1 of GESF, Contributing Population = Calculated Total Average Flow (m³/day) ÷ 0.27 (m³/person/day)

4.5. Sewerage Capacity

4.5.1. According to the “Sewerage Manual – Key Planning Issues and Gravity Collection System” (Sewerage Manual) published by DSD in 2013, the capacities of respective sewers have been calculated based on the Colebrook White’s equation. The roughness coefficients (ks) of 3mm for clayware slined sewer in poor condition are adopted for public sewers in the assessment in accordance with Table 5 of DSD’s “Sewerage Manual Part 1”.

4.5.2. The sewerage impact on various segments of the sewer were evaluated by comparing the estimated peak flow against the capacity of the respective sewer segments. The detailed calculations are provided in **Appendix C**.

4.6. Result and Discussion

4.6.1. The discharge point (FTMH1) from the proposed redevelopment will be connected to the existing sewer (S1: FMH1009620). The sewer connecting the FTMH1 and S1 is proposed to be upgraded from 150 mm to 200 mm diameter, and further connect to the existing downstream 300mm sewer at FMH1009620.

4.6.2. The estimated daily flow of the existing development is 49.5m³/day while the estimated daily flow of the proposed development will be 137.2 m³/day. **Table 4-4** tabulates the sewage generated from both existing development and proposed development.

Table 4-4 Sewage Generated from Existing and Proposed Development

Developments	Daily Flow (m ³ /day)
Existing Development	49.5
Proposed Development	137.2
Difference	87.7

4.6.3. As shown in **Table 4-4**, 87.7 m³/day of daily flow will be increased after redevelopment.

4.6.4. The capacity of each segment for the proposed and existing sewers (i.e., from Project Site to FMH1009620 as shown in **Figure 3.1**) between each manhole has been evaluated and is summarized in **Table 4-5**. The utilization of used capacity range for the downstream sewers will range from about 10% to 39%. Estimation of the flows and capacities are detailed in **Appendix C**.

Table 4-5 Estimated Downstream Sewer Capacities

Pipe Segments	Diameter (m)	Revised ADWF m ³ /day ^[1]	Contributing Population ^[2]	Peaking Factor ^[3]	Estimated Cumulative Peak Flow, m ³ /s ^[4]	Utilisation	Percentage Contribution by Proposed Development
FTMH1 – FMH1009620	0.200	137.2	508	6.0	0.010	10%	10%
FMH1009620 – FMH1009619	0.300	137.2	508	8.0	0.013	16%	16%
FMH1009619 – FMH1009618	0.300	277.6	1028	6.0	0.019	35%	23%
FMH1009618 – FMH1009615	0.300	277.6	1028	6.0	0.019	25%	16%
FMH1009615 – FMH1009614	0.300	277.6	1028	6.0	0.019	30%	20%
FMH1009614 – FMH1009613	0.300	277.6	1028	6.0	0.019	29%	19%
FMH1009613 – FMH1009612	0.300	277.6	1028	6.0	0.019	25%	16%
FMH1009612 – FMH1009603	0.300	277.6	1028	6.0	0.019	33%	22%
FMH1009603 – FMH1009602	0.300	277.6	1028	6.0	0.019	19%	13%
FMH1009602 – FMH1009601	0.300	461.2	1708	6.0	0.032	39%	16%

Notes:

Ks (existing sewer)=3.0mm

Pipe segment that exceeded 100% used capacity are bolded and underlined

[1] Revised ADWF (m³/day) = ADWF (m³/day) × Catchment Inflow Factor

[2] According to Section 12.1 of GESF,

Contributing Population = Calculated Total Average Flow (m³/day) ÷ 0.27 (m³/person/day)

[3] According to Table T-5 of GESF

[4] Total Peak Discharge (m³/s) = (Revised ADWF (m³/day) × Peaking Factor ÷ 86400s/day)

- 4.6.5. The results of the assessment as presented in **Table 4-5** and **Appendix C** have indicated that there is no sewer segments that will exceed the capacity after the discharged of proposed redevelopment under the worst-case scenario.

5. Drainage Impact Assessment

5.1. Existing Site and Drainage System

- 5.1.1. According to the DSD drainage record plans, public stormwater drains are available at the western and eastern boundary of the Project Site along the access road to the West and across Sha Chau Lei Road respectively, as shown in **Figure 3.1**.
- 5.1.2. The nearest stormwater manholes are SMH1012065 and SMH1012064 which are located about 7m to the west of the Project Site. A catchpit SCH1006385 and a tapping point STH1001640 with outlet of 300mm is located to the east of the Project Site. With reference to EPD Centralised Environmental Database (CED), there is a watercourse found to the east of the Project Site.
- 5.1.3. The Project Site is located on a gentle flat land (i.e. 5.5mPD) and currently paved with concrete with greenery towards the north of the Project Site. There will be no change of gradient of the Site after the redevelopment. As per APP-152, greenery area will be maintained as at least 20% of the Site Area. With the increased greenery area, it helps to enhance infiltration and reduce surface runoff.

5.2. Potential Input on Public Stormwater System due to Surface Runoff

Operation Phase

- 5.2.1. The Project Site is currently a gentle flat land paved with concrete surface. There will be no major changes in surface properties and gradient, which will not significantly alter the overall catchment characteristics.
- 5.2.2. Surface runoff within the Project Site will be collected and discharged to existing public stormwater drainage network at terminal manhole SMH1012065 and SMH1012064. Surface runoff will also be collected at the catchpit SCH1006385 and the tapping point STH1001940 before discharging to the Tin Shui Wai Main Channel. The Project consists of redevelopment on a 100% paved site. Reduction of non-paved area is not expected. Additional discharge to the public drainage system is not expected.
- 5.2.3. The provision of a greenery area of approximately 800 m² will further increase filtration of stormwater and minimize surface runoff. As there is a slight increase in greenery area in the proposed redevelopment, peak runoff from the Project Site will slightly decrease as compared to existing site conditions.

- 5.2.4. Adverse impact to the public drainage system is thus not anticipated. Upgrading works is considered not necessary.

5.3. Liability

- 5.3.1. The applicant will be responsible for contractor of all necessary drainage system including the pipe connected to the public drain as well as other internal drainage infrastructure with the Project Site. All drainage facilities shall be designed and constructed to conform to the requirements laid down in below while future maintenance of the sewers outside the Project Site boundary will be carried out by the DSD.

a. The Stormwater Drainage Manual, DSD

b. The General Specification for Civil Engineering Works, Hong Kong Government

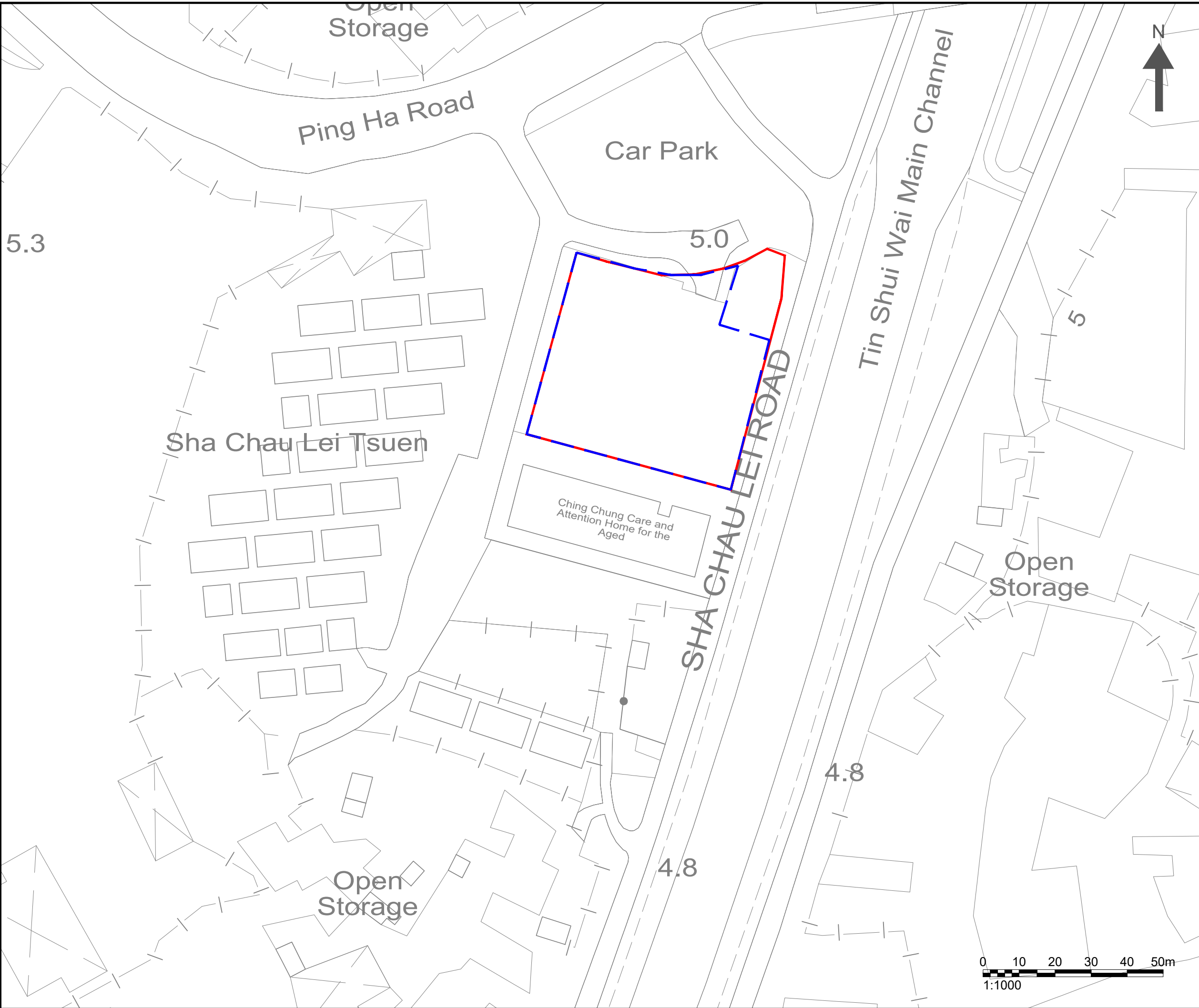
c. The DSD Standard Drawings

- 5.3.2. During operational phase, regular inspection of the sewers within the Project Site should be conducted by the property management office to ensure proper performance. Regular maintenance should also be carried out in accordance with standard practices stated in the DSD's "Sewerage Manual Part 1".

6. Overall Conclusion

- 6.1.1. This Drainage and Sewerage Impact Assessment (DSIA) aims to evaluate the sewerage impacts on the local sewerage and drainage network due to the operation of the proposed redevelopment under no DSD's upgrading works scenario.
- 6.1.2. The sewer connecting the site to FMH1009620 will be upgraded to 200mm. Other existing sewage system with diameter of up to 300 mm located at the southwestern side of the Project Site will remain to collect sewage generated from proposed redevelopment and where sewer conveyed to the public sewer system at manhole FMH1009620. The maximum occupied capacity of the proposed sewer by the proposed redevelopment which is 23%, therefore there is sufficient capacity for the existing sewer to cater for the increased in discharge due to the increased residents and staff in the proposed redevelopment.
- 6.1.3. The findings of the assessment have demonstrated all segments have sufficient sewer capacity to cope with the sewage flow. Significant sewerage impact arising from the proposed redevelopment on the existing sewer is not expected, no mitigation measures and/or upgrading works are considered necessary for the existing sewer except for the FTMH1-FMH1009620 sewer.
- 6.1.4. For drainage impact assessment, the Project Site is paved with concrete in good condition, no change in surface properties and gradient is anticipated. With the provision of greenery and insignificant contribution of stormwater surface runoff associated with the Proposed redevelopment, no potential drainage impact is anticipated, thus no upgrading works are considered necessary.
- 1.3.2. Based on the above, it is concluded that the drainage and sewerage impact arising from the proposed redevelopment should be acceptable.

Figures



- NOTES :
- DEVELOPMENT SITE BOUNDARY
 - REZONING SITE BOUNDARY

Consultant



AEC

Allied Environmental Consultants Limited

Project No. : 2164EA

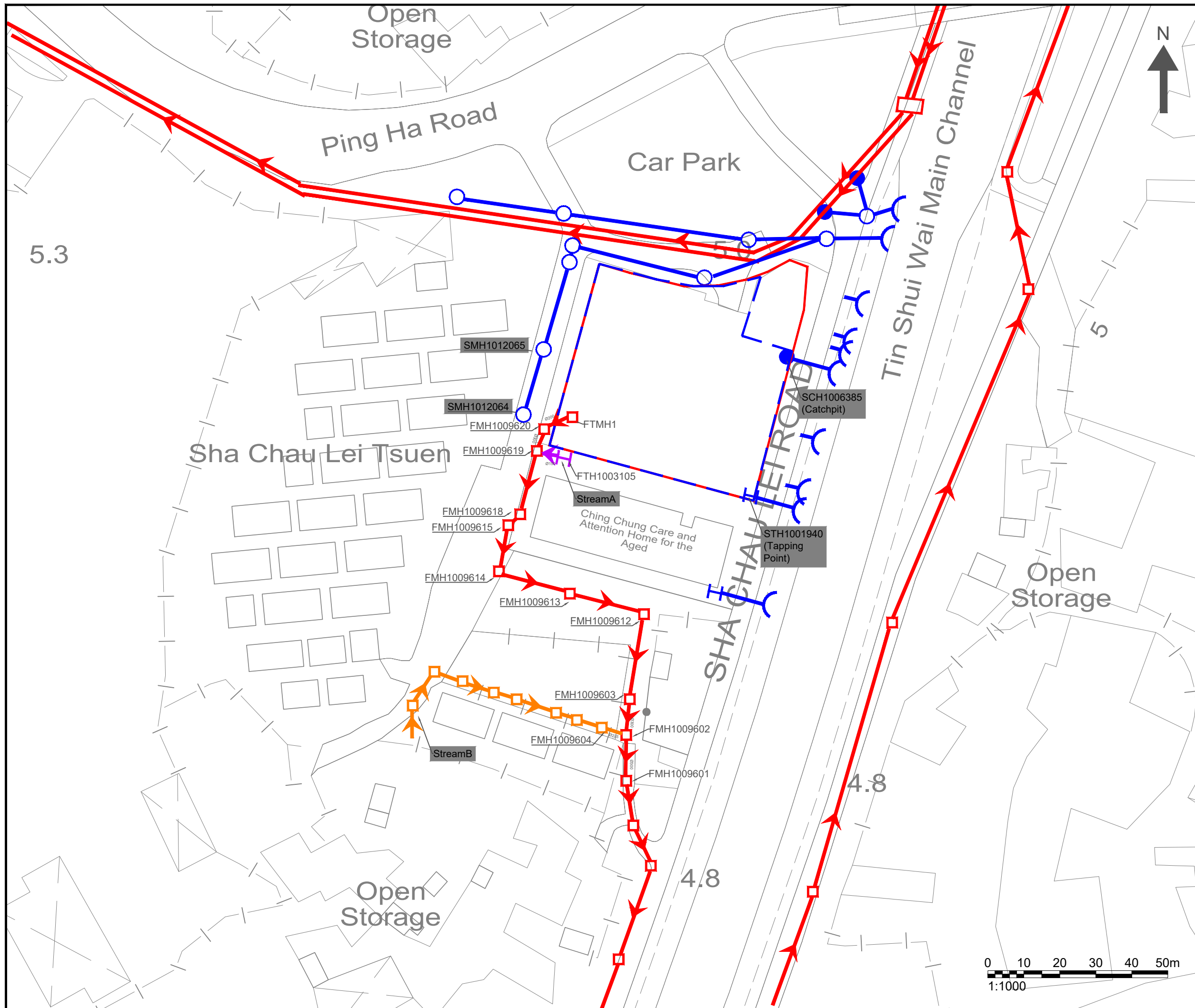
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PROPOSED REDEVELOPMENT OF POK OI
HOSPITAL YEUNG CHUN PUI CARE AND
ATTENTION HOME IN YUEN LONG

Drawing Title :
PROJECT SITE LOCATION

Drawing No : Fig2.1	Revision : 1
Scale : AS SHOWN	Date : Jan 2024

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- NOTES :
- DEVELOPMENT SITE BOUNDARY
 - REZONING SITE BOUNDARY
 - EXISTING SEWER AND MANHOLE
 - STREAM A (SEWAGE)
 - STREAM B (SEWAGE)
 - EXISTING DRAINAGE AND MANHOLE

Consultant

AEC

Allied Environmental Consultants Limited

Project No. : 2164EA

Drawing By : LL

Project :
PROPOSED REDEVELOPMENT OF POK OI HOSPITAL YEUNG CHUN PUI CARE AND ATTENTION HOME IN YUEN LONG

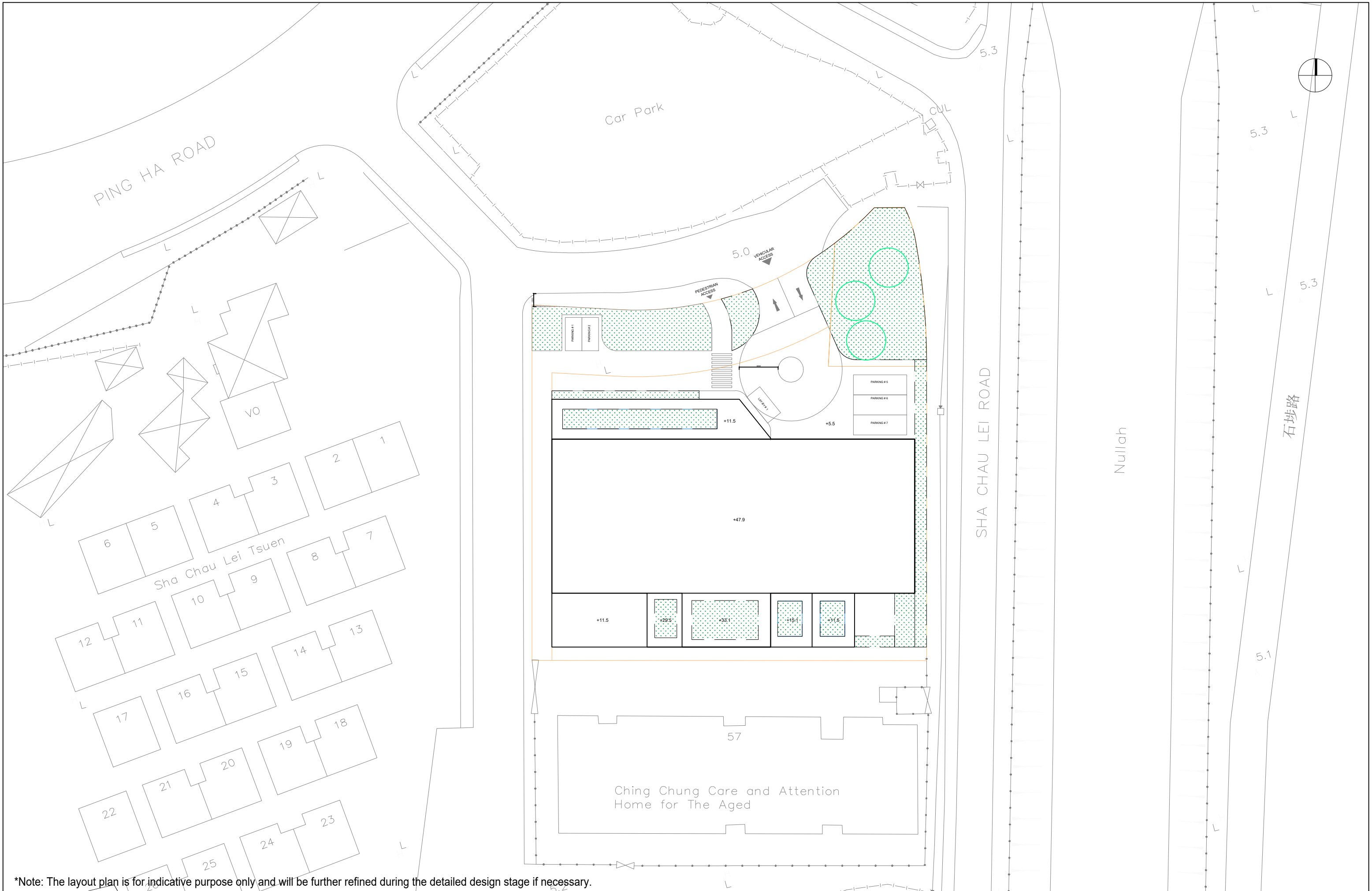
Drawing Title :
OVERVIEW OF PROPOSED AND EXISTING SEWAGE NETWORK AND CATCHMENT

Drawing No : Fig3.1	Revision : 1
Scale : AS SHOWN	Date : Jan 2024

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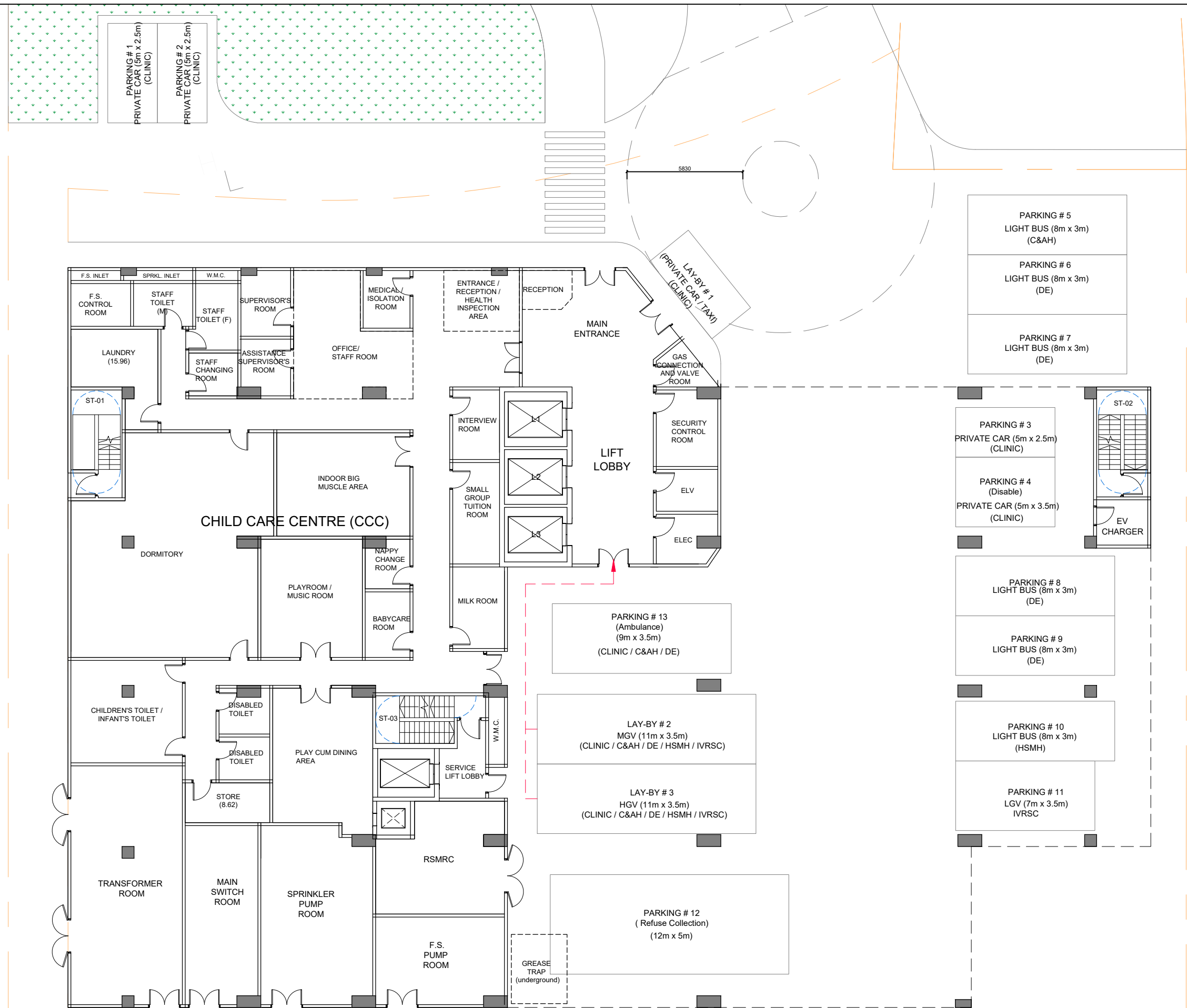
Appendix A

General Building Plans of the Proposed Redevelopment



*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





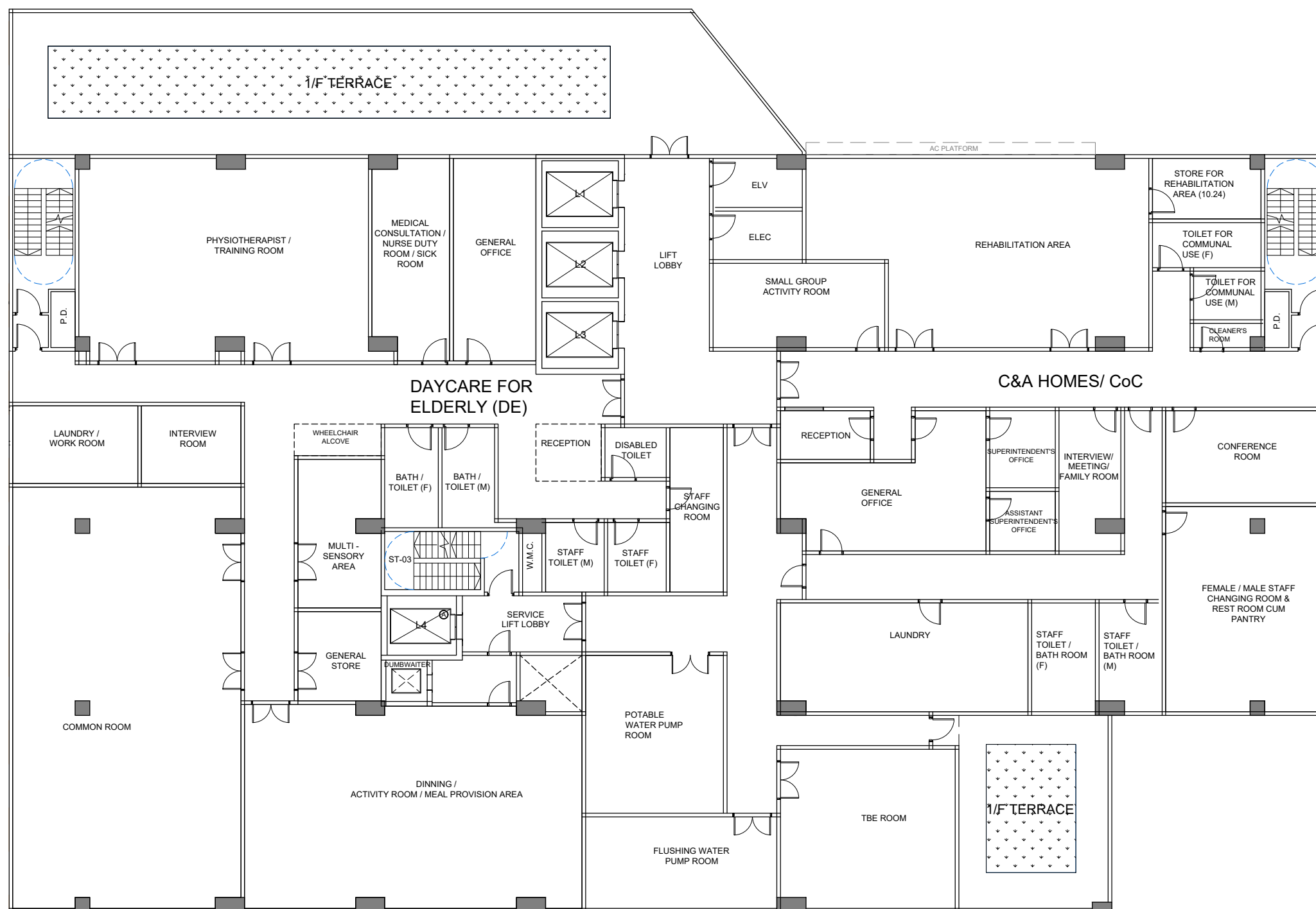
SHA CHAU LEI ROAD

*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





SHA CHAU LEI ROAD

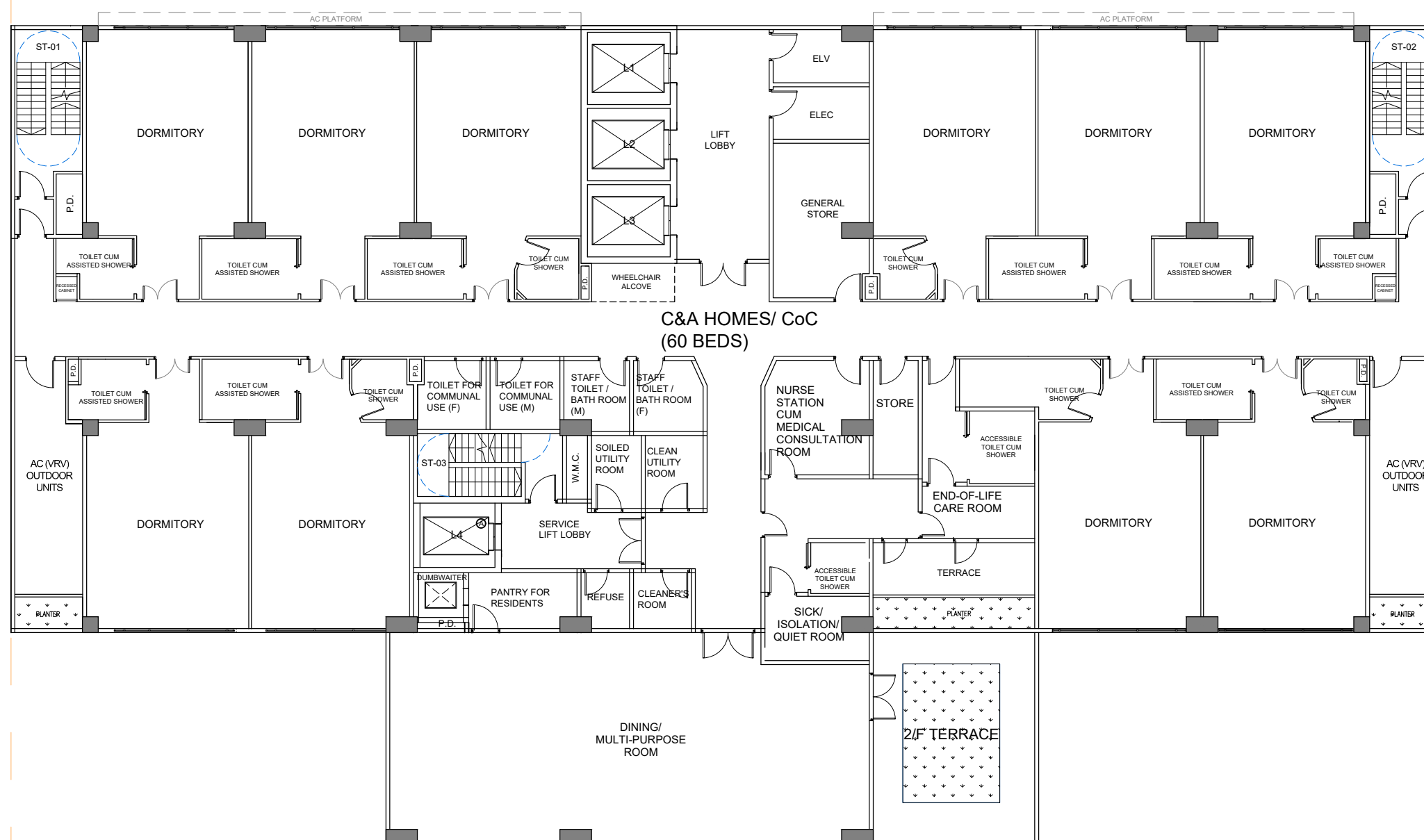


*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





SHA CHAU LEI ROAD

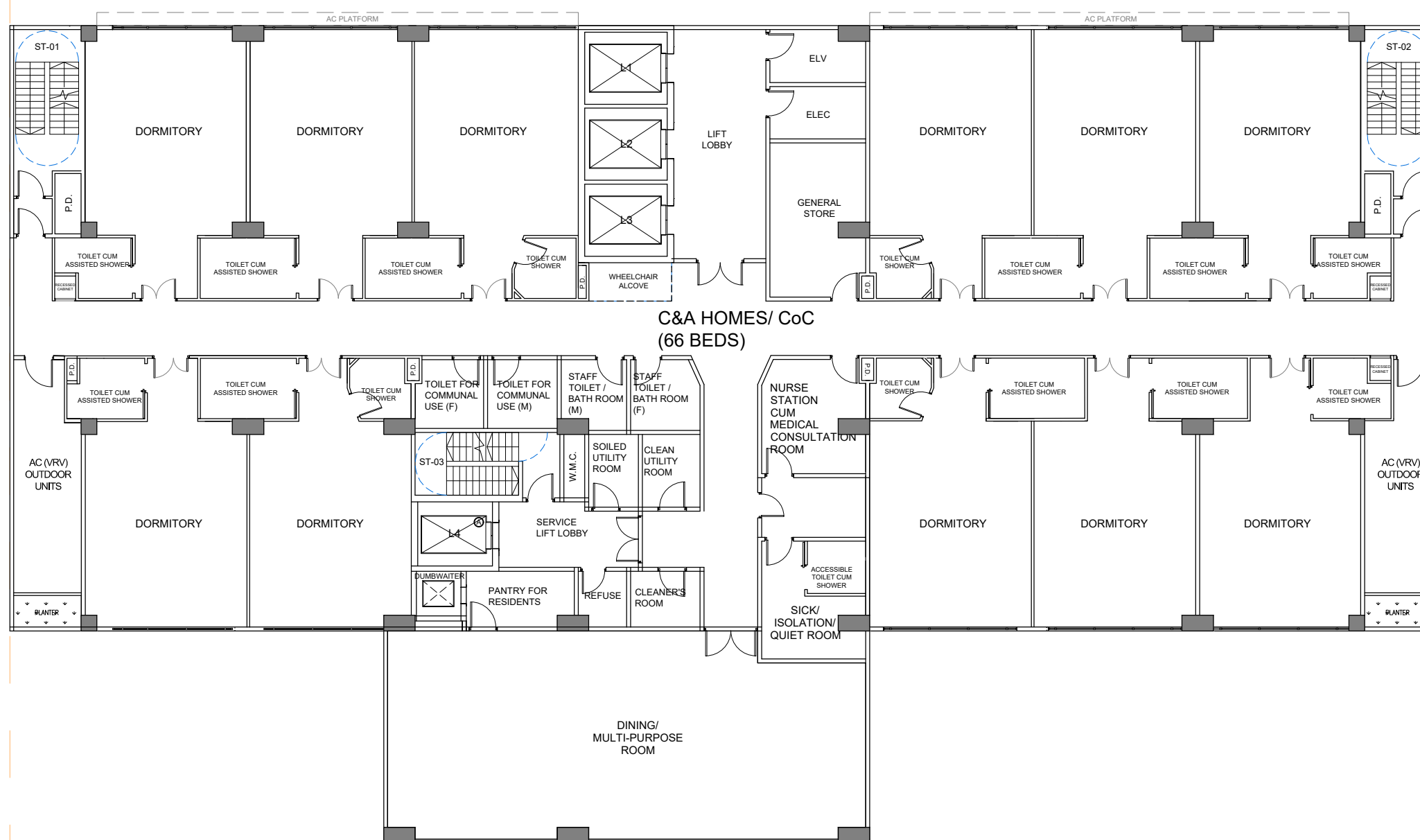


*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





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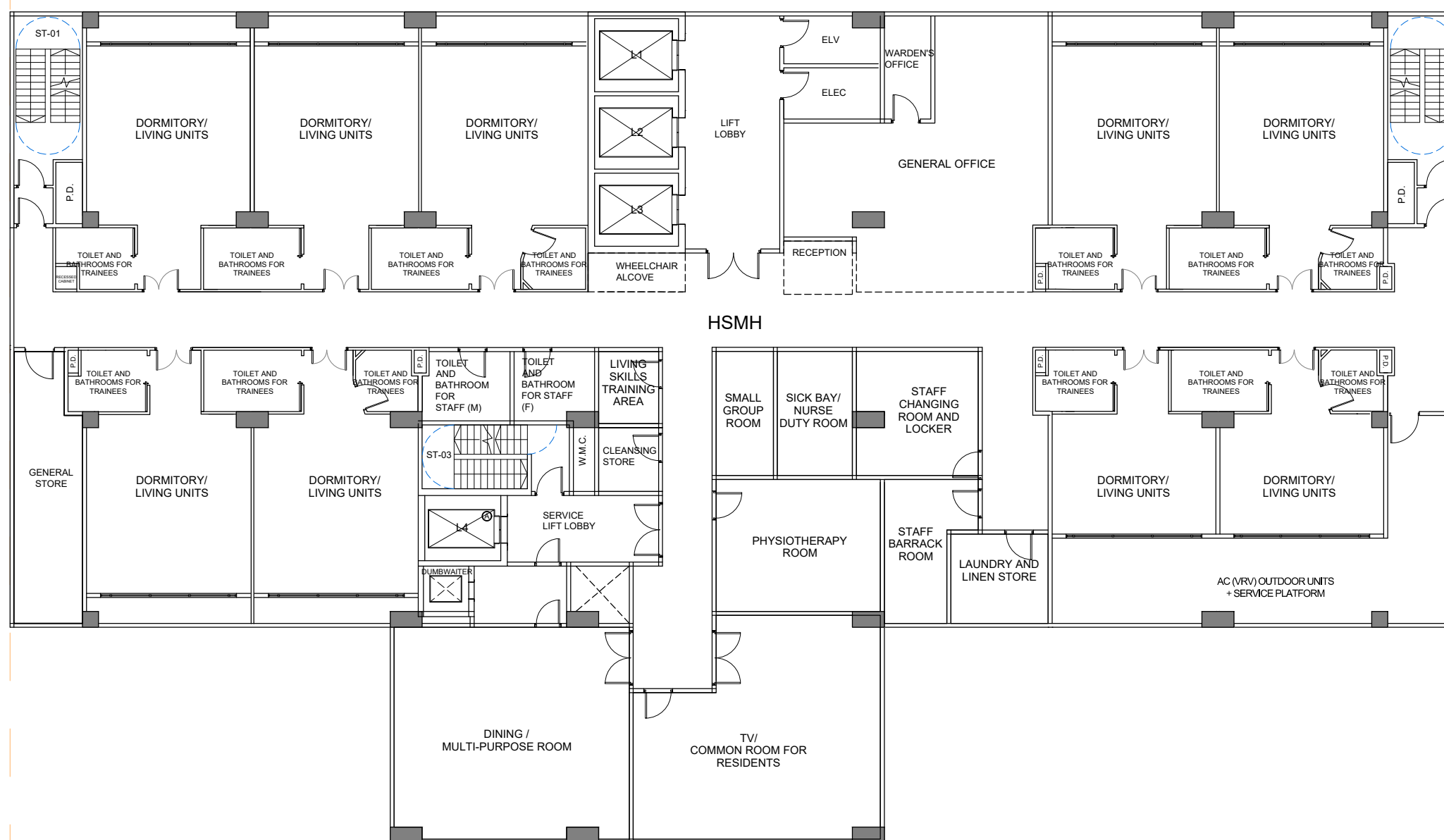


*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





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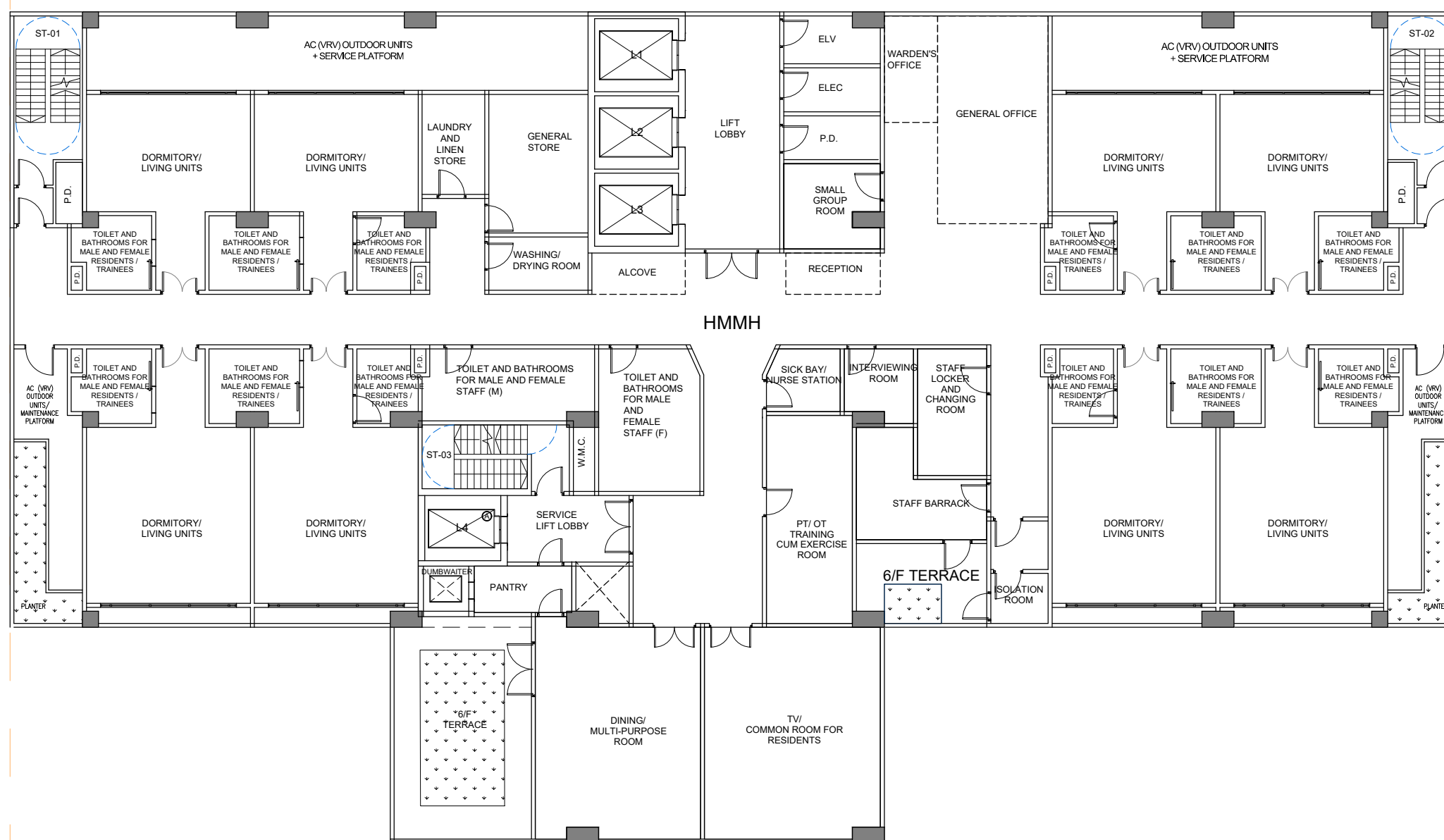


*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.



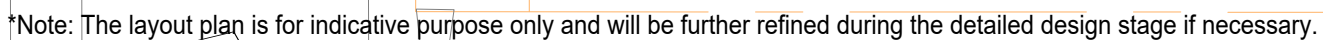


SHA CHAU LEI ROAD



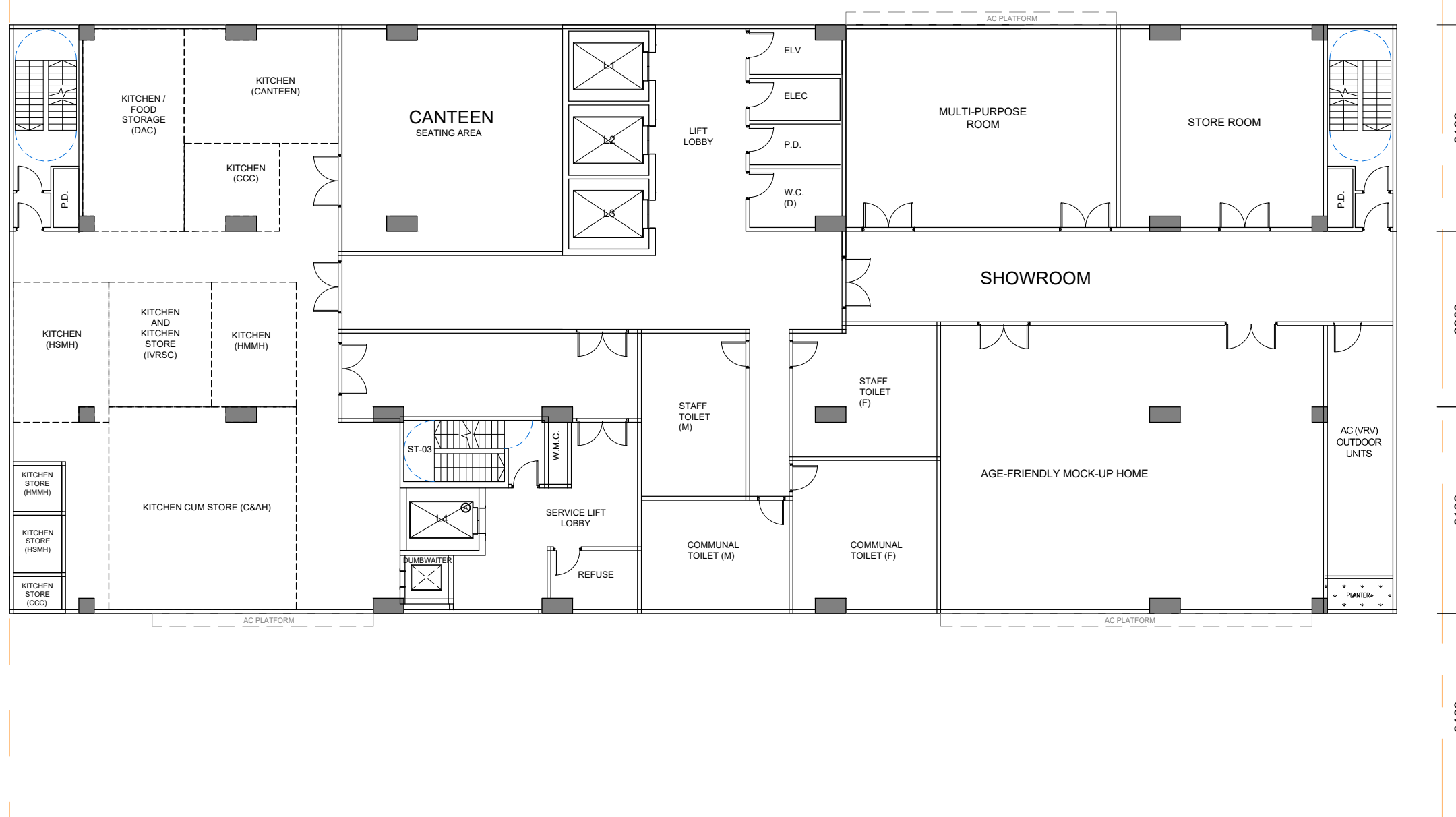
*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.







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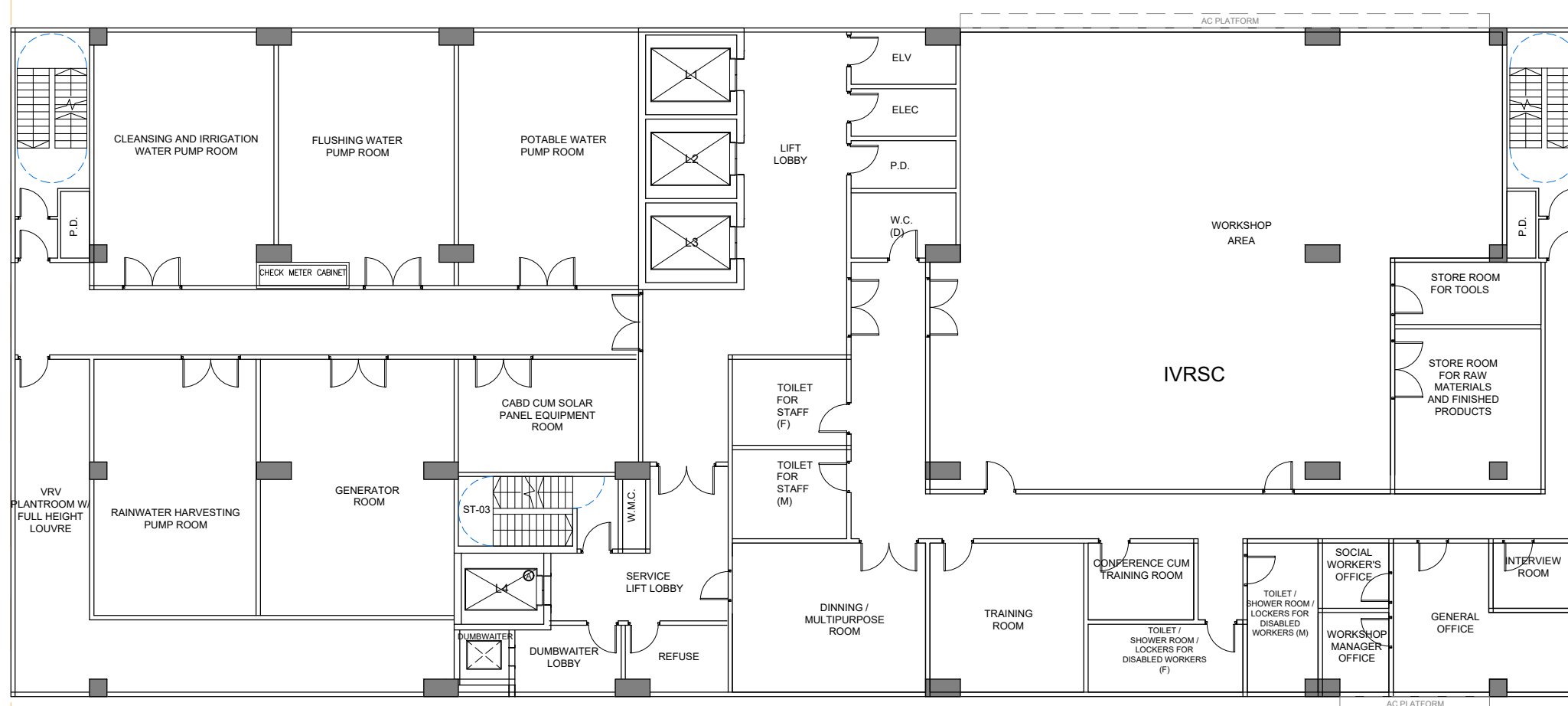


*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





SHA CHAU LEI ROAD

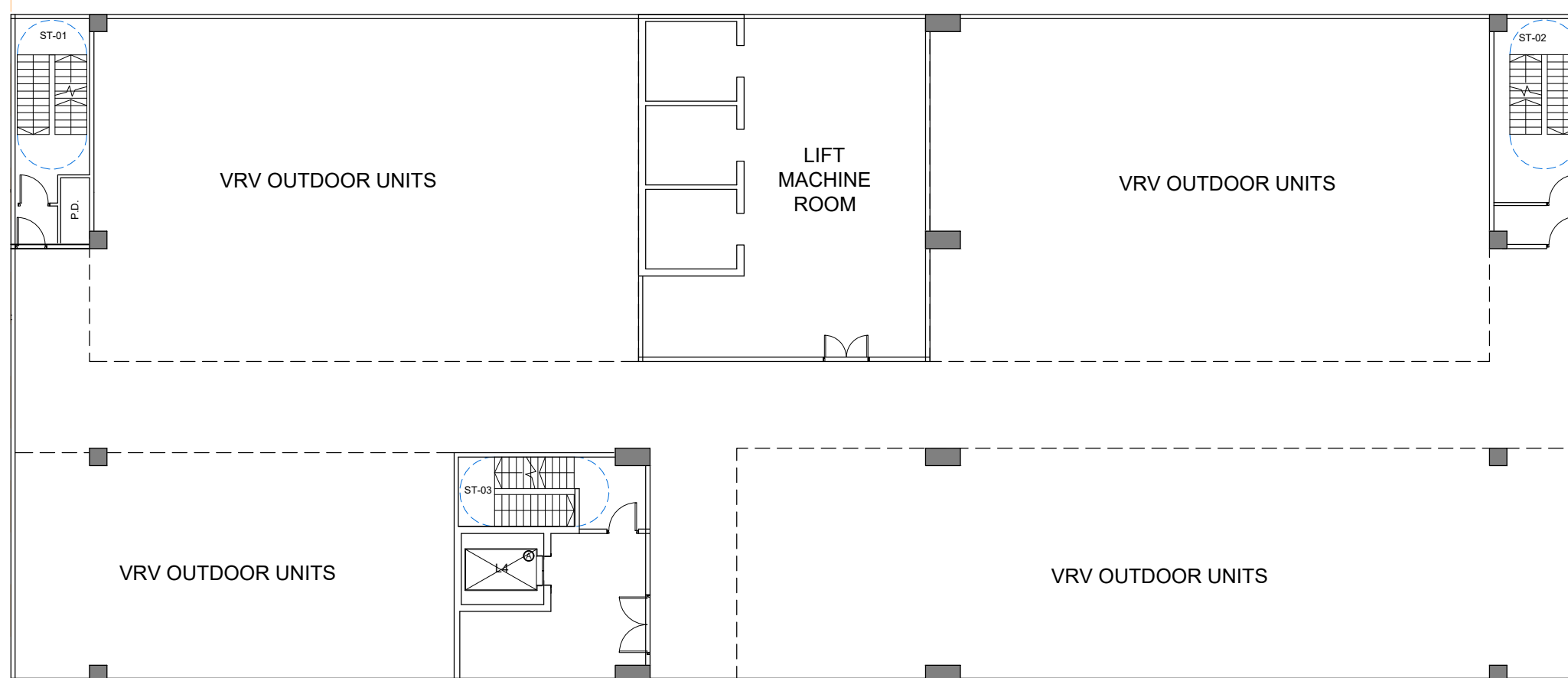


*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.



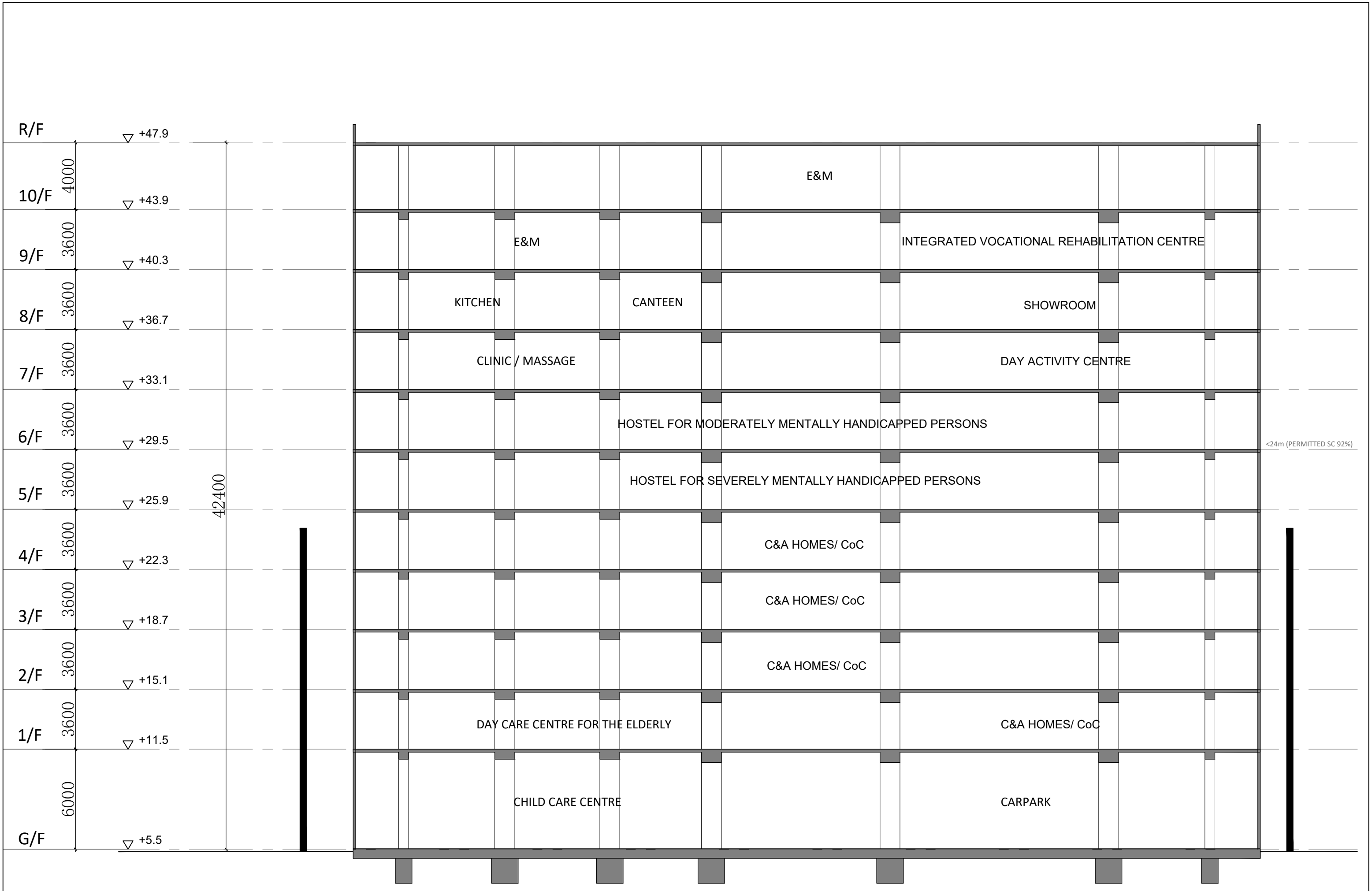


SHA CHAU LEI ROAD



*Note: The layout plan is for indicative purpose only and will be further refined during the detailed design stage if necessary.





Appendix B1

Estimation of Sewage Discharge from the Site (Existing)

Table 1 Estimation of Sewage Flow from the Existing Development

Generation from RCHE (3-storey)				
i)	Care and Attention Home (G/F-2/F)			
a)	Generation from staff			
	Total Floor Area	1707	m ²	
	Worker Density (in 100m ²) ^[2]	3.3	person/100 m ²	Refer to worker density for "Community, Social & Personal Services" in Table 8 of CIFSUS.
	Total number of person	57	persons	
	Unit Flow Factor ^[1]	0.28	m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.
	Average Sewage Discharge	<u>16.0</u>	m ³ /dav	
b)	Generation from residents			
	Total number of residents	143	persons	Full capacity of subsidised places (https://www.elderlyinfo.swd.gov.hk/en/content/pok-oi-hospital-yeung-chun-pui-care-and-attention-home)
	Total number of person	143	persons	
	Unit Flow Factor	0.19	m ³ /person/day	Referred to the planning unit flow for Domestic (housing type specific) - Institutional and special class in Table T-1 of GESF.
	Average Sewage Discharge	<u>27.2</u>	m ³ /dav	
vii)	Kitchen(G/F)			
	Total Floor Area	61.5	m ²	Total Floor area for kitchen
	Worker Density per GFA (in 100m ²)	5.1	person/100m ²	Referred to the worker density of Restaurants (All Types) in Table 8 of CIFSUS
	Total Number of Person	4	persons	
	Unit Flow Factor	1.58	m ³ /person/day	Referred to the planning unit flow for Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
	Average Sewage Discharge	<u>6.3</u>	m ³ /day	
	Total			
	Total estimated daily flow	<u>49.5</u>	m ³ /day	
	Contributing Population	183		
	Catchment Inflow Factor ^[1]	1.00		Refer to the Catchment Inflow Factor for "Yuen Long" in Table T-4 of GESF.
	Peaking factor	8.00		Referred to the Peaking Factor (including stormwater allowance) for facility with existing upstream sewerage in Table T-5 of GESF.
	Peak Flow	<u>0.0046</u>	m ³ /s	

Notes:

- [1] The worker density is made reference to CIFSUS - "Commercial and Industrial Floor Space Utilization Survey " published by Planning Department (PlanD).
- [2] The unit flow factor is made reference to "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (Version 1.0)", published by EPD.

Appendix B2

Estimation of Sewage Discharge from the Site (Proposed)

Table 2 Estimation of Sewage Flow from the Proposed Redevelopment

Generation from Proposed Redevelopment (11-storey)				
i) Child Care Centre (G/F)				
a) Generation from staff				
Total Floor Area	324	m ²		
Worker Density (in 100m ²) ^[2]	3.3	person/100 m ²	Refer to worker density for "Community, Social & Personal Services" in Table 8 of CIFSUS.	
Total number of person	11	persons		
Unit Flow Factor ^[1]	0.28	m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.	
Average Sewage Discharge	3.0	m ³ /day		
ii) Elderly Day Care (1/F)				
a) Generation from Staff				
Total Floor Area	510	m ²		
Worker Density (in 100m ²) ^[2]	3.3	person/100 m ²	Refer to worker density for "Community, Social & Personal Services" in Table 8 of CIFSUS.	
Total number of person	17	persons		
Unit Flow Factor ^[1]	0.28	m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.	
Average Sewage Discharge	4.7	m ³ /day		
iii) Care & Attention Home (1/F-4/F)				
a) Generation from staff				
Total Floor Area	2557	m ²		
Worker Density (in 100m ²) ^[2]	3.3	person/100 m ²	Refer to worker density for "Community, Social & Personal Services" in Table 8 of CIFSUS.	
Total number of person	85	persons		
Unit Flow Factor ^[1]	0.28	m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.	
Average Sewage Discharge	23.8	m ³ /day		
b) Generation from Residents				
Total number of residents	192	persons	full capacity of 192-place residential care home for elderly	
Total number of overnight staff	0	persons	Refer to Cap. 459A Residential Care Homes (Elderly Persons) Regulation, 1 care worker for every 30 residents or part thereof, between 10 p.m. and 7 a.m	
Total number of person	192	persons		
Unit Flow Factor	0.19	m ³ /person/day	Referred to the planning unit flow for Domestic (housing type specific) - Institutional and special class in Table T-1 of GESF.	
Average Sewage Discharge	36.5	m ³ /day		
iv) Hostel for Severely Mentally Handicapped Persons (5/F)				
a) Generation from staff				
Total Floor Area	682	m ²		
Worker Density (in 100m ²) ^[2]	3.3	person/100 m ²		
Total number of person	33	persons	Refer to SWD staffing establishment for HSMH, around 0.66 workers/resident.	
Unit Flow Factor ^[1]	0.28	m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.	
Average Sewage Discharge	9.2	m ³ /day		
b) Generation from Residents				
Total number of residents	50	persons	Refer to Proposed Development Layout, full capacity of 50 nos of bed will be provided for HSMH	
Total number of overnight staff	0	persons	Refer to CAP613A Residential Care Homes (Persons with Disabilities) Regulation (High Care Level Home), 1 care worker for every 40 residents, between 10 p.m. and 7 a.m	
Total number of person	50	persons		
Unit Flow Factor	0.19	m ³ /person/day	Referred to the planning unit flow for Domestic (housing type specific) - Institutional and special class in Table T-1 of GESF.	
Average Sewage Discharge	9.5	m ³ /day		
v) Hostel for Moderately Mentally Handicapped Persons (6/F)				
a) Generation from staff				
Total Floor Area	537	m ²		
Worker Density (in 100m ²) ^[2]	3.3	person/100 m ²		
Total number of person	16	persons	Refer to SWD staffing establishment for HMMH, around 0.38 workers/resident.	
Unit Flow Factor ^[1]	0.28	m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.	
Average Sewage Discharge	4.5	m ³ /day		

Appendix B Estimation of Sewage Discharge from the Site

b) Generation from Residents			
Total number of residents	40	persons	Refer to Proposed Development Layout, full capacity of 40 nos of bed will be provided for HMMH
Total number of overnight staff	0	persons	Refer to CAP613A Residential Care Homes (Persons with Disabilities) Regulation (High Care Level Home), 1 care worker for every 40 residents, between 10 p.m. and 7 a.m
Total number of person	40	persons	
Unit Flow Factor	0.19	m ³ /person/day	Referred to the planning unit flow for Domestic (housing type specific) - Institutional and special class in Table T-1 of GESF.
Average Sewage Discharge	7.6	m ³ /day	
vi) Day Activity Centre, Clinic, Massage, Showroom (7/F&8/F)			
a) Generation from Staff			
Total Floor Area	1168	m ²	
Worker Density (in 100m ²) ^[2]	3.3	person/100 m ²	Refer to worker density for "Community, Social & Personal Services" in Table 8 of CIFSUS.
Total number of person	39	persons	
Unit Flow Factor ^[1]	0.28	m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.
Average Sewage Discharge	10.8	m ³ /day	
vii) Kitchen(8/F)			
Total Floor Area	200	m ²	Total Floor area for kitchen
Worker Density per GFA (in 100m ²)	5.1	person/100m ²	Referred to the worker density of Restaurants (All Types) in Table 8 of CIFSUS
Total Number of Person	11	persons	
Unit Flow Factor	1.58	m ³ /person/day	Referred to the planning unit flow for Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
Average Sewage Discharge	17.4	m ³ /day	
Canteen(8/F)			
Total Floor Area	77	m ²	Total Floor area for kitchen
Worker Density per GFA (in 100m ²)	5.1	person/100m ²	Referred to the worker density of Restaurants (All Types) in Table 8 of CIFSUS
Total Number of Person	4	persons	
Unit Flow Factor	1.58	m ³ /person/day	Referred to the planning unit flow for Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
Average Sewage Discharge	6.3	m ³ /day	
viii) Integrated Vocational Rehabilitation Services Centre (9/F)			
a) Generation from staff			
Total Floor Area	416	m ²	
Worker Density (in 100m ²) ^[2]	3.3	person/100 m ²	Refer to worker density for "Community, Social & Personal Services" in Table 8 of CIFSUS.
Total number of person	14	persons	
Unit Flow Factor ^[1]	0.28	m ³ /person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J11 Community, Social & Personal Services" in Table T-2 of GESF.
Average Sewage Discharge	3.9	m ³ /day	
Total			
Total estimated daily flow	137.2	m³/day	
Contributing Population	508		
Catchment Inflow Factor ^[1]	1.00		Refer to the Catchment Inflow Factor for "Yuen Long" in Table T-4 of GESF.
Peaking Factor	6.00		Referred to the Peaking Factor (excluding stormwater allowance) for facility with new upstream sewerage in Table T-5 of GESF.
Peak Flow	0.0095	m³/s	
Generation from Catchment Areas			
Stream A			
Assumed 100% Capacity (FTH1003105-FMH1009619)			
Max Peak Discharge	0.013		Peak Discharge through manhole=Max Capacity
Total estimated daily flow	140.4	m³/day	Peak Discharge*86400*Peaking Factor
Contributing Population	520		
Catchment Inflow Factor ^[1]	1.00		
Stream B			
Assumed 100% Capacity (FTH1009604-FMH1009602)			
Max Peak Discharge	0.017		Peak Discharge through manhole=Max Capacity
Total estimated daily flow	183.6	m³/day	Peak Discharge*86400*Peaking Factor
Contributing Population	680		
Catchment Inflow Factor ^[1]	1.00		

Notes:

- [1] The worker density is made reference to CIFSUS - "Commercial and Industrial Floor Space Utilization Survey " published by Planning Department (PlanD).
- [2] The unit flow factor is made reference to "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (Version 1.0)", published by EPD.

Appendix C1

Calculation of Flow Capacity of Existing Development

Calculation of Flow Capacity of Existing Development																							
Sewer No.				Material	Internal Diameter (m) [d]	Cross-section Area (m²)	Length (m)	Inlet mPD DS, L ₁ (m) [d]	Outlet mPD DS, L ₂ (m) [d]	Hydraulic pipeline roughness (m) [g]	Hydraulic Gradient	Mean Velocity (m/s) [V]	Max Capacity of Sewer (m³/s)	Total Average Dry Weather Flow m³/day	Catchment Inflow Factor [f]	Revised Total Average Dry Weather Flow [q]	Contributing Population [d]	Peaking Factor [p]	Peak Discharge from Project Site m³/day	Peak Discharge through Manhole m³/s	Percentage of capacity [n]	Percentage Contribution by Existing Development	Remark
ID	From	ID	To		D	A	L				s	V											
FTM#1	Site	S1	FMH1009620	Clayware	0.150	0.018	4.89	4.88	4.39	0.003	0.101	2.47	0.044	49.5	1.0	49.5	183	8.0	395.6	0.0046	11%	11%	Site (Existing)
S1	FMH1009620	S2	FMH1009619	Clayware	0.300	0.071	4.96	4.38	4.34	0.003	0.008	1.12	0.079	49.5	1.0	49.5	183	8.0	395.6	0.0046	6%	6%	Site (Existing)
Stream A	FTH1003105	S2	FMH1009619	Clayware	0.150	0.018	3.78	4.374*	4.34	0.003	0.009	0.73	0.013	140.4	1.0	140.4	520	8.0	1123.2	0.013	100%	/	Stream A: Assumed 100% capacity
S2	FMH1009619	S3	FMH1009618	Clayware	0.300	0.071	17.31	4.33	4.26	0.003	0.004	0.79	0.096	189.9	1.0	189.9	703	8.0	1518.8	0.018	32%	8%	Site (Existing) + Stream A
S3	FMH1009618	S4	FMH1009615	Clayware	0.300	0.071	2.54	4.26	4.24	0.003	0.008	1.10	0.078	189.9	1.0	189.9	703	8.0	1518.8	0.018	23%	6%	Site (Existing) + Stream A
S4	FMH1009615	S5	FMH1009614	Clayware	0.300	0.071	11.55	4.24	4.18	0.003	0.005	0.89	0.063	189.9	1.0	189.9	703	8.0	1518.8	0.018	28%	7%	Site (Existing) + Stream A
S5	FMH1009614	S6	FMH1009613	Clayware	0.300	0.071	19.18	4.15	4.04	0.003	0.006	0.94	0.066	189.9	1.0	189.9	703	8.0	1518.8	0.018	26%	7%	Site (Existing) + Stream A
S6	FMH1009613	S7	FMH1009612	Clayware	0.300	0.071	20.61	4.03	3.87	0.003	0.008	1.09	0.077	189.9	1.0	189.9	703	8.0	1518.8	0.018	23%	6%	Site (Existing) + Stream A
S7	FMH1009612	S8	FMH1009601	Clayware	0.300	0.071	22.51	3.85	3.75	0.003	0.004	0.83	0.058	189.9	1.0	189.9	703	8.0	1518.8	0.018	30%	9%	Site (Existing) + Stream A
S8	FMH1009601	S9	FMH1009602	Clayware	0.300	0.071	8.43	3.73	3.62	0.003	0.013	1.42	0.100	189.9	1.0	189.9	703	8.0	1518.8	0.018	18%	5%	Site (Existing) + Stream A
Stream B	FMH1009604	S9	FMH1009602	Clayware	0.225	0.040	5.72	3.63	3.62	0.003	0.002	0.43	0.017	183.6	1.0	183.6	680	8.0	1488.8	0.017	100%	/	Stream B: Assumed 100 % capacity
S9	FMH1009602	S10	FMH1009601	Clayware	0.300	0.071	11.50	3.61	3.51	0.003	0.009	1.16	0.082	373.5	1.0	373.5	1383	6.0	2240.7	0.026	32%	6%	Site (Existing) + Stream A+ Stream B

[d] Reference from Geotrib Map - *Net height calculated with min 1.150 gradient for 150mm pipe (as suggested by DSD)

[g] Roughness values adopted in the calculations is based on the interpolated values for velocities between 0.75 m/s and 1.2 m/s in accordance with the DSD's Sewerage Manual. For public sewers, assumed clayware sited sewers in "good" condition, so value of 3.0mm is adopted.

[b] The velocity is calculated using the Colebrook-White Formula:

$$f^{-1/2} = -2 \log \left[\frac{k}{3.7D} + \frac{2.5v}{D(2gS)^{1/2}} \right]$$

- where:
k = Colebrook-White roughness coefficient, in meter
V = mean velocity (m/s)
D = circular cross-section pipe, inside diameter (m)
S = slope, in meters per meter
v = kinematic viscosity of water, in meter per second (0.000001306 m²/s)
g = gravitational acceleration (m/s²) (9.807 m/s²)

[d] The Contributing Population is defined as:
Contributing Population = $\frac{\text{Calculated total average flow (m}^3\text{/day)}}{0.27 \text{ (m}^3\text{/person-day)}}$

[d] Reference from Table 3.5 of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning

[f] Reference from Table 3.4 of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning

[g] Revised Total Average Dry Weather Flow = Total Average Dry Weather Flow x Catchment Inflow Factor

[n] Pipe segment that exceeded 100% used capacity are bolded and underlined

Appendix C2

Calculation of Flow Capacity of Proposed Redevelopment

Calculation of Flow Capacity of Proposed Redevelopment

Sewer No.				Material	Internal Diameter (m) [d]	Cross-section Area (m²)	Length (m)	Inlet mPD US_L (m) [d]	Outlet mPD US_L (m) [d]	Hydraulic pipeline roughness (m) [s]	Hydraulic Gradient	Mean Velocity (m/s) [V]	Max Capacity of Sewer (m³/s)	Total Average Dry Weather Flow m³/day	Catchment Inflow Factor [f]	Revised Total Average Dry Weather Flow [d]	Contributing Population	Peaking Factor	Peak Discharge from Project Site m³/day	Peak Discharge through Manhole m³/s	Utilization	Percentage Contribution by Proposed Development [d]	Remark
ID	From	ID	To		D	A	L	I	O	s	s	V	Q	Q _{TADWF}	F	Q _{TDWF}	P	Q _P	Q _{PM}	U	PC		
FT3081	Site	S1	F3M1009620	Clayware	0.200	0.031	4.89	4.88	4.39	0.003	0.101	3.01	0.084	137.2	1.0	137.2	508	6.0	823.2	0.010	10%	10%	Site (Proposed)
	F3M1009620	S2	F3M1009619	Clayware	0.300	0.071	4.96	4.38	4.34	0.003	0.008	1.12	0.079	137.2	1.0	137.2	508	8.0	1097.6	0.013	16%	16%	Site (Proposed)
Stream A	FT11003105	S2	F3M1009619	Clayware	0.150	0.018	3.78	4.374"	4.34	0.003	0.009	0.73	0.013	140.4	1.0	140.4	520	8.0	1123.2	0.013	100%	/	Stream A: Assumed 100% capacity
S2	F3M1009619	S3	F3M1009618	Clayware	0.300	0.071	17.31	4.33	4.26	0.003	0.004	0.79	0.056	277.6	1.0	277.6	1028	6.0	1665.6	0.019	35%	23%	Site (Proposed) + Stream A
S3	F3M1009618	S4	F3M1009615	Clayware	0.300	0.071	2.54	4.26	4.24	0.003	0.008	1.10	0.078	277.6	1.0	277.6	1028	6.0	1665.6	0.019	25%	16%	Site (Proposed) + Stream A
S4	F3M1009615	S5	F3M1009614	Clayware	0.300	0.071	11.55	4.24	4.18	0.003	0.005	0.89	0.063	277.6	1.0	277.6	1028	6.0	1665.6	0.019	30%	20%	Site (Proposed) + Stream A
S5	F3M1009614	S6	F3M1009613	Clayware	0.300	0.071	19.18	4.15	4.04	0.003	0.006	0.94	0.066	277.6	1.0	277.6	1028	6.0	1665.6	0.019	29%	19%	Site (Proposed) + Stream A
S6	F3M1009613	S7	F3M1009612	Clayware	0.300	0.071	20.61	4.03	3.87	0.003	0.008	1.09	0.077	277.6	1.0	277.6	1028	6.0	1665.6	0.019	25%	16%	Site (Proposed) + Stream A
S7	F3M1009612	S8	F3M1009603	Clayware	0.300	0.071	22.51	3.85	3.75	0.003	0.004	0.83	0.058	277.6	1.0	277.6	1028	6.0	1665.6	0.019	30%	22%	Site (Proposed) + Stream A
S8	F3M1009603		F3M1009602	Clayware	0.300	0.071	8.43	3.73	3.62	0.003	0.013	1.42	0.100	277.6	1.0	277.6	1028	6.0	1665.6	0.019	19%	13%	Site (Proposed) + Stream A
Stream B	F3M1009604	S9	F3M1009602	Clayware	0.225	0.040	5.72	3.63	3.62	0.003	0.002	0.43	0.017	183.6	1.0	183.6	680	8.0	1488.8	0.017	100%	/	Stream B: Assumed 100 % capacity
S9	F3M1009602	S10	F3M1009601	Clayware	0.300	0.071	11.50	3.61	3.51	0.003	0.009	1.16	0.082	461.2	1.0	461.2	1708	6.0	2767.2	0.032	39%	16%	Site (Proposed) + Stream A+ Stream B

[d] Reference from Geotrichy Man. "not provided calculated with min 1:150 gradient for 150mm rise (as suggested by DSD)

[s] Roughness values adopted in the calculations is based on the interpolated values for velocities between 0.75 m/s and 1.2 m/s in accordance with the DSD's Sewerage Manual. For public sewers, assumed clayware stoned sewers in "good" condition, its value of 3.0mm is adopted.

[d] The velocity is calculated using the Colebrook-White Formula:

$$f' = -2 \left(2.5 \log \left(\frac{k}{3.7D} + \frac{2.5\nu}{D \left(2.5 \log \right)^{1.7}} \right) \right)^{-2}$$

where
k = Colebrook-White roughness coefficient, in meter
V = mean velocity (m/s)
D = circular cross-section pipe, inside diameter (m)
S = slope, in meters per meter
ν = kinematic viscosity of water, in meter per second (0.00001306 m/s)
g = gravitational acceleration (m/s²) (9.817 m/s²)
The Contributing Population is defined as:

Contributing Population = $\frac{\text{Calculated total average flow (m}^3\text{/day)}}{0.27 \text{ (m}^3\text{/person/day)}}$

[d] Reference from Table 7.1 of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning
For sewers FT3081 to S10, peaking factor (including storm water allowance) for facility with new upstream sewerage is adopted.
For sewers S1 to S18, peaking factor (including storm water allowance) for facility with existing upstream sewerage is adopted.

[d] Reference from Table 7.4 of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning

[d] Revised Total Average Dry Weather Flow = Total Average Dry Weather Flow + Catchment Inflow Factor

[d] Pipe segment that exceeded 100% and capacity are belled and modified

[d] Percentage contribution by proposed development = $\frac{\text{Peak Discharge through Manhole (m}^3\text{/s)}}{\text{Max Capacity of Sewer (m}^3\text{/s)}}$

Appendix 7

Preliminary Geotechnical Appraisal and Foundation Proposal

PRELIMINARY GEOTECHNICAL APPRAISAL

**PROPOSED REDEVELOPMENT OF POK OI HOSPITAL YEUNG
CHUN PUI CARE AND ATTENTION HOME**

AT

YUEN LONG, HONG KONG

Revision: -

November 2023

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REVISION HISTORY

Rev.	Description of Revision	Date
-	1 st Submission for Approval	19 November 2023
-	RtoC 07 Nov 2024	26 November 2024

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APPENDICES

Appendix A – Geological Map

Appendix B – Drawing of Schedule Area 2 (GS-SP/714-1)

Appendix C – Adjacent GI Record

Appendix D – Adjacent Slope Feature Record

1 INTRODUCTION

1.1 Background

P&T Group has been appointed as the leading consultant to oversee the technical feasibility study for the proposed redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long.

Asia Infrastructure Solutions Limited has been appointed by P&T Group as the structural and geotechnical consultant and is responsible for structural and geotechnical feasibility study for the proposed development.

The Project comprises the demolition of existing building and construction of new block(s) with an aim to optimise the use of the site at 58 Sha Chau Lei Tsuen, Ha Tsuen, Ping Ha Road, Yuen Long at Lot No. 2273 and the Extension thereto in Demarcation District 125, and to cater for the increasing demand for elderly, rehabilitation and child care services, by providing more floor area and better and updated facilities.



1.2 Objective

This report aims to provide preliminary geotechnical appraisal review to the existing premises for the proposed development.

2 SITE GEOLOGY

2.1 Site Topography

The Site is at LOT NO. 2273 & extension in DD 125, Ping Ha Road, Ping Shan, Yuen Long, New Territories (also known as 58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long, New Territories).

The site is relatively flat, and the ground level is around +5.0mPD to +5.7mPD.

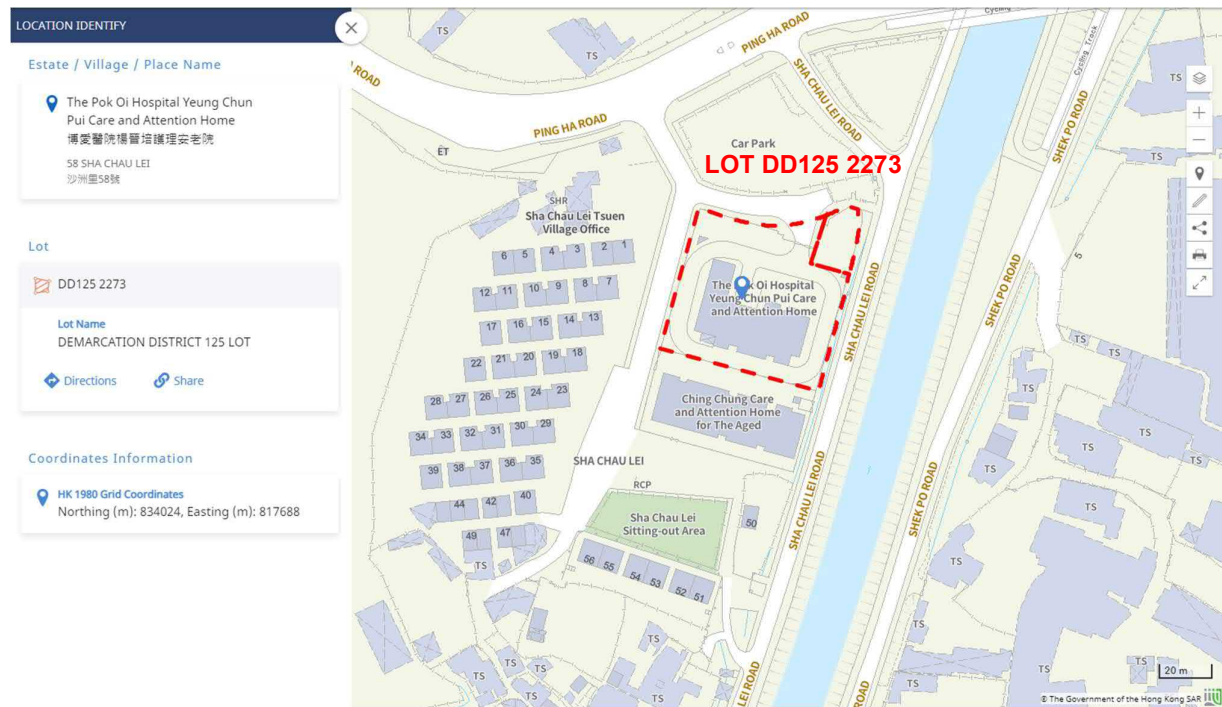
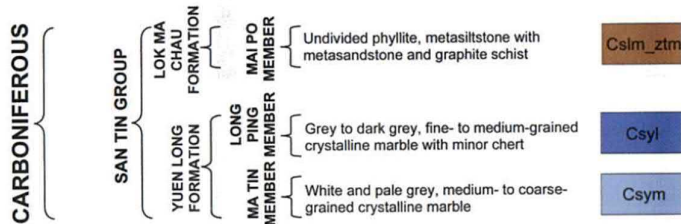
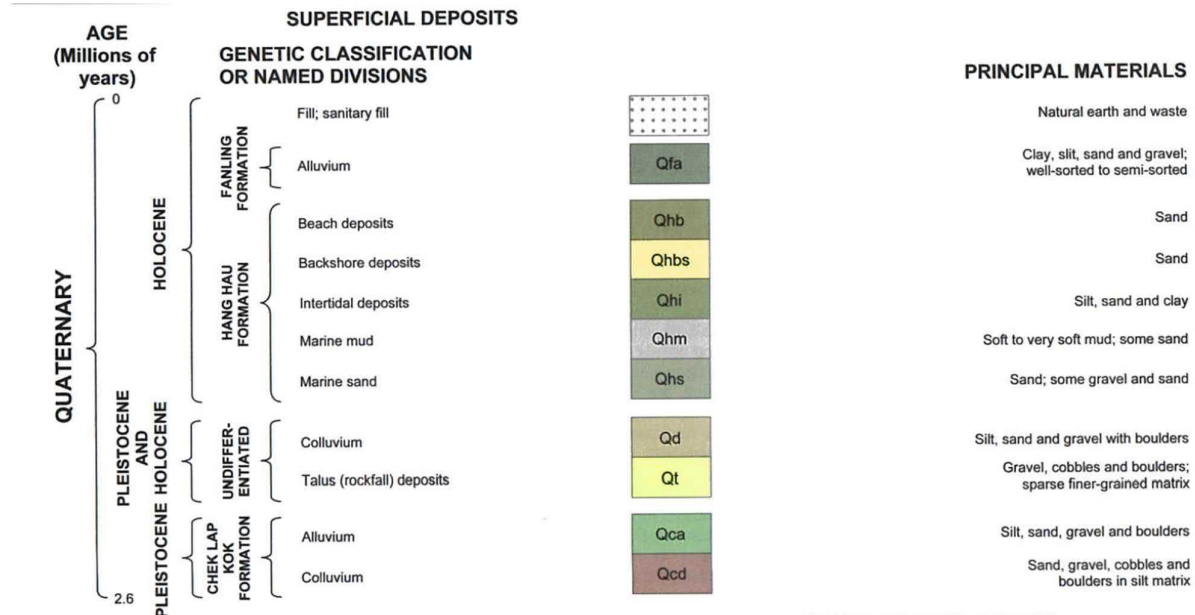
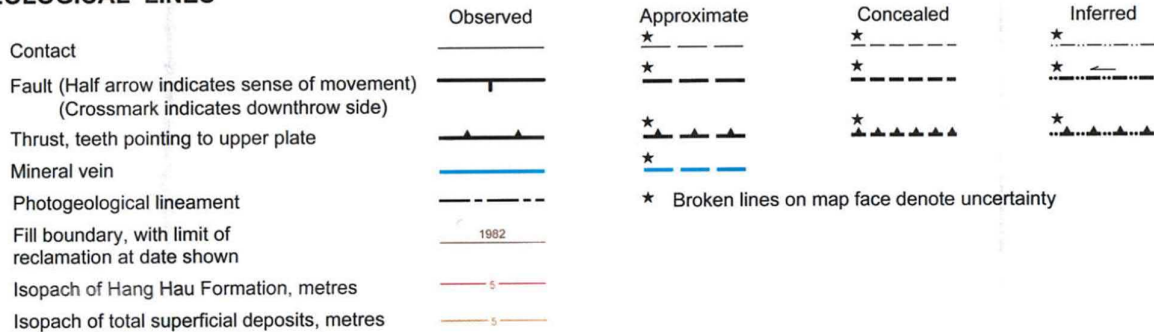


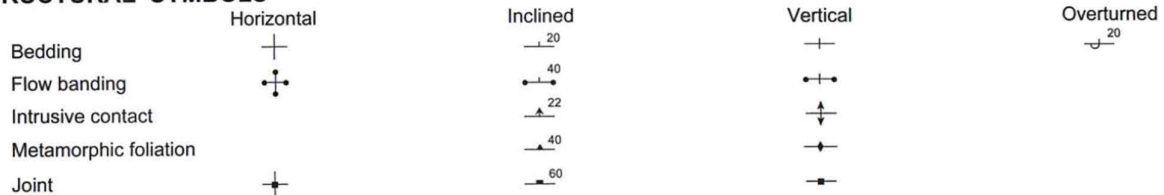
Figure 2.1 Site Location Plan



GEOLOGICAL LINES



STRUCTURAL SYMBOLS



2.4 Ground Conditions

There are numerous borehole investigations conducted near the Site, however, most of the borehole record are shallow and did not reach the rockhead level. Based on the available GI data within 500m, it is estimated that the subsoil geology is in the sequence of fill, alluvium, sandy/clayed silt layer, completely to slightly decomposed metasiltstone and fine ash tuff. The location of the drill holes and the G.I records are attached in **Appendix C** for reference.

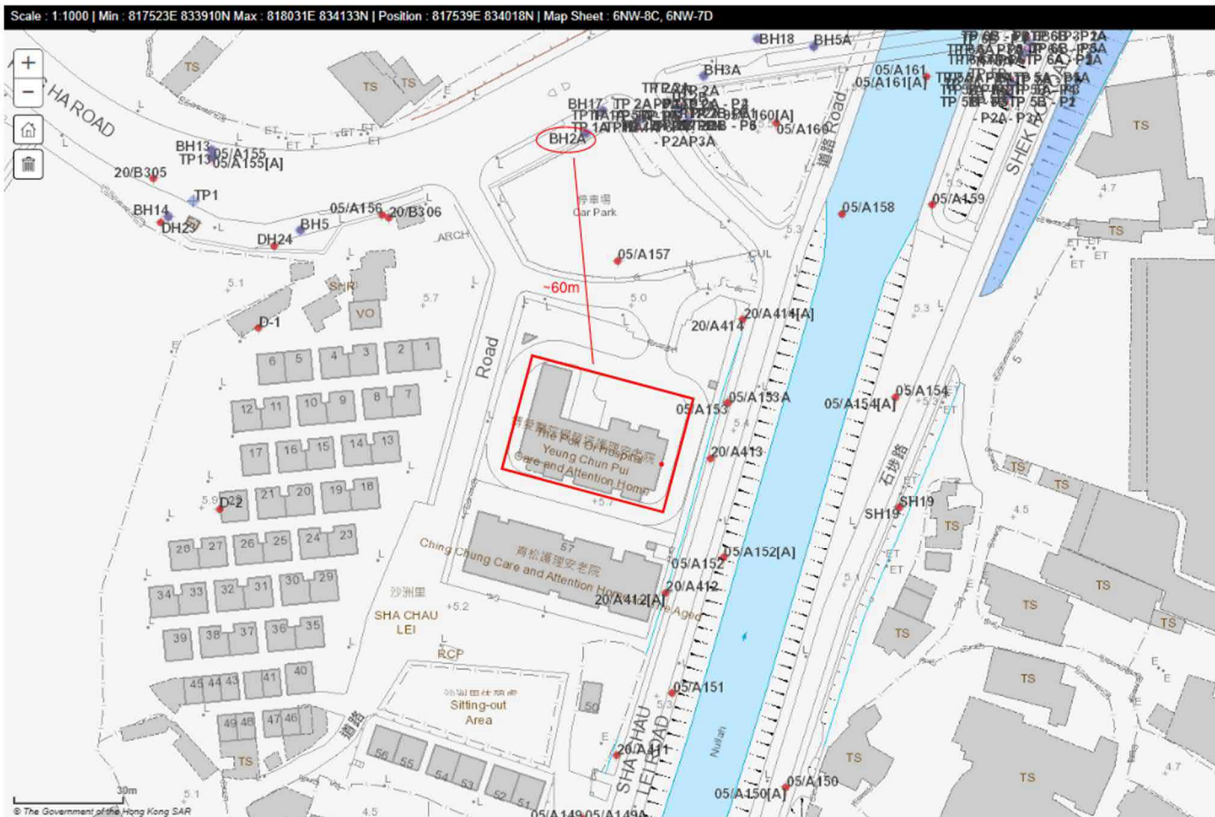
Borehole BH2A


The first layer in BH2A is fill, which is approximately 4.5m thick. It comprises firm to stiff, yellowish brown, sandy clayey SILT with occasional angular, medium gravel of strong granite.

The layer of alluvium is approximately 17m thick in BH2A, comprising firm to stiff, light brown, dappled black and yellowish brown, clayed silt with occasional rounded, medium gravel of moderately strong silica fragments.

Clayed silt layer lying between the alluvium and bed rock comprises extremely weak, olive grey/greyish brown, completely decomposed metasiltstone.

Bedrock is found at -37.7mPD, comprising strong, grey, slightly decomposed metasiltstone and strong, grey, slightly decomposed, fine ash tuff at the bottom of drill holes.



 FUGRO GEOTECHNICAL SERVICES LTD		DRILLHOLE RECORD		HOLE No. BH2A	
		CONTRACT No.: GE/2008/04		SHEET: 5 of 5	
PROJECT: PWP Item No. 7811TH, Ping Ha Road Improvement - Remaining Works (Ha Tsuen Section)					
METHOD: Rotary Drilling		CO-ORDINATES:		WORKS ORDER No. GE/2008/04.4	
MACHINE & No.: FDR-12		E 817690.40 N 834103.84		DATE from: 18/10/2008 to 27/10/2008	
FLUSHING MEDIUM: Water		ORIENTATION: Vertical		GROUND LEVEL + 6.50 mPD	

Drilling Progress	Casing depth/size	Water Level (m) Start/end	Water Return %	TCR %	SCR %	ROD %	FI	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
41	0.75m at 18:00													As sheet 4 of 5.
42	4.55m at 08:50							12, 23, 55, 45 / 25mm 500 bits / 100mm	79, 80, 81, 82	40.40, 42.40, 43.80, 44.80, 45.80	40.40, 42.40, 43.80, 44.80, 45.80			
43									83	42.40	42.40		IV	Weak, grey, highly decomposed calcareous METASILTSTONE. (Recovered as angular, fine to coarse gravel)
44								150 / 45mm, 100 / 25mm 100 bits / 200mm	84, 85	43.40, 44.40	43.40, 44.40			
45										44.24, 44.30	44.24, 44.30		II	Strong, grey, spotted white, slightly decomposed, calcareous METASILTSTONE with occasional marble and silica clasts (10mm - 30mm). Joints are very closely to closely spaced, rough planar, extremely narrow, iron stained, dipping at 25° - 35° and subvertical.
46										45.44	45.44			
47										46.54, 46.54	46.54, 46.54		II	Strong, grey, slightly decomposed METASILTSTONE. Joints are closely spaced, smooth planar, extremely narrow, clean, dipping at 45° - 55°.
48										47.00	47.00		II	Strong, grey, spotted white, slightly decomposed, buffaceous METASILTSTONE. Joints are closely spaced, rough planar, extremely narrow, iron stained, dipping at 35° - 45°.
49	1.20m at 18:00									48.40	48.40			Strong, grey, slightly decomposed, fine ash TUFF. Joints are very closely to closely spaced, rough planar, extremely narrow, clean, locally kaolin and chlorite coated, dipping at 15° - 25° and 35° - 45°.
50	4.50m at 08:00									49.54, 49.54	49.54, 49.54			End of investigation hole at 49.54m.

<ul style="list-style-type: none"> Small Disturbed Sample Pluton sample U76 Undisturbed Sample U100 Undisturbed Sample Mazier Sample SPT Liner Sample Water Sample 	<ul style="list-style-type: none"> Standard Penetration Test In-situ Vane Shear Test Permeability Test Acoustic Borehole Televiewer Packer Test Piezometer Tip Standpipe 	<p>LOGGED <u>W. Yu</u></p> <p>DATE <u>26/10/2008</u></p> <p>CHECKED <u>A.B. Hollinshead</u></p> <p>DATE <u>31/10/2008</u></p>
--	--	---

FGS Job No.: 07 0376 03 4

Borehole DH168

The first layer in BH168 is fill, which is approximately 3m thick. It comprises firm, brown sandy silt with some to many angular to subangular medium to coarse gravel sizes moderately weak rock fragments.

The layer of alluvium is approximately 5m thick in BH168 comprising firm to stiff, yellowish brown and light grey mottled light pink clayed very sandy silt, fine coarse sand with zone subangular fine to medium quartz gravel.

Sandy and clayed silt layer lying between the alluvium and bed rock comprises extremely weak, olive grey/greyish brown, completely decomposed metasiltstone.

Bedrock is found at -45.65mPD, comprising continuous strong, grey, locally spotted and dappled white slightly decomposed fine ash tuff with medium spaced, smooth, planar, calcite coated, occasionally clean joints dipping at 60deg to 70deg at the bottom of drill holes.



* AGMD = Automatic groundwater monitoring device

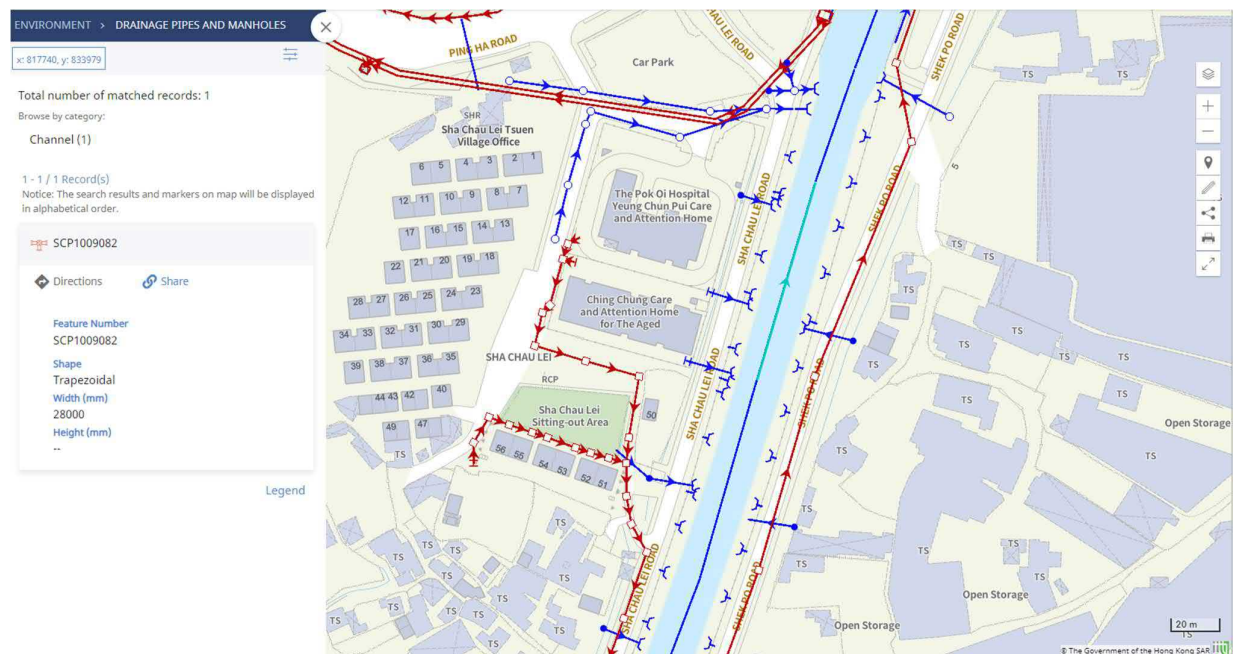
		Groundwater Level Record Sheet					
Contract No:		GE/2008/4	Works Order No : GE/2008/4.4				
Project :		PWP Item No. 7611TH, Ping Ha Road Improvement - Remaining Works (Ha Tsuen Section)					
Drillhole No.		BH2A					
Piezometer No.	P (Lower)	Co-ordinates:	Season:				
Installation Date	27/10/2008	Easting (m) 817690.40	Wet 1 Apr to 31 Oct				
AGMD Level (mPD)	N/A	Northing (m) 834103.84	Dry 1 Nov to 31 Mar				
AGMD S/N	N/A						
Logger S/N	N/A						
Gauge Factor (psi/Digit)	N/A						
Thermal Factor (psi/°C)	N/A						
R _s (F² x 10⁻³)	N/A						
T _a (°C)	N/A						
		Standpipe Piezometer:					
		Top Level (mPD)	+6.50				
		Installed Tip Depth from Top Level (m)	43.80				
		Tip Level (mPD)	-37.30				
Contractor: Fugro Geotechnical Services Ltd.		Logged By: K.C. Ng	Checked By: S.M. Pyle				
<p>The graph plots Piezometric Level (mPD) on the y-axis (ranging from +3.04 to +3.07) against Date / Time on the x-axis (from 30/10/08 to 08/11/08). The data points are connected by straight lines, showing a peak around 06/11/08 at approximately 3.06 mPD.</p>							
(Automatic Groundwater Monitoring Device) —x—					(Piezometer/Standpipe) —•—		Remark
Date / Time dd/mm/yy hh:mm	R _i (Hz)	Temp (°C)	Pressure (mH ₂ O) Above	Piezometric Level (mPD)	Date Time dd/mm/yy hh:mm	Manual Dip (m below top)	
					31/10/08 09:20	3.46	3.04
					01/11/08 09:10	3.45	3.05
					03/11/08 09:30	3.46	3.04
					04/11/08 10:00	3.46	3.04
					05/11/08 09:30	3.44	3.06
					06/11/08 09:20	3.45	3.05
					07/11/08 09:10	3.46	3.04

2.6 Adjacent Nullah

The nullah with the designation SCP1009082 is a water channel located along Sha Chau Road, with a distance of approximately 30 meters from the site. It is characterized by a trapezoidal shape, which means it has a base width that is different from its top width, resulting in sloping sides.

The nullah has a width of 28000mm, indicating its capacity to carry a significant volume of water during periods of rainfall or runoff. The wider base of the trapezoidal shape helps to accommodate higher flow rates, reducing the risk of overflowing or flooding in the surrounding area.

Understanding its characteristics and proximity to the site is essential for ensuring proper planning and implementation of construction activities while preserving the integrity and functionality of the nullah.



2.7 Existing Adjacent Features

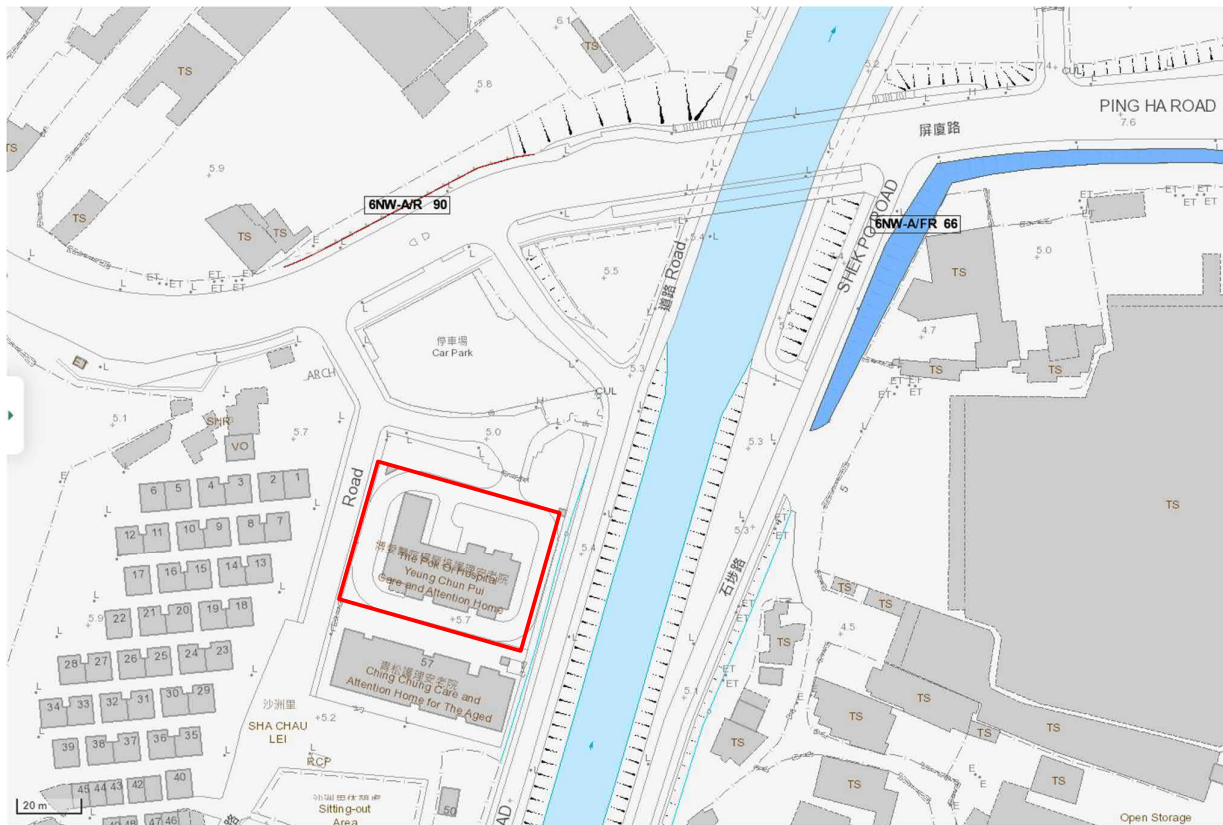


Figure 2.2 Existing Features Location Plan

6NW-A/R 90

The feature 6NW-A/R 90 is a concrete retaining wall with a level platform, standing tall with a maximum height of 3 meters. The structure spans a length of 78.3 meters along Ping Ha Road. Its face angle of 90 degrees creates a vertical face. The retaining wall is approximately 120 meters away from the site.

6NW-A/FR 66

Another feature 6NW-A/FR 66 contains slope part and the wall part. The slope height is 2.8m and the length is 225m. The average angle of the slope is 30degree.

The wall part has three retaining wall structures in total. Maximum height of Wall 1 is 0.6m and the length is 45.5m. Maximum height of Wall 2 is 2.2m and the length is 44.4m. Maximum height of Wall 3 is 2.0m and the length is 45.5m.

This feature locates on the opposite of the existing nullah from 100m to 300m away from the site.

3 GEOTECHNICAL ASSESSMENT

Refer to the existing ground investigation reports, the bedrock level is around -40mPD. A comprehensive soil investigation to understand the properties and behaviour of the soil within the site shall be carried out. This investigation should include testing for soil composition, strength, permeability, and potential for settlement. The results will help determine the appropriate foundation design and construction methods. Detail proposal may refer to the **Ground Investigation Report**.

The following geotechnical concerns require assessment for the proposed development:

- The suitable foundation type for the proposed development, particular its impact onto the adjacent ground and nullah. Detail refers to the **Foundation Proposal Report**.
- Effect of construction to adjacent feature, nullah, ground and structures.

3.1 Effects of Proposed Development Existing Nullah

The existing nullah is approximately 30m beyond the site boundary. The nullah serves as a drainage channel, carrying water runoff during rainfall events. Excavation works near the nullah shall consider the natural flow of water and potential flooding or redirection of water towards undesired locations. Since the proposed development has no basement and the nullah is over 30m from the site, only shallow excavation works will be carried out for pile cap construction, the impact shall be relatively insignificant.

Deep foundation is proposed for the development, such that the building will sit on bedrock. There is no adverse effect nor additional surcharge applied on the existing nullah.

3.2 Effects of Proposed Development on Existing Features

Two registered features are more than 100m away from the site location. The proposed development has no basement, but only shallow excavation works for pile cap construction, there is no adverse effect of the adjacent features.

3.3 Monitoring

Monitoring should be set up when commence site work including ground investigation, excavation works and foundation works. This involves monitoring the ground settlement, adjacent building settlement and tilting, vibration check, groundwater level.

4 CONCLUSION

Having reviewed the regional ground geology based on the existing available ground condition and investigation records, it is concluded that proposed development is structurally and geotechnically sound.

The evaluations stated in this report were based on observations which limits to only those areas accessible for observation and the information downloaded from Building Department's Online BRAVO system, Ginfo and Geoinf Map by CEDD. No destructive inspection or testing of materials was performed.

Appendix A – Geological Map

Appendix B – Drawing of Schedule Area 2 (GS-SP/714-1)

Appendix C – Adjacent GI Record

Appendix D – Adjacent Slope Feature Record

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FOUNDATION PROPOSAL

**PROPOSED REDEVELOPMENT OF POK OI HOSPITAL YEUNG
CHUN PUI CARE AND ATTENTION HOME**

AT

YUEN LONG, HONG KONG

Revision: -

November 2023

CONTACTS

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REVISION HISTORY

Rev.	Description of Revision	Date
-	1 st Submission for Approval	24 November 2023

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APPENDICES

Appendix A – Adjacent GI Record

Appendix B – Drawing of Schedule Area 2 (GS-SP/714-1)

Appendix C – Preliminary Foundation Schemes

1 INTRODUCTION

1.1 Background

P&T Group has been appointed as the leading consultant to oversee the technical feasibility study for the proposed redevelopment of Pok Oi Hospital Yeung Chun Pui Care and Attention Home in Yuen Long.

Asia Infrastructure Solutions Limited has been appointed by P&T Group as the structural and geotechnical consultant and is responsible for structural and geotechnical feasibility study for the proposed development.

The Project comprises the demolition of existing building and construction of new block(s) with an aim to optimise the use of the site at 58 Sha Chau Lei Tsuen, Ha Tsuen, Ping Ha Road, Yuen Long at Lot No. 2273 and the Extension thereto in Demarcation District 125, and to cater for the increasing demand for elderly, rehabilitation and child care services, by providing more floor area and better and updated facilities.



1.2 Objective

This report aims to provide a preliminary foundation proposal for the proposed development.

2 SITE GEOLOGY

2.1 Site Topography

The Site is at LOT NO. 2273 & extension in DD 125, Ping Ha Road, Ping Shan, Yuen Long, New Territories (also known as 58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long, New Territories).

The site is relatively flat, and the ground level is around +5.0mPD to +5.7mPD.

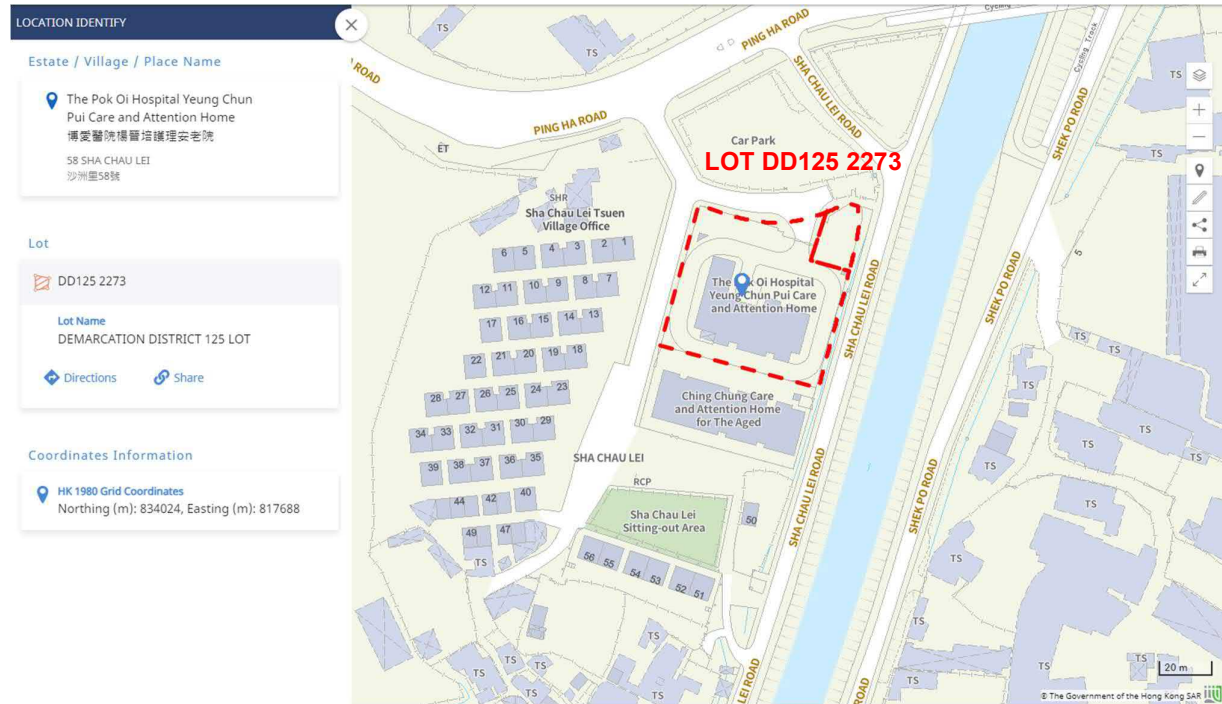


Figure 2.1 Site Location Plan

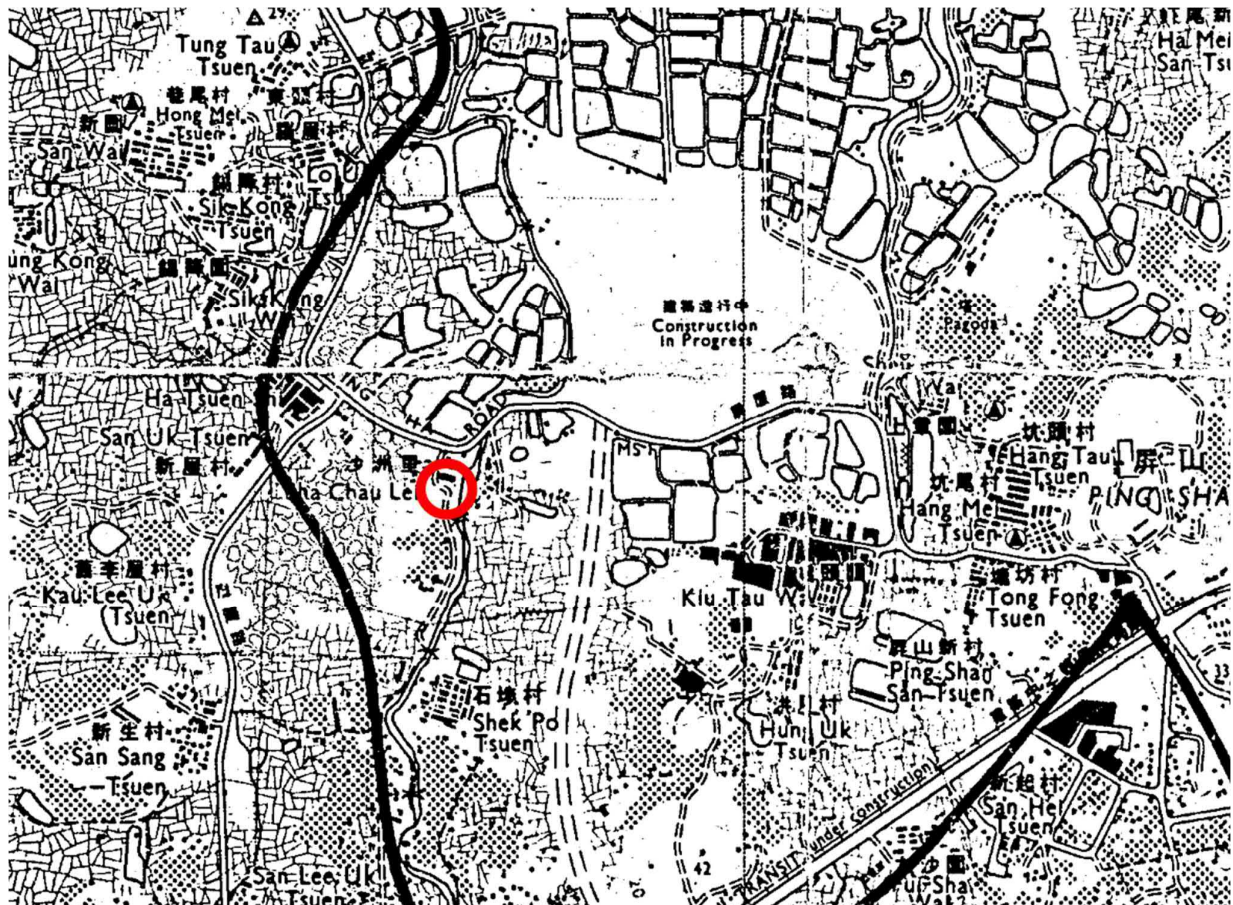
2.2 Schedule Area 2

According to PNAP APP-30, certain Mid-levels area has been designated as Area Number 1 of the Scheduled Areas (Scheduled Area No. 1) in Schedule 5 to the Buildings Ordinance (BO). The site is at mid-levels area and thus falls within Scheduled Area No. 1 as shown in figure below. The plan is attached in **Appendix B**.

According to the GEO publication HGM20 Sheet 6 Edition II - 2019, the site is underlain by marble clast-bearing rocks (grey to dark grey, fine- to medium grained crystalline marble with minor chert and white and pale grey, medium- to coarse-grained crystalline marble) of the Tuen Mun Formation.

According to PANP APP-61, attention should be given to logging the location and size of the cavities, the nature of the cavity wall and the infill, together with rock discontinuities. Fracture indices including total core recovery, solid core recovery, rock quality designation and fracture index should be shown on the drill logs.

The depths of drillholes should be determined by considering the depth of marble bedrock and the magnitude of the load to be applied by the structure. If marble is encountered, a minimum penetration of 20 m into sound marble rock is recommended in order to reduce the risk of existing cavities not being identified.



2.3 Ground Conditions

There are numerous borehole investigations conducted near the Site, however, most of the borehole record are shallow and did not reach the rockhead level. Based on the available GI data within 500m, it is estimated that the subsoil geology is in the sequence of fill, alluvium, sandy/clayed silt layer, completely to slightly decomposed metasiltstone and fine ash tuff. The location of the drill holes and the G.I records are attached in **Appendix C** for reference.

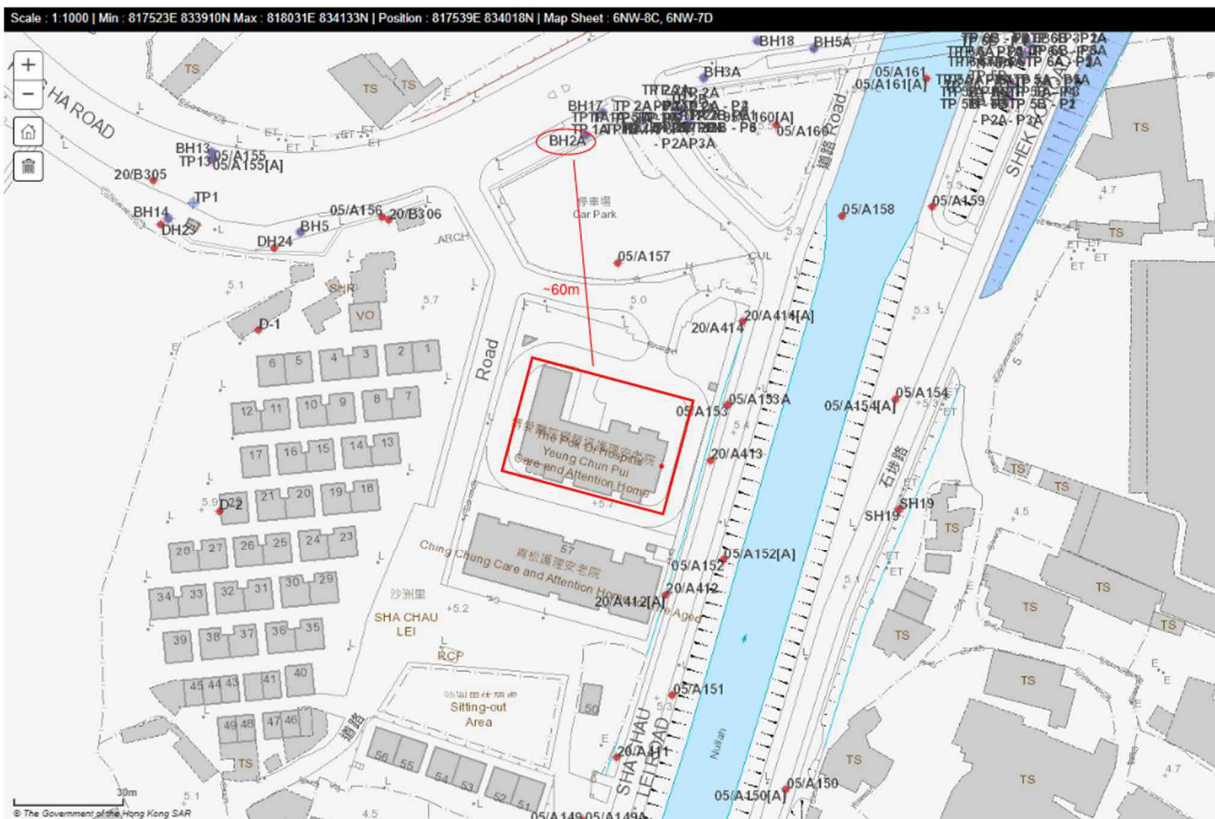
Borehole BH2A


The first layer in BH2A is fill, which is approximately 4.5m thick. It comprises firm to stiff, yellowish brown, sandy clayey SILT with occasional angular, medium gravel of strong granite.

The layer of alluvium is approximately 17m thick in BH2A, comprising firm to stiff, light brown, dappled black and yellowish brown, clayed silt with occasional rounded, medium gravel of moderately strong silica fragments.















Clayed silt layer lying between the alluvium and bed rock comprises extremely weak, olive grey/greyish brown, completely decomposed metasiltstone.

Bedrock is found at -37.7mPD, comprising strong, grey, slightly decomposed metasiltstone and strong, grey, slightly decomposed, fine ash tuff at the bottom of drill holes.



 FUGRO GEOTECHNICAL SERVICES LTD		DRILLHOLE RECORD		HOLE No. BH2A	
		CONTRACT No.: GE/2008/04		SHEET: 5 of 5	
PROJECT: PWP Item No. 7811TH, Ping Ha Road Improvement - Remaining Works (Ha Tsuen Section)					
METHOD: Rotary Drilling		CO-ORDINATES:		WORKS ORDER No. GE/2008/04.4	
MACHINE & No.: FDR-12		E 817690.40 N 834103.84		DATE from: 18/10/2008 to 27/10/2008	
FLUSHING MEDIUM: Water		ORIENTATION: Vertical		GROUND LEVEL + 6.50 mPD	

Drilling Progress	Casing depth/size	Water Level (m) Start/end	Water Return %	TCR %	SCR %	ROD %	FI	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
41	0.75m at 18:00 4.55m at 08:50								70	40.40			V	As sheet 4 of 5.
42								52, 23, 55, 45 / 25mm 500 bits / 100mm	80 81 82	42.40 42.30 42.20 42.10				
43									83	42.40	42.40		IV	Weak, grey, highly decomposed calcareous METASILTSTONE. (Recovered as angular, fine to coarse gravel)
44								50 / 40mm, 100 / 25mm 100 bits / 200mm	84 85	41.40 41.30				
45										44.24 44.30			II	Strong, grey, spotted white, slightly decomposed, calcareous METASILTSTONE with occasional marble and silica clasts (10mm - 30mm). Joints are very closely to closely spaced, rough planar, extremely narrow, iron stained, dipping at 25° - 35° and subvertical.
46										45.44				
47										46.54 46.50			II	Strong, grey, slightly decomposed METASILTSTONE. Joints are closely spaced, smooth planar, extremely narrow, clean, dipping at 45° - 55°.
48										46.20 46.20			II	Strong, grey, spotted white, slightly decomposed, buffaceous METASILTSTONE. Joints are closely spaced, rough planar, extremely narrow, iron stained, dipping at 35° - 45°.
49										46.40 46.40				Strong, grey, slightly decomposed, fine ash TUFF. Joints are very closely to closely spaced, rough planar, extremely narrow, clean, locally kaolin and chlorite coated, dipping at 15° - 25° and 35° - 45°.
50										49.54 49.54				End of investigation hole at 49.54m.

<ul style="list-style-type: none">  Small Disturbed Sample  Pluton sample  U76 Undisturbed Sample  U100 Undisturbed Sample  Mazier Sample  SPT Liner Sample  Water Sample 	<ul style="list-style-type: none">  Standard Penetration Test  In-situ Vane Shear Test  Permeability Test  Acoustic Borehole Televiewer  Packer Test  Piezometer Tip  Standpipe 	<p>LOGGED <u>W. Yu</u></p> <p>DATE <u>26/10/2008</u></p> <p>CHECKED <u>A.B. Hollinshead</u></p> <p>DATE <u>31/10/2008</u></p>
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FGS Job No.: 07 0376 03 4

Borehole DH168


The first layer in BH168 is fill, which is approximately 3m thick. It comprises firm, brown sandy silt with some to many angular to subangular medium to coarse gravel sizes moderately weak rock fragments.




The layer of alluvium is approximately 5m thick in BH168 comprising firm to stiff, yellowish brown and light grey mottled light pink clayed very sandy silt, fine coarse sand with zone subangular fine to medium quartz gravel.

Sandy and clayed silt layer lying between the alluvium and bed rock comprises extremely weak, olive grey/greyish brown, completely decomposed metasiltstone.

Bedrock is found at -45.65mPD, comprising continuous strong, grey, locally spotted and dappled white slightly decomposed fine ash tuff with medium spaced, smooth, planar, calcite coated, occasionally clean joints dipping at 60deg to 70deg at the bottom of drill holes.



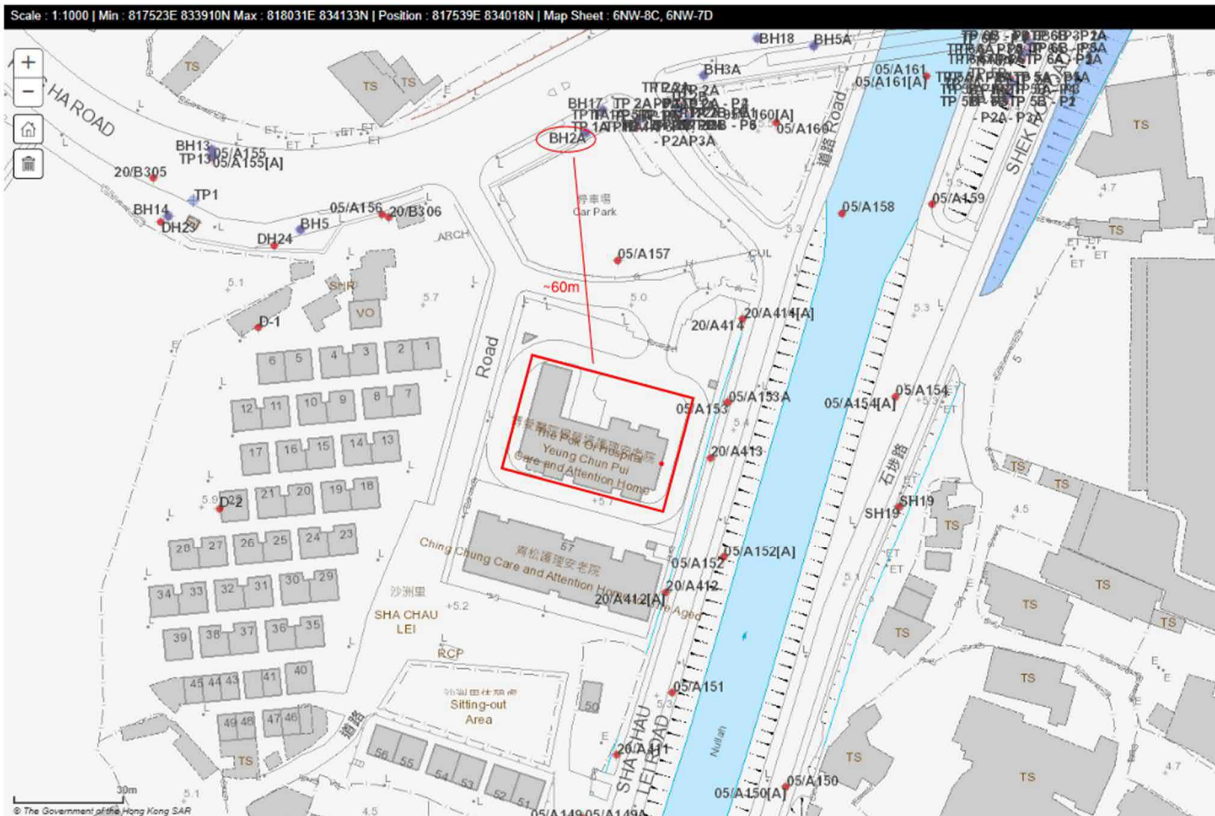
	Gammon Construction Limited Geotechnical Contracting Department		DRILLHOLE No. TS200/DH/168 SHEET 5 of 6	
	DRILLHOLE RECORD			
	PROJECT KCRC West Rail TS-200 Western Section, Phase 3 Ground Investigation			
METHOD IP + WB + RC		CO-ORDINATES E 817545.47 N 833607.46		CONTRACT No. TS-200
MACHINE & No. Toho (D2)				DATE from 12/03/1998 to 19/03/1998
FLUSHING MEDIUM Water		ORIENTATION Vertical		GROUND LEVEL 5.60 mPD

Drilling Progress	Casing depth/size	Water Depth (m)	TCR %	SCR %	ROD %	FI	Tests	Samples		Reduced Level	Depth (m)	Legend	Grade	Description
								No.	Type					
	HX 47.07	2.00	100	66	51	>20 10.0	5.7 25.174/50mm N=200/125mm	70	U	40.00		40.00		As sheet 4 of 6.
								71		40.26				
								72		42.00				
								73		42.43				
								74		44.00				
								75		44.25				
								76		46.10				
										47.07				
										48.15				
										49.17				
			50.00											
			51.00											
			52.00											
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			97.00											
			98.00											
			99.00											
			100.00											

Small disturbed sample Large disturbed sample SPT liner sample U76 undisturbed sample U100 undisturbed sample Marier sample Platon sample	Water sample Piezometer tip Standard penetration test Prestressmeter Test Permeability test Impression packer test In-situ vane shear test	LOGGED J Lau DATE 20/03/1998 CHECKED B Shepatone DATE 20/03/1998	REMARKS
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2.4 Ground Water Record

According to the groundwater records cited in the GI report of BH2A, which is approximately 60 meters beyond the site, the water level fluctuations for the period between October 31, 2008, and November 6, 2008, have been documented. The report states that the water level of BH2A (upper) ranged from +2.91mPG to +2.94mPD, while the water level of BH2A (lower) fluctuated between from +3.04mPG to +3.06mPD



[illegible]

* AGMD = Automatic groundwater monitoring device

[illegible]

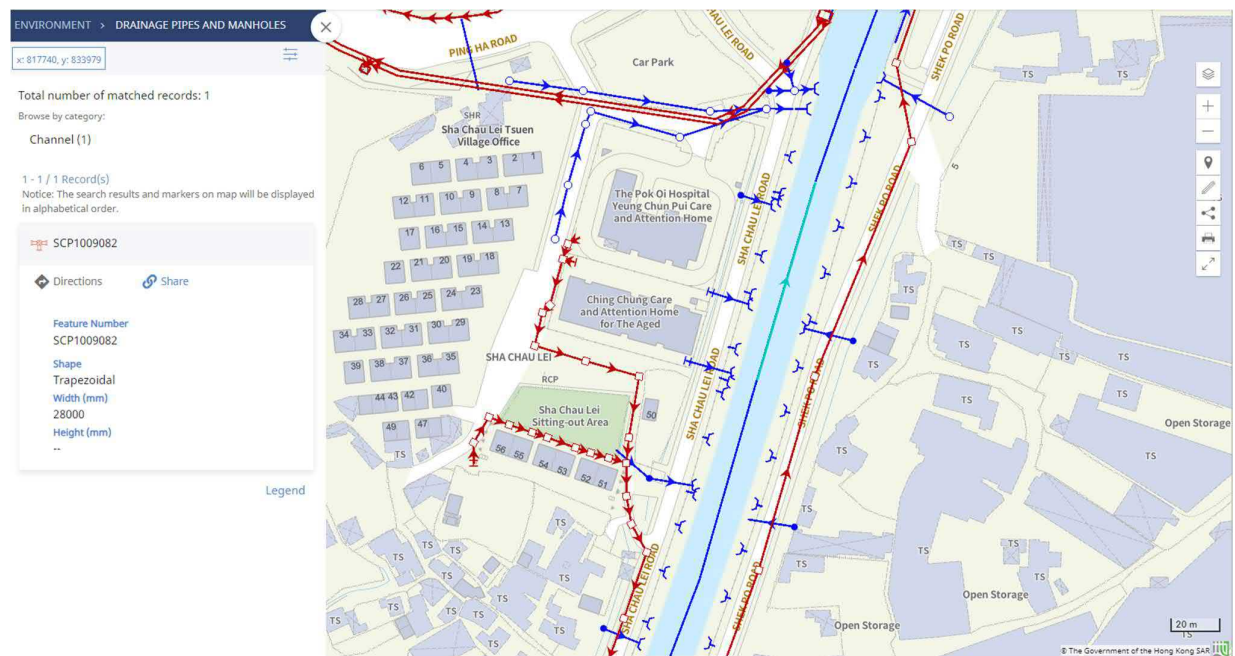
* AGMD = Automatic groundwater monitoring device

2.5 Adjacent Nullah

The nullah with the designation SCP1009082 is a water channel located along Sha Chau Road, with a distance of approximately 30 meters from the site. It is characterized by a trapezoidal shape, which means it has a base width that is different from its top width, resulting in sloping sides.

The nullah has a width of 28000mm, indicating its capacity to carry a significant volume of water during periods of rainfall or runoff. The wider base of the trapezoidal shape helps to accommodate higher flow rates, reducing the risk of overflowing or flooding in the surrounding area.

Understanding its characteristics and proximity to the site is essential for ensuring proper planning and implementation of construction activities while preserving the integrity and functionality of the nullah.



3 FOUNDATION PROPOSAL

3.1 Design Code/ Reference

The proposed design works shall comply with the following codes and standards:

- Building (Construction) Regulations, Hong Kong
- Code of Practice on Wind Effects in Hong Kong 2019
- Code of Practice for Structure Use of Concrete 2013
- Code of Practice for Foundations 2017
- Code of Practice for Dead and Imposed Loads 2011

3.2 The Proposed Foundation Scheme

The proposed development is approximately 37m x 54m in plan. The building consists of 9 storeys including the main roof. There is no basement of the structure. Column grid varies from 6.15m x 6.95m to 12.3m x 8.05m.

With the consideration of the structure mass, ground condition and the settlement concerns, piling foundation is proposed. Plan for two foundation schemes refer to **Appendix C**.

Bored pile/ Sicket-H pile on rock can carry large column load from the superstructure down to bed rock directly such that the settlement will be minimized and will not impose additional loading on the adjacent structure or nullah. As both piles can be operated in a reasonable quiet condition and generally no restrictions in piling hours. It is proposed for the new development. Preliminary check for the critical case for each scheme is shown below. Final pile size and design subject to detail checking.

Bored Pile Scheme

Allowable Column Load = $12.3 \times 8.05 \times 9 \times 15kPa \times 1.25(\text{Wind Factor}) = 15940kN$

Provide 1 no. of 1.5m dia. bored pile per column.

$$\text{Pile Capacity} = 0.35 \times 45 \times \pi \times \left(\frac{1500}{2}\right)^2 = 27832kN > 15940kN$$

$$\text{Bearing Capacity} = 5000kPa \times \pi \times \left(\frac{1500}{2}\right)^2 = 8835kN$$

Assume 3m rock shaft in Grade III Rock

$$\text{Rock Shaft Capacity} = 700kPa \times \pi \times (1500 - 300) \times 3 = 7917kN$$

$$\text{Total Capacity} = 8835 + 7917 = 16752kN > 15940kN$$

Socket-H Pile Scheme

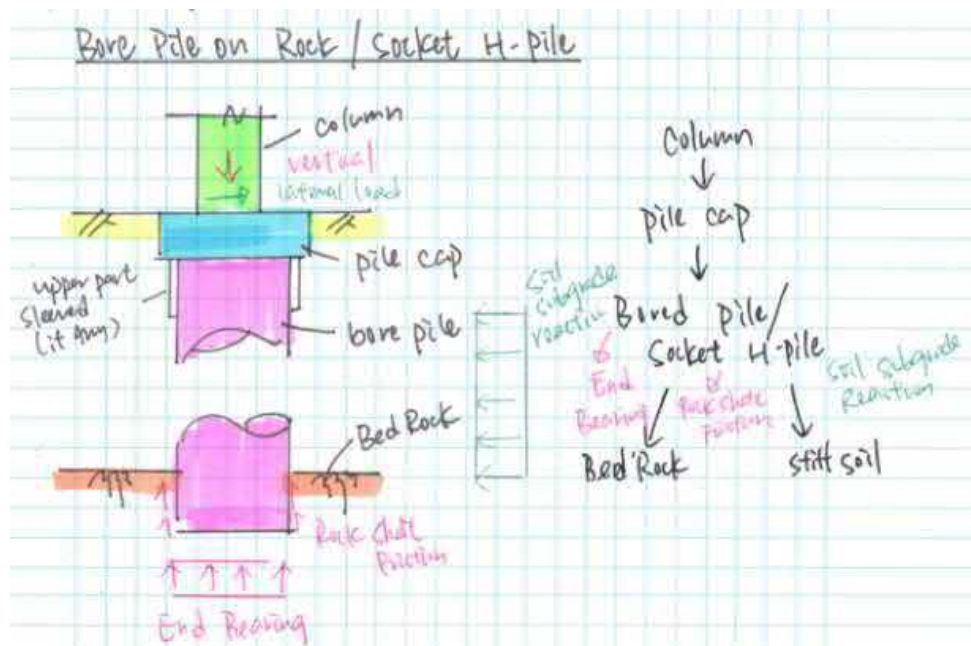
For 305x305x223UB socket-H pile with 5.5m socket length

$$\text{Shaft Friction Capacity} = 700\text{kPa} \times \pi \times 0.56 = 6158\text{kN}$$

$$\text{Steel Capacity} = 0.5 \times 415 \times 28400 = 6106\text{kN}$$

$$\text{Nos. of Socket - H Pile Capacity} = 3 \times 6106 = 18318\text{kN} > 15940\text{kN}$$

3.3 Load Transfer Mechanism



Gravity Load Resisting System

The gravity loading and internal forces of column/shear walls due to wind loads from the superstructure are transferred to the pile cap and piles underneath. And further transfer to the bed rock via end bearing and rock shaft friction.

Lateral Load Resisting System

The lateral forces acting on the pile cap will be resisted by the passive soil reaction between the piles and the soil.

3.4 Effect to Adjacent Nullah

Since the new proposed development is sit on piling foundation, there is neglectable effect to the existing structure and foundation. While during the construction, a monitoring system is proposed in the foundation plan to gauge the effect on the adjacent structures and nullah throughout the entire site works.

4 MONITORING INSTRUMENTATION

Precautionary measures such as standpipe piezometer, tilting check points, ground settlement check points, vibration check points etc. will be provided when necessary in order not to impose any adverse effect on the existing structures.

Three levels of control criteria, alert, alarm, and action levels are established for monitoring during the course of foundation and ELS works (ELS works under separate submission). The following will be implemented should the control level be reached:

- Alert level – The frequency of monitoring and / or monitoring stations needs to be increased.
- Alarm level – Design assumptions are to be reviewed and amendment submission may be required.
- Action level – Relevant works need to be suspended, backfill the site to safe level where necessary. Works can only be resumed when the migration have been approved.

5 CONCLUSION

With the consideration of existing GI records and proposed building layout, piling works is recommended. Both bored pile and socket-H pile scheme are geotechnically and structurally feasible and would not cause any adverse effect on the adjacent structures, buildings and nullah. The proposed piling foundation are designed to take assumed vertical and lateral loads from the superstructure.

Monitoring of the adjacent structures at the specified frequency on the design drawings will be carried out to forewarn of any undue movement occurring outside the site

Appendix A – Adjacent GI Record



Gammon Construction Limited
Geotechnical Contracting Department

DRILLHOLE No.
TS200/DH/168

SHEET 1 of 6

DRILLHOLE RECORD

PROJECT KCRC West Rail TS-200 Western Section, Phase 3 Ground Investigation

METHOD IP + WB + RC

CO-ORDINATES

CONTRACT No. TS-200

MACHINE & No. Toho (D2)

E 817545.47

N 833607.46

DATE from 12/03/1998 to 19/03/1998

FLUSHING MEDIUM Water

ORIENTATION Vertical

GROUND LEVEL 5.60 mPD

Drilling Progress	Casing depth/size	Water Depth (m)	TCR %	SCR %	ROD %	FI	Tests	Samples			Reduced Level	Depth (m)	Legend	Grade	Description
								No.	Type	Depth					
12/03/98	PX							A	≡	0.50					Firm, brown sandy SILT with some to many angular to subangular medium to coarse gravel sized moderately weak rock fragments (FILL).
12/03/98								B	≡	1.00	4.60	1.00			Brown, sandy silty angular coarse GRAVEL sized moderately weak rock fragments (FILL).
13/02/98								C	≡	1.50	4.10	1.50			Firm, brown sandy silty CLAY (FILL).
							1,1 2,1,1,2 N=5	D	□	2.00	3.60	2.00			Soft, yellowish brown and light grey clayey very sandy SILT with occasional organic matter (FILL/ALLUVIUM?).
								2	≡	2.45					
								3	▨	3.00	2.60	3.00			Firm, yellowish brown and light grey, mottled light pink clayey very sandy SILT (ALLUVIUM).
								4	▨	3.45					
							4,5 4,3,3,4 N=14	5	□	4.00					
								6	≡	4.45					
								7	▨	5.00	0.60	5.00			Medium dense, reddish brown clayey silty fine coarse SAND with zone subangular fine to medium quartz gravel (ALLUVIUM).
								8	▨	5.45					
							3,4 5,5,5,6 N=21	9	□	6.00					6.00-7.00m: Purplish brown in colour.
								10	≡	6.45					
								11	▨	7.00	-1.40	7.00			Yellowish brown, silty sandy angular to subangular medium to coarse quartz GRAVEL (ALLUVIUM).
								12	▨	7.45					
								13	□	8.00	-2.40	8.00			Extremely weak, yellowish brown completely decomposed fine ash TUFF (Very stiff, slightly sandy SILT).
							3,5 6,11,9,11 N=37	14	≡	8.45					
								15	▨	9.00					9.00-11.00m: Brown in colour.
								16	▨	9.45					

Small disturbed sample

Large disturbed sample

SPT liner sample

U76 undisturbed sample

U100 undisturbed sample

Mazier sample

Piston sample

Water sample

Piezometer tip

Standard penetration test

Pressuremeter Test

Permeability test

Impression packer test

In-situ vane shear test

LOGGED J Lau
DATE 20/03/1998
CHECKED B Shepstone
DATE 20/03/1998

REMARKS
1. Insoection pit excavated to 2.00m depth.
2. Piezometer installed at 2.00 m depth.
3. Core loss in core run from 50.40m - 51.25m assumed to be grade V/IV fine ash tuff.
4. NA - Not applicable.



Gammon Construction Limited
Geotechnical Contracting Department

DRILLHOLE No.
TS200/DH/168
SHEET 2 of 6

DRILLHOLE RECORD

PROJECT **KCRC West Rail TS-200 Western Section, Phase 3 Ground Investigation**

METHOD **IP + WB + RC**

CO-ORDINATES

CONTRACT No. **TS-200**

MACHINE & No. **Toho (D2)**

E **817545.47**
N **833607.46**

DATE from **12/03/1998** to **19/03/1998**

FLUSHING MEDIUM **Water**

ORIENTATION **Vertical**

GROUND LEVEL **5.60 mPD**

Drilling Progress	Casing depth/size (m)	Water Depth (m)	TCR %	SCR %	ROD %	FI	Tests	Samples No. Type Depth	Reduced Level -4.40	Depth (m) 10.00	Legend	Grade	Description
							2,2 3,2,3,5 N=13	17 10.00 18 10.45					As sheet 1 of 6. 10.00-11.00m: Firm.
			100					19 11.00	-5.40	11.00	V/IV		Very weak, grey completely to highly decomposed fine ash TUFF (Sandy silty angular to subangular fine to coarse GRAVEL sized with rock fragments).
							4,6 8,10,11,13 N=42	20 12.10 21 12.55	-6.50	12.10	V		Extremely weak, brown completely decomposed fine ash TUFF (Very stiff slightly clayey SILT).
			100					23 13.00					
							4,6 6,7,10,12 N=35	24 14.10 25 14.55					14.10-15.00m: With occasional subangular fine to medium gravel sized moderately weak rock fragments.
			100					27 15.00					
13/02/98 -14/03/98	1.30						6,7 14,20,29,32 N=95	28 16.10 29 16.55					16.10-17.00m: Slightly sandy.
			100					31 17.00	-11.40	17.00	V/IV		Very weak, grey completely to highly decomposed fine ash TUFF (Sandy silty angular to subangular fine to coarse GRAVEL sized moderately weak rock fragments).
	PX 18.10 HX						6,16 20,16,17,23 N=76	32 18.10 33 18.55	-12.50	18.10	V		Extremely weak, brown completely decomposed fine ash TUFF (Very stiff, slightly clayey SILT)
			100					35 19.00					

Small disturbed sample

Large disturbed sample

SPT liner sample

U76 undisturbed sample

U100 undisturbed sample

Mazier sample

Piston sample

Water sample

Piezometer tip

Standard penetration test

Pressuremeter Test

Permeability test

Impression packer test

In-situ vane shear test

LOGGED J Lau
DATE 20/03/1998
CHECKED B Shepstone
DATE 20/03/1998

REMARKS



Gammon Construction Limited

Geotechnical Contracting Department

DRILLHOLE No.
TS200/DH/168

SHEET 3 of 6

DRILLHOLE RECORD

PROJECT KCR West Rail TS-200 Western Section, Phase 3 Ground Investigation

METHOD IP+WB+RC

CO-ORDINATES

CONTRACT No. TS-200

MACHINE & No. Toho (D2)

E 817545.47
N 833607.46

DATE from 12/03/1998 to 19/03/1998

FLUSHING MEDIUM Water

ORIENTATION Vertical

GROUND LEVEL 5.60 mPD

Drilling Progress	Casing depth/size	Water Depth (m)	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
							11,15 16,32,45,60 N=153	36 20.10 37 20.55	-14.40	20.00			As sheet 2 of 6.
			100				13,23 24,28,32,40 N=124	38 21.00 39 22.10 40 22.55	-15.40	21.00		V	Extremely weak, brown completely decomposed fine ash TUFF (Very stiff, slightly clayey sandy SILT).
			100				23,75 88,112/75mm N=200/150mm	41 23.00 42 24.10 43 24.40					
			100				6,9 11,23,33,40 N=107	44 25.00 45 26.10 46 26.55					26.00-27.00m: With some angular to subangular fine to medium gravel sized moderately weak rock fragments.
			100				21,179/75mm N=179/75mm	47 27.00 48 28.10 49 28.25 50 28.40	-21.40	27.00		V/V	Extremely weak to very weak, greyish brown completely to highly decomposed fine ash TUFF (Silty sandy angular to subangular fine to coarse GRAVEL sized moderately weak rock fragments).
14/03/98 16/03/98		1.60	100					51 29.00 52 29.00 53 29.00 54 29.00 55 29.00	-23.40	29.00		V	Extremely weak, light brownish green completely decomposed fine ash TUFF (Very stiff, clayey SILT).

- * Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- Piston sample
- Water sample
- Piezometer tip
- Standard penetration test
- Pressuremeter Test
- Permeability test
- Impression packer test
- In-situ vane shear test

LOGGED J Lau
DATE 20/03/1998
CHECKED B Shepstone
DATE 20/03/1998

REMARKS



Gammon Construction Limited
Geotechnical Contracting Department

DRILLHOLE No.
TS200/DH/168

SHEET 4 of 6

DRILLHOLE RECORD

PROJECT **KCRC West Rail TS-200 Western Section, Phase 3 Ground Investigation**

METHOD **IP + WB + RC**

CO-ORDINATES

CONTRACT No. **TS-200**

MACHINE & No. **Toho (D2)**

E **817545.47**

DATE from **12/03/1998** to **19/03/1998**

N **833607.46**

FLUSHING MEDIUM **Water**

ORIENTATION **Vertical**

GROUND LEVEL **5.60 mPD**

Drilling Progress	Casing depth/size	Water Depth (m)	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
							70,130/75mm N = 130/75mm	56 30.10 57 30.25	-24.40	30.00			As sheet 3 of 6.
			100					58 31.00	-25.40	31.00		V/IV	Very weak, yellowish brown completely to highly decomposed fine ash TUFF (Silty sandy angular to subangular fine to coarse GRAVEL sized moderately weak rock fragments).
							60,140/75mm N = 140/75mm	59 32.10 60 32.25 61 32.25	-26.50	32.10		V	Extremely weak, light brown completely decomposed fine ash TUFF (Very stiff, slightly sandy clayey SILT).
			85					62 33.00					
							7,16 24,32,56,72 N = 184	63 34.10 64 34.10 65 34.55					
							8,12 26,34,68,72 N = 200	66 36.00 67 36.45					
							6,15 18,43,52,75 N = 188	68 38.00 69 38.45					38.00-39.00m: Greyish green in colour.

16/03/98

- | | |
|--------------------------|-----------------------------|
| * Small disturbed sample | △ Water sample |
| Large disturbed sample | □ Piezometer tip |
| SPT liner sample | ↓ Standard penetration test |
| U76 undisturbed sample | ⊥ Pressuremeter Test |
| U100 undisturbed sample | ⊥ Permeability test |
| Mazier sample | ⊥ Impression packer test |
| Piston sample | ∇ In-situ vane shear test |

LOGGED J Lau
DATE 20/03/1998
CHECKED B Shepstone
DATE 20/03/1998

REMARKS



Gammon Construction Limited
Geotechnical Contracting Department

DRILLHOLE No.
TS200/DH/168
SHEET 5 of 6

DRILLHOLE RECORD

PROJECT KCRC West Rail TS-200 Western Section, Phase 3 Ground Investigation		
METHOD IP+WB+RC	CO-ORDINATES E 817545.47 N 833607.46	CONTRACT No. TS-200
MACHINE & No. Toho (D2)		DATE from 12/03/1998 to 19/03/1998
FLUSHING MEDIUM Water	ORIENTATION Vertical	GROUND LEVEL 5.60 mPD

Drilling Progress	Casing depth/size	Water Depth (m)	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
17/03/98		2.00					5.7 26,174/50mm N=200/125mm	70 40.00 71 40.28					As sheet 4 of 6.
							9.9 12,20,20,50 N=102	72 42.00 73 42.45					
							6.12 200/75mm N=200/75mm	74 44.00 75 44.25	-38.40	44.00		V	Extremely weak, brownish grey completely decomposed fine ash TUFF (Very stiff, clayey SILT with some subangular fine to medium gravel sized moderately weak rock fragments).
							112,88/25mm N=88/25mm	76 46.00 46.10	-40.40	46.00		V/IV	Very weak, grey completely to highly decomposed fine ash TUFF (Angular to subangular medium to coarse GRAVEL sized moderately weak rock fragments).
	HX 47.07		100	66	51	>20 10.0		47.07	-41.47	47.07		IV/III	Moderately weak to moderately strong, grey highly to moderately decomposed fine ash TUFF with closely spaced, smooth and rough, planar, clean joints, dipping at 40°-60°. 47.07-47.20m: Highly fractured.
17/03/98 18/03/98		2.00	100	64	56	6.0		48.15	-42.80	48.40		III	Moderately strong, grey moderately decomposed fine ash TUFF with closely spaced, smooth and rough, planar, calcite coated, occasionally iron stained joints, dipping at 50°-70° and with some voids (1-6 cm).
			93	86	80			49.17					
<p>Small disturbed sample Water sample Large disturbed sample Piezometer tip SPT liner sample Standard penetration test U76 undisturbed sample Pressuremeter Test U100 undisturbed sample Permeability test Mazier sample Impression packer test Piston sample In-situ vane shear test</p>								LOGGED <u>J Lau</u> DATE <u>20/03/1998</u> CHECKED <u>B Shepstone</u> DATE <u>20/03/1998</u>		REMARKS			



Gammon Construction Limited
Geotechnical Contracting Department

DRILLHOLE No.
TS200/DH/168
SHEET 6 of 6

DRILLHOLE RECORD

PROJECT **KCRC West Rail TS-200 Western Section, Phase 3 Ground Investigation**

METHOD **IP + WB + RC**

CO-ORDINATES

CONTRACT No. **TS-200**

MACHINE & No. **Toho (D2)**

E **817545.47**
N **833607.46**

DATE from **12/03/1998** to **19/03/1998**

FLUSHING MEDIUM **Water**

ORIENTATION **Vertical**

GROUND LEVEL **5.60 mPD**

Drilling Progress	Casing depth/size	Water Depth (m)	TCR %	SCR %	RQD %	FI	Tests	Samples			Reduced Level	Depth (m)	Legend	Grade	Description
								No.	Type	Depth					
															As sheet 4 of 6.
			67	0	0	NA NI NR		T2IOI	50.40	-44.80 -44.94 -45.08	50.40 50.54 50.68		V/IV III V/IV		Extremely weak to very weak, grey, spotted brown completely to highly decomposed fine ash TUFF (Sandy silty angular to subangular fine to coarse GRAVEL sized rock fragments). 50.54-50.68m: Quartz vein. Non intact. 50.68-50.96m: Inferred to be grade V/IV fine ash tuff. Moderately weak to moderately strong, grey highly to moderately decomposed fine ash TUFF with closely spaced, smooth, planar, iron stained joints, dipping at 30°-40° and 60°-70° Strong, grey, locally spotted and dappled white slightly decomposed fine ash TUFF with medium spaced, smooth, planar, calcite coated, occasionally clean joints, dipping at 60°-70°.
						6.9		T2IOI	51.25	-45.36 -45.65	50.96 51.25		IV/III		
			100	96	96	4.1		T2IOI	52.33				II		
			99	95	95			T2IOI	53.87						
			100	87	87	1.9		T2IOI	55.37						
			100	100	100			T2IOI	56.28	-50.68	56.28		V/IV		
18/03/98															End of Investigation hole at 56.28m.
19/03/98	2.00		100	100	100										
19/03/98															

	Small disturbed sample		Water sample
	Large disturbed sample		Piezometer tip
	SPT liner sample		Standard penetration test
	U76 undisturbed sample		Pressuremeter Test
	U100 undisturbed sample		Permeability test
	Mazier sample		Impression packer test
	Piston sample		In-situ vane shear test

LOGGED	J Lau
DATE	20/03/1998
CHECKED	B Shepstone
DATE	20/03/1998

REMARKS

CLIENT: KOWLOON CANTON RAILWAY CORPORATION

CONTRACTOR: GAMMON CONSTRUCTION LTD.

PROJECT: K C R C WEST RAIL TS200 WESTERN SECTION,
PHASE 3 GROUND INVESTIGATION

HOLE NO. TS200/DH/168

BOX 1 OF 4

DEPTH: 0.00 m. TO 47.07 m.



0.0M

0.5M

1M



CLIENT: KOWLOON CANTON RAILWAY CORPORATION

CONTRACTOR: GAMMON CONSTRUCTION LTD.

PROJECT: K C R C WEST RAIL TS200 WESTERN SECTION,
PHASE 3 GROUND INVESTIGATION

HOLE NO. TS200/DH/168

BOX 2 OF 4

DEPTH: 47.07 m. TO 50.40 m.



0.M

0.5M

1M

47.07

48.15

49.17

50.40

CLIENT: KOWLOON CANTON RAILWAY CORPORATION

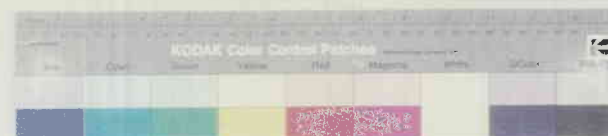
CONTRACTOR: GAMMON CONSTRUCTION LTD.

PROJECT: K C R C WEST RAIL TS200 WESTERN SECTION,
PHASE 3 GROUND INVESTIGATION

HOLE NO. TS200/DH/168

BOX 3 OF 4

DEPTH: 50.40 m. TO 53.87 m.



0.M

0.5M

1M

50.40

No RECOVERY
0.23m

51.25

52.33

53.87

CLIENT: KOWLOON CANTON RAILWAY CORPORATION

CONTRACTOR: GAMMON CONSTRUCTION LTD.

PROJECT: K C R C WEST RAIL TS200 WESTERN SECTION,
PHASE 3 GROUND INVESTIGATION

HOLE NO. TS200/DH/168

BOX 4 OF 4

DEPTH: 53.87 m. TO 56.28 m.



0.M | | | 0.5M | | | 1M

53.87



55.37



56.28
END





FUGRO
GEOTECHNICAL
SERVICES LTD

DRILLHOLE RECORD

HOLE No.

BH2A

CONTRACT No.: GE/2008/04

SHEET:

1

of

5

PROJECT: PWP Item No. 7811TH, Ping Ha Road Improvement - Remaining Works (Ha Tsuen Section)

METHOD: Rotary Drilling

CO-ORDINATES:

WORKS ORDER No. GE/2008/04.4

MACHINE & No.: FDR-12

E 817690.40

N 834103.84

DATE from: 18/10/2008 to 27/10/2008

FLUSHING MEDIUM: Water

ORIENTATION: Vertical

GROUND LEVEL + 6.50 mPD

Drilling Progress	Casing depth/size	Water Level (m) Shift start/end	Water Return %	TCR %	SCR %	RQD %	FI	Tests	Samples			Reduced Level	Depth (m)	Legend	Grade	Description
									No.	Type	Depth					
18/10/2008	SW											6.50	0.00			Firm to stiff, yellowish brown (10YR/5/6), sandy clayey SILT with occasional angular, medium gravel of strong granite. (FILL)
1									1	*	0.85					
									2	*	0.85					
									3	*	1.55					
19/2008												4.50	2.00			Firm, greyish brown (10YR/5/2), mottled grey and red, sandy clayey SILT with occasional angular, coarse gravel of weak phyllite. (FILL)
22/10/2008									4	*	1.95					
3									5	*	2.00					
									6	*	3.00					
									7	*	3.10					
4									8	*	3.20					
									9	*	3.50					
									10	*	4.00					
5									11	*	4.45	2.00	4.50			Firm, olive (5Y/5/3), sandy clayey SILT. (ALLUVIUM)
									12	*	4.60					
									13	*	4.85					
6									14	*	6.00	0.50	6.00			Light grey (10R/7/1), silty, fine SAND. (ALLUVIUM)
									15	*	7.00					
									16	*	7.10					
7									17	*	7.20	-0.60	7.10			Soft, light grey (10R/7/1), mottled red and yellowish brown, sandy clayey SILT. (ALLUVIUM)
									18	*	7.50					
									19	*	8.00	-1.50	8.00			Soft to firm, light yellowish brown (2.5Y/6/4), mottled red, slightly sandy, silty CLAY with occasional subrounded to rounded, moderately strong quartz. (ALLUVIUM)
8	SW 8.00								20	*	9.00					
	PW								21	*	9.10					
									22	*	9.20					
9									23	*	9.50					
									24	*	9.85					
									25	*	10.00					
10									26	*	10.00	-3.50	10.00			
<div><div><div>Small Disturbed Sample</div><div>Piston sample</div><div>U76 Undisturbed Sample</div><div>U100 Undisturbed Sample</div><div>Mazier Sample</div><div>SPT Liner Sample</div><div>Water Sample</div></div><div><div>Standard Penetration Test</div><div>In-situ Vane Shear Test</div><div>Permeability Test</div><div>Optical Borehole Televiwer</div><div>Packer Test</div><div>Piezometer Tip</div><div>Standpipe</div></div></div> <div>LOGGED <u>W.P. Wu</u> DATE <u>28/10/2008</u> CHECKED <u>A.B. Hollinshead</u> DATE <u>31/10/2008</u></div> <div>REMARKS 1. Inspection pit was excavated to depth of 2.00m. 2. Piezometers were installed at 7.00m and 43.80m below existing ground level on 27/10/2008. 3. Halcrow buckets were installed from 0.50m to 4.00m at 0.50m intervals in the Upper and Lower piezometer.</div>																

		DRILLHOLE RECORD		HOLE No. BH2A	
		CONTRACT No.: GE/2008/04		SHEET: 2 of 5	

PROJECT: PWP Item No. 7811TH, Ping Ha Road Improvement - Remaining Works (Ha Tsuen Section)

METHOD: Rotary Drilling		CO-ORDINATES:		WORKS ORDER No. GE/2008/04.4	
MACHINE & No.: FDR-12		E 817690.40 N 834103.84		DATE from: 18/10/2008 to 27/10/2008	
FLUSHING MEDIUM: Water		ORIENTATION: Vertical		GROUND LEVEL + 6.50 mPD	

Drilling Progress	Casing depth/size	Water Level (m) Shift start/end	Water Return %	TCR %	SCR %	RQD %	FI	Tests	Samples			Reduced Level	Depth (m)	Legend	Grade	Description
									No.	Type	Depth					
11				85				1, 1, 2, 3, 4, 4 N=13	21	↓	10.00	-3.50	10.00			Medium dense, light yellowish brown (2.5Y/6/4), silty, fine SAND with occasional pieces of clayey silt. (ALLUVIUM)
									22	↓	11.00					
									23	↓	11.10					
									24	↓	11.20					
12				60					25	↓	11.50	-5.50	12.00			Firm, pale brown (10YR/6/3), dappled light purple, slightly clayey SILT. (ALLUVIUM)
									26	↓	12.00					
									27	↓	13.00					
									28	↓	13.10					
13				100					29	↓	14.10					Firm to stiff, light brown (7.5YR/6/3), dappled black and yellowish brown, clayey SILT with occasional rounded, medium gravel of moderately strong silica fragments. (ALLUVIUM)
									30	↓	14.20					
									31	↓	14.30					
									32	↓	14.80					
14				70				2, 2, 3, 5, 9, 13 N=30	33	↓	15.10	-8.60	15.10			
									34	↓	16.10					
									35	↓	16.20					
									36	↓	17.20					
15				85					37	↓	17.30					
									38	↓	17.40					
									39	↓	17.70					
									40	↓	18.20					
16				50				1, 2, 3, 3, 4, 6 N=16	41	↓	19.20					
									42	↓	19.30					
									43	↓	19.30					
									44	↓	19.30					
17				50					45	↓	20.00	-13.50	20.00			

0.85m at 18:00
22/10/2008

4.55m at 08:00
23/10/2008

LOGGED W.P. Yip

DATE 28/10/2008

CHECKED A.B. Hollinshead

DATE 31/10/2008

REMARKS

↓ Small Disturbed Sample	↓ Standard Penetration Test
▨ Piston sample	↓ In-situ Vane Shear Test
▩ U76 Undisturbed Sample	↓ Permeability Test
▩ U100 Undisturbed Sample	⋮ Optical Borehole Televiwer
▨ Mazier Sample	⋮ Packer Test
▨ SPT Liner Sample	⬆ Piezometer Tip
▲ Water Sample	⬆ Standpipe



**FUGRO
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DRILLHOLE RECORD

HOLE No. **BH2A**

CONTRACT No.: **GE/2008/04**

SHEET: **3** of **5**

PROJECT: **PWP Item No. 7811TH, Ping Ha Road Improvement - Remaining Works (Ha Tsuen Section)**

METHOD: **Rotary Drilling**

CO-ORDINATES:

WORKS ORDER No. **GE/2008/04.4**

MACHINE & No.: **FDR-12**

E **817690.40**
N **834103.84**

DATE from: **18/10/2008** to **27/10/2008**

FLUSHING MEDIUM: **Water**

ORIENTATION: **Vertical**

GROUND LEVEL **+ 6.50** mPD

Drilling Progress	Casing depth/size	Water Level (m) Shift start/end	Water Return %	TCR %	SCR %	RQD %	F I	Tests	Samples No. Type Depth	Reduced Level -13.50	Depth (m) 20.00	Legend	Grade	Description
21								2, 3, 6, 6, 8, 12 N=32	40 20.30 41 20.40 42 20.50					As sheet 2 of 5.
22				100					43 21.30	-14.80	21.30		V	Extremely weak, light yellowish brown (2.5Y/6/4), completely decomposed METASILTSTONE. (Very stiff, clayey SILT)
23								9, 15, 20, 28, 30, 22 / 35mm 100 bls / 260mm	44 22.30 45 22.40 46 22.50					
24				100					47 23.30	-16.80	23.30		V	Extremely weak, light purple (5R/7/2), striped, yellowish brown, completely decomposed METASILTSTONE. (Very stiff, clayey SILT)
25	PW 24.40 HW							9, 9, 15, 23, 42, 20 / 15mm 100 bls / 240mm	48 24.30 49 24.40 50 24.50					
26				100					51 25.30	-18.80	25.30		V	Extremely weak, light yellowish brown (2.5Y/6/4), dappled grey, completely decomposed METASILTSTONE. (Firm to stiff, clayey SILT)
27								1, 2, 3, 5, 8, 8 N=24	52 26.30 53 26.40 54 26.50					
28				80					55 27.30					
29								9, 9, 10, 10, 12, 14 N=46	56 28.30 57 28.40 58 28.50					
30		0.80m at 18:00 23/10/2008 4.60m at 08:00 24/10/2008		80					59 29.30	-23.50	30.00			

- | | |
|-------------------------|----------------------------|
| Small Disturbed Sample | Standard Penetration Test |
| Piston sample | In-situ Vane Shear Test |
| U76 Undisturbed Sample | Permeability Test |
| U100 Undisturbed Sample | Optical Borehole Televiwer |
| Mazier Sample | Packer Test |
| SPT Liner Sample | Piezometer Tip |
| Water Sample | Standpipe |

LOGGED W.P. [Signature]
DATE 28/10/2008
CHECKED A.B-Hollinshead [Signature]
DATE 31/10/2008

REMARKS

FUGRO GEOTECHNICAL SERVICES LTD		DRILLHOLE RECORD		HOLE No. BH2A	
		CONTRACT No.: GE/2008/04		SHEET: 4 of 5	

PROJECT: **PWP Item No. 7811TH, Ping Ha Road Improvement - Remaining Works (Ha Tsuen Section)**

METHOD: Rotary Drilling		CO-ORDINATES:		WORKS ORDER No. GE/2008/04.4	
MACHINE & No.: FDR-12		E 817690.40 N 834103.84		DATE from: 18/10/2008 to 27/10/2008	
FLUSHING MEDIUM: Water		ORIENTATION: Vertical		GROUND LEVEL + 6.50 mPD	

Drilling Progress	Casing depth/size	Water Level (m) Shift start/end	Water Return %	TCR %	SCR %	RQD %	FI	Tests	Samples		Reduced Level	Depth (m)	Legend	Grade	Description
									No.	Type					
31								7, 6, 10, 10, 10, 11 N=41	60 61 62	30.30 30.40 30.50	-23.50	30.00		V	As sheet 3 of 5.
32									63	31.30	-24.80	31.30		V	Extremely weak, greyish brown (10YR/5/2), completely decomposed METASILTSTONE. (Stiff, sandy SILT with some angular, coarse gravel)
33									64 65	32.30 32.40	-25.90	32.40		V	Extremely weak, olive grey (5Y/5/2), completely decomposed METASILTSTONE. (Very stiff, slightly clayey SILT)
34								15, 28, 45, 55 / 45mm 100 bls / 120mm	66 67 68	33.40 33.50 33.60					
35									69	34.40					
36								20, 30 / 20mm, 100 / 60mm 100 bls / 60mm	70 71	35.40 35.50					
37									72	36.40					
38								25, 25 / 15mm, 100 / 50mm 100 bls / 50mm	73 74	37.40 37.50					
39									75	38.40	-31.90	38.40		V	Extremely weak, brown (7.5YR/5/4), completely decomposed METASILTSTONE. (Silty, fine SAND)
40								4, 6, 15, 25, 28, 29 N=97	76 77 78	39.40 39.50 39.60	-33.00	39.50		V	Extremely weak, light grey (10R/7/1), completely decomposed METASILTSTONE. (Very stiff, clayey SILT)

Small Disturbed Sample	Standard Penetration Test
Piston sample	In-situ Vane Shear Test
U76 Undisturbed Sample	Permeability Test
U100 Undisturbed Sample	Optical Borehole Televierwer
Mazier Sample	Packer Test
SPT Liner Sample	Piezometer Tip
Water Sample	Standpipe

LOGGED W.P. Yu
 DATE 28/10/2008

CHECKED A.B. Hollinshead
 DATE 31/10/2008

REMARKS



FUGRO
GEOTECHNICAL
SERVICES LTD

DRILLHOLE RECORD

HOLE No. BH2A

CONTRACT No.: GE/2008/04

SHEET: 5 of 5

PROJECT: PWP Item No. 7811TH, Ping Ha Road Improvement - Remaining Works (Ha Tsuen Section)

METHOD: Rotary Drilling

CO-ORDINATES:

WORKS ORDER No. GE/2008/04.4

MACHINE & No.: FDR-12

E 817690.40

N 834103.84

DATE from: 18/10/2008 to 27/10/2008

FLUSHING MEDIUM: Water

ORIENTATION: Vertical

GROUND LEVEL + 6.50 mPD

Drilling Progress	Casing depth/size	Water Level (m) Shift start/end	Water Return %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level -33.50	Depth (m) 40.00	Legend	Grade	Description
24/10/2008 25/10/2008	0.75m at 18:00			100					79 40.40				V	As sheet 4 of 5.
41	4.55m at 08:00							12, 23, 55, 45 / 25mm 100 bis / 100mm	80 41.40 81 41.50 82 41.60					
42									83 42.40	-35.90	42.40		IV	Weak, grey, highly decomposed calcareous METASILTSTONE. (Recovered as angular, fine to coarse gravel)
43				90				50 / 40mm, 100 / 20mm 100 bis / 20mm	84 43.40 85 43.50					
44	HW 44.24		70	100	0	0			44.24 44.30	-37.74	44.24		II	Strong, grey, spotted white, slightly decomposed, calcareous METASILTSTONE with occasional marble and silica clasts (10mm - 30mm). Joints are very closely to closely spaced, rough planar, extremely narrow, iron stained, dipping at 25° - 35° and subvertical.
45			70	100	44	18	10.7		T2101 45.44					
46			70	100	79	56			T2101	-40.04	46.54		II	Strong, grey, slightly decomposed METASILTSTONE.
47							7.7		46.96	-40.50	47.00		II	Joints are closely spaced, smooth planar, extremely narrow, clean, dipping at 45° - 55°.
48			70	100	69	42			T2101	-41.70	48.20		II	Strong, grey, spotted white, slightly decomposed, tuffaceous METASILTSTONE. Joints are closely spaced, rough planar, extremely narrow, iron stained, dipping at 35° - 45°.
25/10/2008 27/10/2008	1.20m at 18:00								48.49					Strong, grey, slightly decomposed, fine ash TUFF.
49	4.30m at 08:00		70	100	32	0	19.4		T2101	-43.04	49.54			Joints are very closely to closely spaced, rough planar, extremely narrow, clean, locally kaolin and chlorite coated, dipping at 15° - 25° and 35° - 45°.
27/10/2008	0.90m at 12:00													End of investigation hole at 49.54m.
50														

- Small Disturbed Sample
- Piston sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample
- SPT Liner Sample
- Water Sample
- Standard Penetration Test
- In-situ Vane Shear Test
- Permeability Test
- Acoustic Borehole Televiwer
- Packer Test
- Piezometer Tip
- Standpipe

LOGGED W. R. Yu
DATE 28/10/2008
CHECKED A.B. Hollinshead
DATE 31/10/2008

REMARKS



CEDD Contract No.: GE/2008/04
Ground Investigation - New
Territories West (Term Contract)



Fugro Geotechnical Services Ltd.

Hole No. BH2A Box No.: 1 of 4

Works Order No.: GE/2008/04.4

Depth: 0.00 m. to 22.40 m.

Job Title:

Date of Photograph: 29/10/2008

PWP Item No. 7811TH
Ping Ha Road Improvement
- Remaining Works
(Ha Tsuen Section)



(1)

0.50

0.00





CEDD Contract No.: GE/2008/04
Ground Investigation - New
Territories West (Term Contract)



Fugro Geotechnical Services Ltd.

Hole No. BH2A Box No. : 2 of 4

Works Order No. : GE/2008/04.4 Depth : 22.40 m. to 44.30 m.

Job Title :

PWP Item No. 7811TH

Ping Ha Road Improvement
- Remaining Works
(Ha Tsuen Section)

Date of Photograph : 29/10/2008





CEDD Contract No.: GE/2008/04
Ground Investigation - New
Territories West (Term Contract)



Fugro Geotechnical Services Ltd.

Works Order No. : GE/2008/04. 4

Job Title :

PWP Item No. 7811TH
Ping Ha Road Improvement
- Remaining Works
(Ha Tsuen Section)

Hole No. BH2A Box No. : 3 of 4

Depth : 44.30 m. to 46.96 m.

Date of Photograph : 29/10/2008





CEDD Contract No.: GE/2008/04
Ground Investigation - New
Territories West (Term Contract)



Fugro Geotechnical Services Ltd.

Works Order No. : GE/2008/04. 4

Job Title :

PWP Item No. 7811TH

Ping Ha Road Improvement
- Remaining Works
(Ha Tsuen Section)

Hole No. BH2A Box No. : 4 of 4

Depth : 46.96 m. to 49.54 m.

Date of Photograph : 29/10/2008





FUGRO
GEOTECHNICAL
SERVICES LTD

PIEZOMETER DETAIL AND RESPONSE TEST RECORD SHEET

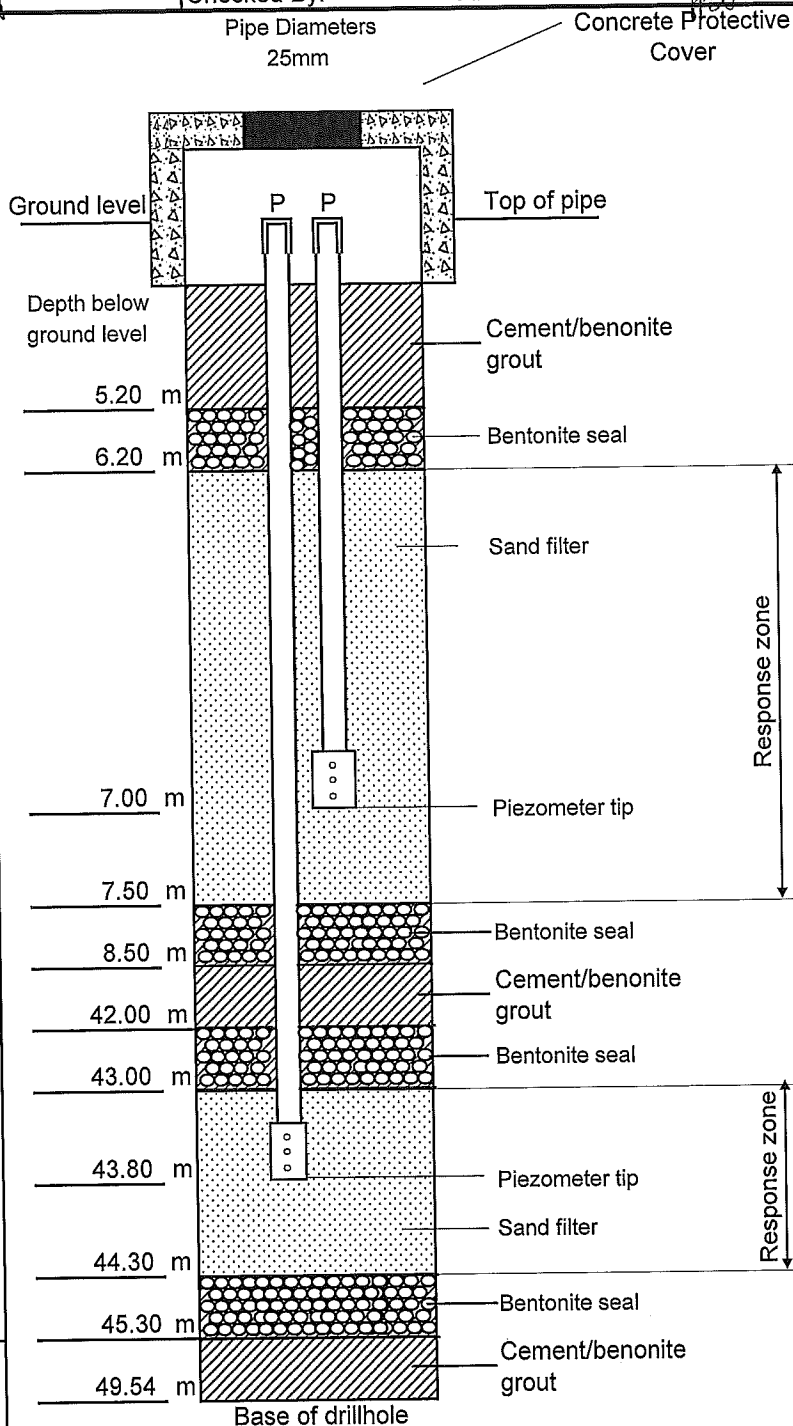
Contractor	Fugro Geotechnical Services Ltd	Drillhole No.:	BH2A (Upper)
Contract No.	GE/2008/4	Date of Test:	30/10/2008
W.O. No.	GE/2008/4.4	Ground Level:	+6.50 mP.D.
Project:	PWP Item No. 7811TH, Ping Ha Road Improvement - Remaining Works (Ha Tsuen Section)	Co-ordinates(m):	E 817690.40 N 834103.84
Initial Water Level:	3.57 m below G.L.	Piezometer Tip Level:	-0.50 mP.D.
Test/Supervised By:	K.C. Ng	Checked By:	A. Brock-Hollinshead

Elapsed Time	Depth of Water from top of pipe
(minutes)	(m)
0.00	0.00
0.25	0.47
0.50	0.85
0.75	1.18
1.00	1.55
1.50	2.08
2.00	2.33
3.00	2.85
4.00	3.14
5.00	3.30
6.00	3.39
7.00	3.45
8.00	3.48
9.00	3.50
10.00	3.51
15.00	3.54
20.00	3.56
25.00	3.57

Material Surrounding Response Zone:
6.20m to 7.10m: Silty SAND. (ALLUVIUM)
7.10m to 7.50m: Sandy clayey SILT.
(ALLUVIUM)

Remarks:

1. Halcrow buckets were installed from
0.50m to 4.00m at 0.50m intervals.



PIEZOMETER DETAIL AND RESPONSE TEST RECORD SHEET

Contractor	Fugro Geotechnical Services Ltd	Drillhole No.:	BH2A (Lower)
Contract No.	GE/2008/4	Date of Test:	30/10/2008
W.O. No.	GE/2008/4.4	Ground Level:	+6.50 mP.D.
Project:	PWP Item No. 7811TH, Ping Ha Road Improvement - Remaining Works (Ha Tsuen Section)	Co-ordinates(m): E 817690.40 N 834103.84	
Initial Water Level:	3.47 m below G.L.	Piezometer Tip Level:	-37.30 mP.D.
Test/Supervised By:	K.C. Ng	Checked By:	A. Brock-Hollinshead

[illegible]

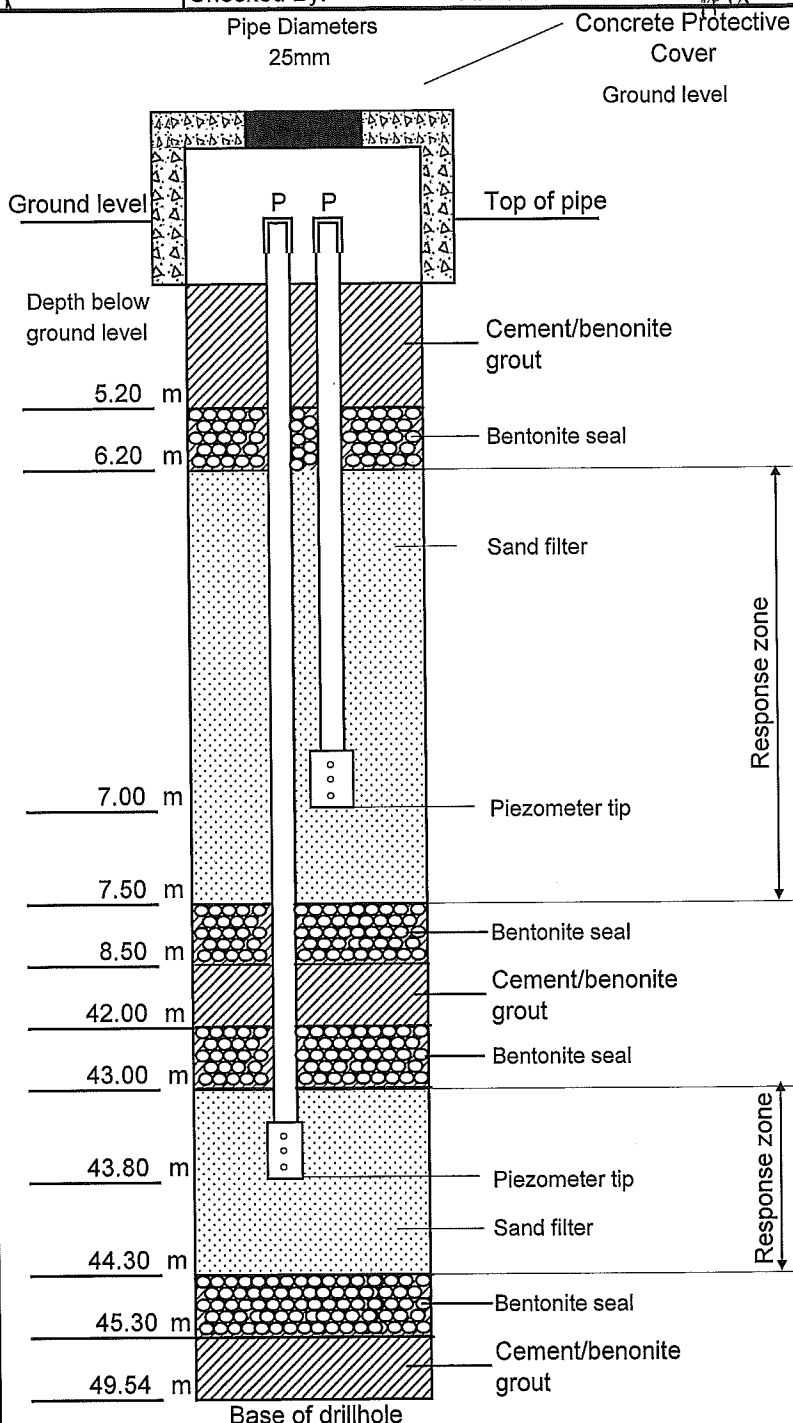
Material Surrounding Response Zone:

43.00m to 44.24m: Highly decomposed
METASILTSTONE

44.24m to 44.30m: Moderately decomposed
METASILTSTONE

Remarks:

1. Halcrow buckets were installed from 0.50m to 4.00m at 0.50m intervals.





Works Order No :	GE/2008/4.4
------------------	-------------

Contract No:	GE/2008/4	Works Order No :	GE/2008/4.4
Project :	PWP Item No. 7811TH, Ping Ha Road Improvement - Remaining Works (Ha Tsuen Section)		

Drillhole No.	BH2A
Piezometer No.	P (Upper)
Installation Date	27/10/2008
AGMD Level (mPD)	N/A
AGMD S/N	N/A
Logger S/N	N/A
Gauge Factor (psi/Digit)	N/A
Thermal Factor (psi/°C)	N/A
R_0 ($F^2 \times 10^{-3}$)	N/A
T_0 (°C)	N/A

Co-ordinates:

Easting	(m)	817690.40
Northing	(m)	834103.84


Season:


Wet	1 Apr to 31 Oct
Dry	1 Nov to 31 Mar

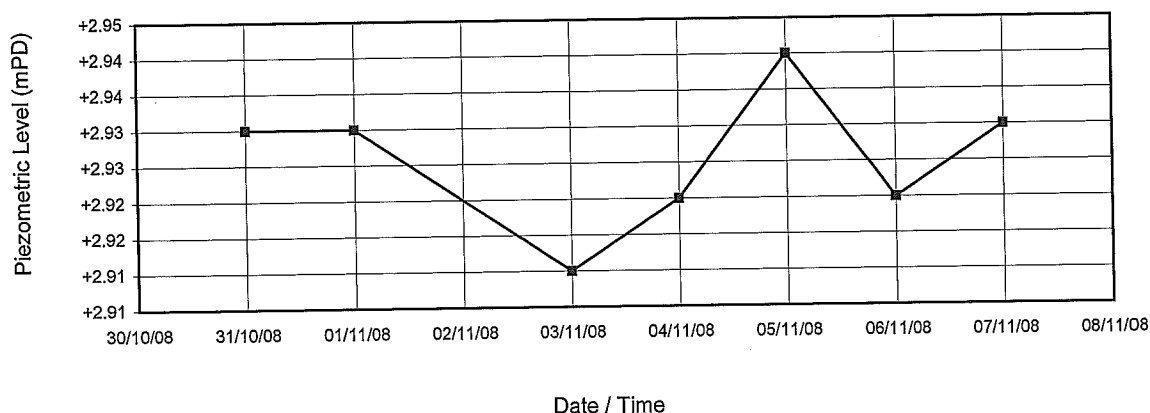
Standpipe Piezometer:

Top Level (mPD)	+6.50
Installed Tip Depth from Top Level (m)	7.00
Tip Level (mPD)	-0.50

Contractor: Fugro Geotechnical Services Ltd.


Logged By: K.C. Ng 

Checked By : S.M. Pyle 

[illegible]

* AGMD = Automatic groundwater monitoring device

Groundwater Level Record Sheet

 SERVICES LTD			
Contract No:	GE/2008/4	Works Order No :	GE/2008/4.4
Project :	PWP Item No. 7811TH, Ping Ha Road Improvement - Remaining Works (Ha Tsuen Section)		

Drillhole No.	BH2A
Piezometer No.	P (Lower)
Installation Date	27/10/2008
AGMD Level (mPD)	N/A
AGMD S/N	N/A
Logger S/N	N/A
Gauge Factor (psi/Digit)	N/A
Thermal Factor (psi/°C)	N/A
$R_0 (F^2 \times 10^{-3})$	N/A
$T_0 (°C)$	N/A

Co-ordinates:

Easting	(m)	817690.40
Northing	(m)	834103.84

Season:


Wet	1 Apr to 31 Oct
Dry	1 Nov to 31 Mar

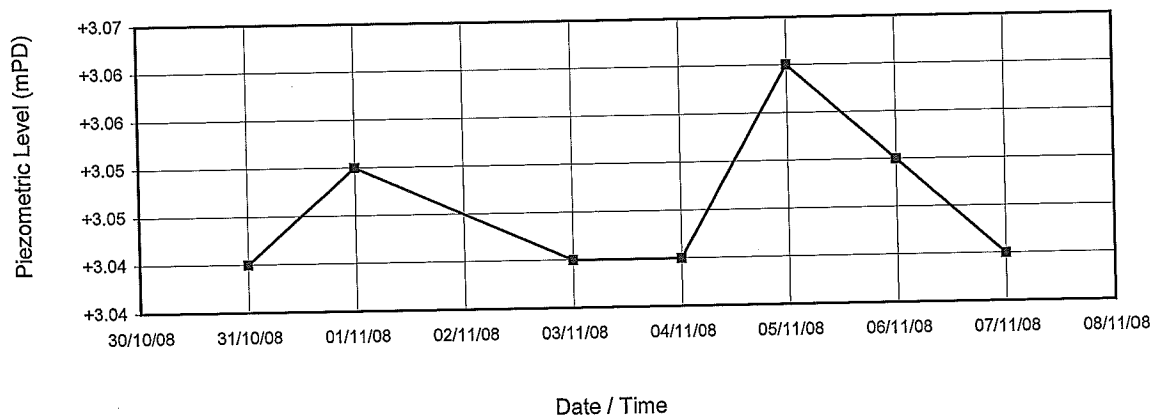
Standpipe Piezometer:

Top Level (mPD)	+6.50
Installed Tip Depth from Top Level (m)	43.80
Tip Level (mPD)	-37.30

Contractor: Fugro Geotechnical Services Ltd.

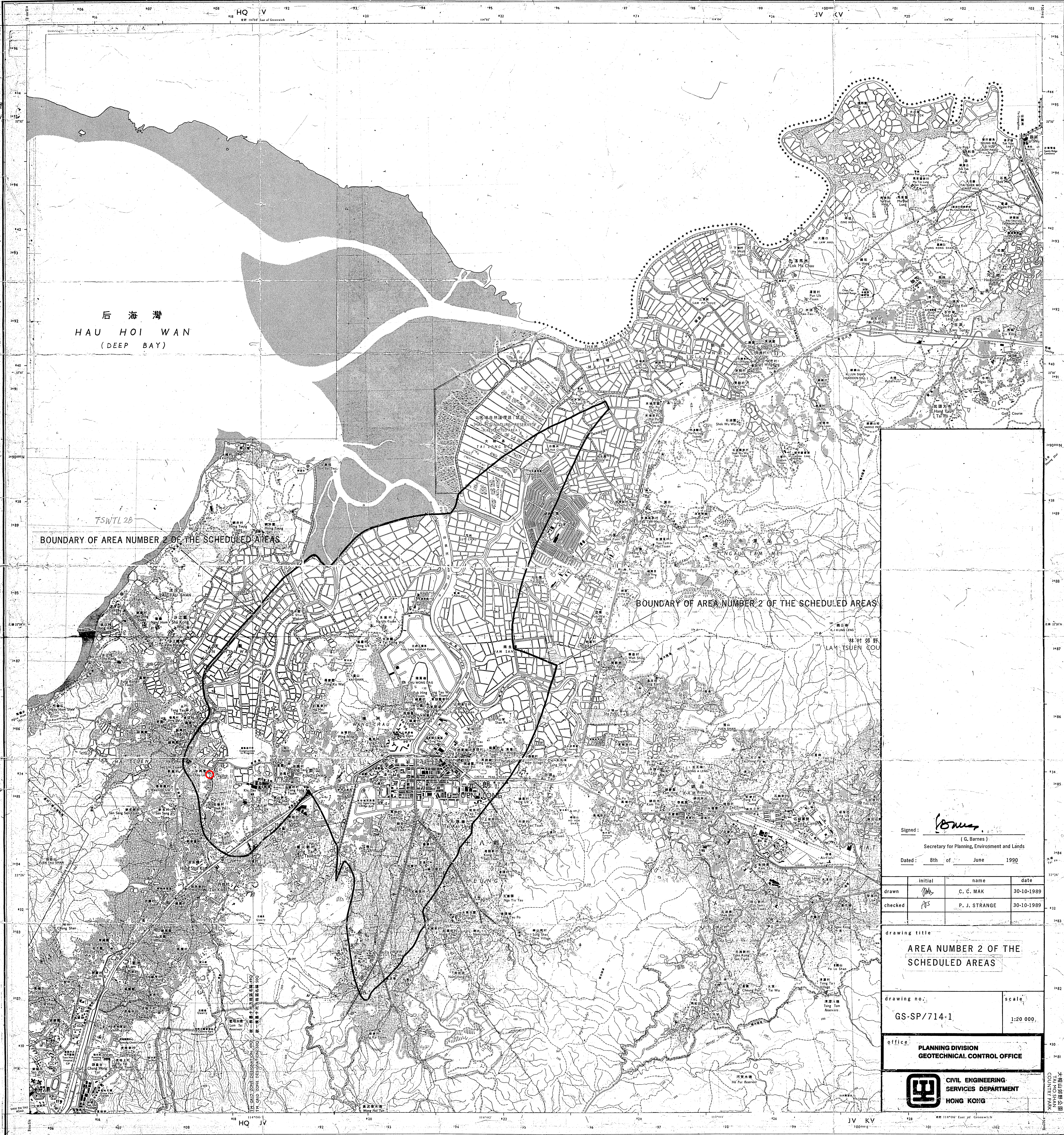
Logged By: K.C. Ng 

Checked By : S.M. Pyle 

[illegible]

* AGMD = Automatic groundwater monitoring device

Appendix B – Drawing of Schedule Area 2 (GS-SP/714-1)



Signed: *G. Barnes*
(G. Barnes)
Secretary for Planning, Environment and Lands
Dated: 8th of June 1990

	initial	name	date
drawn	<i>CM</i>	C. C. MAK	30-10-1989
checked	<i>PS</i>	P. J. STRANGE	30-10-1989

drawing title
AREA NUMBER 2 OF THE SCHEDULED AREAS

drawing no. **GS-SP/714-1** scale **1:20 000**

office **PLANNING DIVISION
GEOTECHNICAL CONTROL OFFICE**



**CIVIL ENGINEERING
SERVICES DEPARTMENT
HONG KONG**

大埔山頂公園
TAI PO SHAN
COUNTRY PARK

Appendix C – Preliminary Foundation Schemes



BORED PILE FOUNDATION PROPOSAL

600mm DIA. BORED PILE
1000x1000x1500dp PILE CAP

1000mm DIA. BORED PILE
1400x1400x1500dp PILE CAP

1500mm DIA. BORED PILE
2000x2000x1500dp PILE CAP

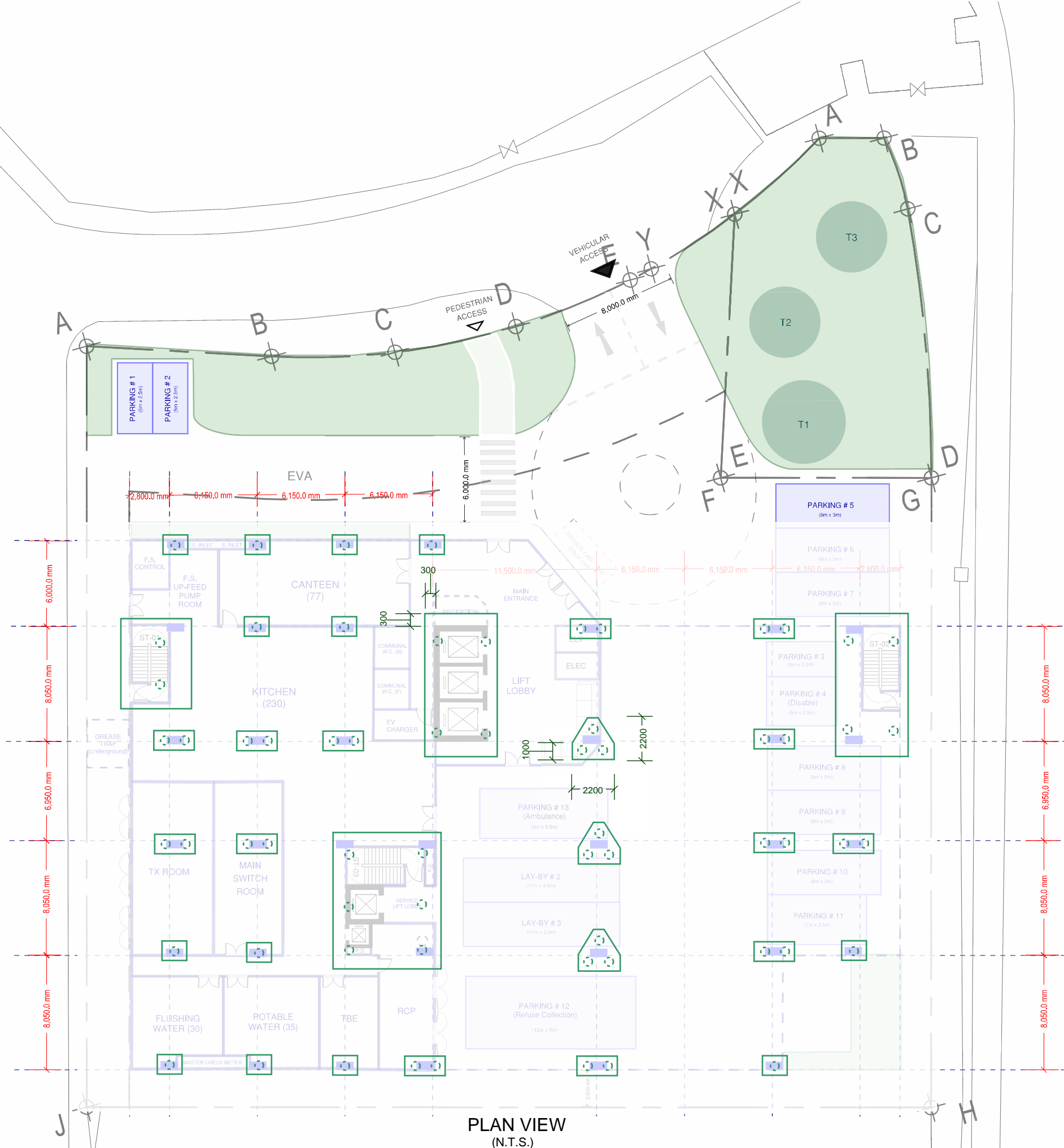
NOTE:

1. PILE CAP DEPTH TO BE 1500mm UON.
2. SOCKET LENGTH TO BE 3m.
3. TENTATIVE PILE FOUNDING LEVEL -41.7mPD.
4. PILE CAP TO BE TIED BY GROUND BEAM 1000x1000dp BOTH DIRECTIONS.
5. REINFORCEMENT QUANTITY OF PILE CAP AND GROUND BEAM TO BE 150kg/m3 AND 180kg/m3 RESPECTIVELY.

G/F

Scale 1:150 @ A3

Date : 31 OCT 2023



305x305x233UC SOCKET-H PILE

1400x1000x1500dp PILE CAP

2200x1000x1500dp PILE CAP

NOTE:

1. PILE CAP DEPTH TO BE 1500mm UNLESS OTHER STATED.
2. SOCKET LENGTH TO BE 5.5m.
3. TENTATIVE PILE FOUNDING LEVEL -44.2mPD.
4. PILE CAP TO BE TIED BY GROUND BEAM 1000x1000dp BOTH DIRECTIONS.
5. REINFORCEMENT QUANTITY OF PILE CAP AND GROUND BEAM TO BE 150kg/m3 AND 180kg/m3 RESPECTIVELY.

SOCKET-H PILE FOUNDATION PROPOSAL

G/F

Scale 1:150 @ A3
Date : 31 OCT 2023



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Appendix 8

Responses-to-Comments included in Previous Further Information Submissions

By Email and Hand

Our Ref: S3108/58SCLT/24/006Lg

10 September 2024

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

Dear Sir/Madam,

**Proposed Amendment to the Building Height Restriction of
the "Government, Institution or Community" Zone
for Permitted Social Welfare Facility
(Redevelopment of The Pok Oi Hospital Yeung Chun Pui
Care and Attention Home)
No.58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long, New Territories
(Planning Application No. Y/HSK/1)
- Further Information No. 1 -**

Reference is made to the captioned S12A Planning Application which is scheduled for consideration by the by the Town Planning Board ("TPB") on 20 September 2024 and the comments from various Government Departments received via emails from Tuen Mun and Yeun Long West District Planning Office during period from 29 August to 3 September 2024.

To address comments from the relevant Government Departments, further information ("FI") has been prepared. This FI submission consists of:

Responses-to-Comments Table

Annex A – Replacement Pages of Supporting Planning Statement

Annex B – Replacement Pages of Visual Impact Assessment

Annex C – Replacement Pages of Environmental Assessment

Annex D – Revised Drainage and Sewerage Impact Assessment

Should you have any queries in relation to the above and attached, please do not hesitate to contact the undersigned at 3426 8452 or Mr Wilson Man at 3426 3830. Thank you for your kind attention.

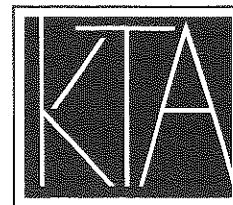
Yours faithfully
For and on behalf of
KTA PLANNING LIMITED


Kitty Wong

Encl. Responses-to-Comments table with Annexes A to D (4 hardcopies)

cc. DPO/TM&YL – Ms Charlotte Lam / Ms Moon Kok (by email)
the Applicant & Team

KW/WM/vy



PLANNING LIMITED

規劃顧問有限公司

UNIT K, 16/F, MG TOWER
133 HOI BUN ROAD, KWUN TONG
KOWLOON, HONG KONG

九龍觀塘海濱道133號
萬兆豐中心16樓K室

電話TEL (852) 3426 8451

傳真FAX (852) 3426 9737

電郵EMAIL kta@ktaplanning.com



FS 579819



**S12A Amendment of Plan Application
Proposed Amendment to the Building Height Restriction of the
“Government, Institution or Community” Zone
for Permitted Social Welfare Facility
(Redevelopment of The Pok Oi Hospital Yeung Chun Pui Care and Attention Home)
at 58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long, New Territories
Planning Application No. Y/HSK/1**

Comments	Responses
Comments from Social Welfare Department (received on 29 August 2024) (Contact Person: Ms. Eunice LEUNG, Tel: 3575 8335)	
1. The proposed redevelopment, if materialised, would optimise the use of the subject site to augment the provision of elderly, rehabilitation and child care services so as to meet the existing and future service demands. As the proposed redevelopment is in line with the Government's policy and the intention of the Special Sites Scheme, we support the applicant's s.12A Planning Application. In view that the TFS for the redevelopment project is still under vetting and the building design could only be finalised upon completion of the detailed design, The applicant should ensure that the proposed building height of the redevelopment under this application is feasible and could optimise the subject site for accommodating the proposed welfare facilities in full.	Noted.
The applicant should duly address our comments as attached in Appendix I . 2. Please revise the supporting planning statement as proposed in Annex I and II –.	Noted and relevant pages of the Supporting Planning Statement have been revised accordingly (Annex A refers).
3. SWD's and ArchSD's consolidated comments on the 1 st draft of Technical Feasibility Study (TFS) report were provided to POH on 21.8.2024. POH is reminded to address our comments on the TFS report (including the Traffic Impact Assessment report) and suitably incorporate them into the pre-submission, as appropriate.	Noted.
4. The NOFA figures for DE, IVRSC, HSMH, HMMH and CCC in Table 3.4 of the Supporting Planning Statement on page 25 are incorrect/ do not tally	Table 3.4 has been revised and tallied with the figures in TFS report (Annex A refers).

Comments	Responses
with those in the TFS report. Please check and revise the NOFA, corresponding GFA and percentage as appropriate.	
<p>Para. 3.6.1 on page 29:</p> <p>5. "Table 3.4" as mentioned in the last line should be "Table 3.6". Please revise.</p>	Noted and revised accordingly (Annex A refers).
Comments from Food and Environmental Hygiene Department (received on 29 August 2024) (Contact Person: Mr. Raymond CHAN, Tel: 3141 1231)	
<p>Please be informed that FEHD has no adverse comment on the subject planning application. Our advisory comments are provided as follows:</p> <p>1. No Food and Environmental Hygiene Department's (FEHD) facilities will be affected. If any FEHD facility is affected by the development, FEHD's prior consent must be obtained. Reprovisioning of the affected facilities by the project proponent up to the satisfaction of FEHD may be required. Besides, the project proponent may be required to provide sufficient amount of additional recurrent cost for management and maintenance of the reprovisioned facilities to FEHD;</p>	Noted.
<p>2. 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. 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 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.</p>	Noted.

Comments	Responses
<p>3. 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.</p>	<p>Noted.</p>
<p>4. 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.</p>	<p>Noted.</p>
<p>5. 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.</p>	<p>Noted.</p>
<p>6. 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.</p>	<p>Noted.</p>

Comments	Responses
Comments from Planning Department (received on 3 September 2024) (Contact Person: Ms. Charlotte KO, Tel: 3565 3946)	
<u>Visual Impact Assessment (VIA)</u>	
<u>Detailed Comments/Advisory Comments</u>	
1. Para. 7.4 – VP2 could also represent future users of the planned Regional Park and Sports Ground to the southwest of the application site (the Site).	Noted and Para. 7.4 has been updated accordingly (Annex B refers).
2. Figure 1 and Section 7 – The scale of Figure 1 and the distance between the VPs and the Site as indicated in Section 7 are incorrect. The VPs should be within a distance ranging from about 20m to 110m from the Site.	Noted. The scale on Figure 1 and Figure 2 and Section 7 have been revised accordingly (Annex B refers).
3. Figures 3 and 4 (VP1 and VP2) – The Consultant may wish to annotate the outline of the planned public housing developments (PHDs) under the Planning Application No. A/HSK/452 for the sake of clarity/better illustration.	Noted and annotated in VP1 and VP2 accordingly (Annex B refers).
4. Figure 6 (VP4) – It seems that the proposed development should appear to be slightly wider.	Noted and VP4 has been updated accordingly (Annex B refers).
<u>Air Ventilation</u>	
5. As indicated in para. 5.9.10 of the Planning Statement, according to the Joint HPLB and ETWB Technical Circular No. 1/06 on Air Ventilation Assessments (“AVAs”), the proposed scheme does not fall within the categories of the projects requiring AVA. No significant adverse air ventilation impact on the surrounding pedestrian wind environment is anticipated.	Noted.

Comments	Responses
Comments from Environmental Protection Department (received on 3 September 2024) (Contact Person: Miss. Zhongming HE, Tel: 2835 2390)	
<u>Air Quality (Appendix 5 - EA)</u>	
Subject to the TD's agreement on the road type, we have no major comments on the application except the following textual comments:	
1. Section 6.5.1- Please delete the second sentence.	Noted. The second sentence of Section 6.5.1 has been deleted (Annex C refers).
2. Section 6.5.5 - Please delete the last sentence.	Noted. The last sentence of Section 6.5.5 has been deleted (Annex C refers).
3. Please be reminded that TD's agreement on the road type should be supplemented.	Noted. TD's agreement will be supplemented once available.
<u>Water Quality (Appendix 5 - EA)</u>	
1. We have no further comment.	Noted.
<u>Sewerage Planning (Appendix 6 - DSIA)</u>	(The revised SIA report is enclosed at Annex D of this submission)
1. P.7, section 3.3.1 – <ul style="list-style-type: none"> • Typo on manhole “FTMH11”. 2. P.8, Table 4.1 <ul style="list-style-type: none"> • UFF 1.58m³/person/day is applied to Kitchen and Canteen as shown in Table 4.2. 	Noted and revised accordingly.
3. P.9-12, Table 4.2 & Appendix B <ul style="list-style-type: none"> • For calculation of ADWF, please present the figures in the same number of decimal places for consistency. • Please check the calculation of peak flow and state if storm water allowance is included or excluded in the existing and proposed development. • Peaking factor in Table 4.2 is inconsistent with Appendix B2. 	<ul style="list-style-type: none"> • Noted. Table 4.2 and Appendix B have been revised accordingly. • The peaking factor excluding stormwater allowance is used in the peak flow estimation of proposed development. Meanwhile the peaking factor including stormwater allowance is used in stream with existing upstream (Stream A and Stream B). • Noted. The peaking factor in Table 4.2 and Appendix B2 has been revised and tallied with each other.

Comments	Responses
<ul style="list-style-type: none"> Worker density is missing in Hostel for HMMH for the Proposed Development. 	<ul style="list-style-type: none"> Noted. Working density has been added.
<p>4. P.12, section 4.4.4</p> <ul style="list-style-type: none"> Please state if storm water allowance is included or excluded when using peaking factors in the hydraulic calculation. 	<p>The peaking factor excluding stormwater allowance is used in the peak flow estimation of proposed development. Meanwhile the peaking factor including stormwater allowance is used in stream with existing upstream (Stream A and Stream B).</p>
<p>5. P.14, section 4.6.1</p> <ul style="list-style-type: none"> Please mention the manhole number of the discharge point (i.e. FTMH1). 	<p>Noted and revised accordingly.</p>
<p>6. P.14, section 4.6.3</p> <ul style="list-style-type: none"> Please check the increase in daily flow after redevelopment. 	<p>Noted. The increased in daily flow has been revised to 87.7 m³/day.</p>
<p>7. P.15, Table 4-5</p> <ul style="list-style-type: none"> Please check the peaking factors for existing sewers. 	<p>Noted. Table 4-5 has been revised. The peaking factor excluding stormwater allowance is used in the peak flow estimation of proposed development. Meanwhile the peaking factor including stormwater allowance is used in stream with existing upstream (Stream A and Stream B).</p>
<p>8. P.18, section 6.1.3</p> <ul style="list-style-type: none"> Typo on manhole “FTMH1009620” . 	<p>Noted and revised to “FMH1009620”.</p>
<p>9. Appendix B2</p> <ul style="list-style-type: none"> Titles of the calculation are missing. 	<p>Noted and the title has been added.</p>
<p>10. Appendix C1</p> <ul style="list-style-type: none"> Please check the mean velocity from site to FMH1009615. Total average dry weather flow of Stream A and Stream B are not consistent with Appendix C2. Please check the Revised Total Average Dry Weather Flow of FTH1003105-FMH1009619. Please check all peaking factors. 	<ul style="list-style-type: none"> Noted. The mean velocity of Appendix C1 has been revised. Noted. The ADWF of Stream A & B are revised and tallied in both App C1 & C2. Noted. The Revised Total ADWF has been revised for Stream A & B. Noted. The peaking factors have been revised. The peaking

Comments	Responses
	factor excluding stormwater allowance is used in proposed development, while the peaking factor including stormwater allowance is used in stream with existing upstream (Stream A & B).
<p>11. Appendix C2</p> <ul style="list-style-type: none"> • Please check the Invert level (US_IL) of FTH1003105 against Appendix C1. Suggest to follow the style of presentation in Appendix C1 (i.e. Highlighted in red with “*”). • Please check all peaking factors. • Please check the Utilization of FMH1009604-FMH1009602(S9). 	<ul style="list-style-type: none"> • Noted. The inlet level (US_IL) has been revised to follow Appendix C1. • Noted. The peaking factors are revised and the peaking factor excluding stormwater allowance is used in proposed development, while the peaking factor including stormwater allowance is used in stream with existing upstream (Stream A & B). • Noted. The calculation has been revised and the utilization has been amended to 33%.
Comments from Buildings Department (received on 3 September 2024) (Contact Person: Ms. Connie WONG, Tel: 2626 1440)	
1. Please be advised that our previous comments conveyed in (i) to (iii) of comments #4 dated 3.4.2024 are still applicable.	Noted.
Comments from Fire Services Department (received on 3 September 2024) (Contact Person: Mr. YUEN Tsz-fung, Tel: 2733 7781)	
1. Detailed fire services requirements will be formulated upon receipt of formal submission of STT/STW, general building plans or referral of application via relevant licensing authority as appropriate. 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. In addition, height restriction as stipulated in relevant regulations governing the proposed social welfare facilities shall be observed. Licensing	Noted.

Comments	Responses
requirements will be formulated upon receipt of a formal application via the Licensing Authority.	

Compiled by: KTA

Date: 10 September 2024

File Ref. 20240910_Y_HSK_1_FI 1_V01

By Email and Hand

Our Ref: S3108/58SCLT/24/007Lg

30 September 2024

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



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Dear Sir/Madam,

**Proposed Amendment to the Building Height Restriction of
the "Government, Institution or Community" Zone
for Permitted Social Welfare Facility
(Redevelopment of The Pok Oi Hospital Yeung Chun Pui
Care and Attention Home)
No.58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long, New Territories
(Planning Application No. Y/HSK/1)
- Further Information No. 2 -**

Reference is made to the captioned S12A Planning Application which is scheduled for consideration by the by the Town Planning Board ("TPB") on 8 November 2024, Further Information ("FI") No.1 submitted to the TPB on 10 September 2024 and the comments from various Government Departments received via emails from Tuen Mun and Yeun Long West District Planning Office during period from 29 August to 13 September 2024.

We would like to clarify that although minor adjustments to the floor area of various proposed social welfare facilities have been made in FI No. 1, the total domestic and non-domestic GFA of the Proposed Development would remain unchanged.

To address comments from the Transport Department, local setback of the northern site boundary has been provided to allow for a continuous footpath of about 2m in width. The G/F plan of the Proposed Development has been updated and is included in **Annex B** of this FI Submission.

To address comments from the relevant Government Departments, FI No.2 has been prepared. This FI submission consists of:

Responses-to-Comments Table

Annex A – Replacement Pages of Supporting Planning Statement

Annex B – Updated G/F Plan of the Indicative Development Scheme

Annex C – Replacement Pages of Preliminary Geotechnical Appraisal and Foundation
Proposal

Annex D – Replacement Pages of Environmental Assessment

Annex E – Replacement Pages of Traffic Impact Assessment

Annex F – Replacement Pages of Landscape Proposal

Should you have any queries in relation to the above and attached, please do not hesitate to contact the undersigned at 3426 8452 or Mr Wilson Man at 3426 3830.



Our Ref: S3108/58SCLT/24/007Lg
Date: 30 September 2024



PLANNING LIMITED
規劃顧問有限公司

Thank you for your kind attention.

Yours faithfully
For and on behalf of
KTA PLANNING LIMITED

A handwritten signature in black ink, appearing to be 'Kitty Wong', written over a horizontal line.

Kitty Wong

Encl. Responses-to-Comments table with Annexes A to F (4 hardcopies)

cc. DPO/TM&YL – Ms Charlotte Lam / Ms Moon Kok (by email)
the Applicant & Team

KW/WM/vy

**S12A Amendment of Plan Application
Proposed Amendment to the Building Height Restriction of the
“Government, Institution or Community” Zone
for Permitted Social Welfare Facility
(Redevelopment of The Pok Oi Hospital Yeung Chun Pui Care and Attention Home)
at 58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long, New Territories
(Planning Application No. Y/HSK/1)**

Comments	Responses
Comments from Geotechnical Engineering Office, Civil Engineering and Development Department (received on 29 August 2024) (Contact Person: Ms. Celia YANG, Tel: 2762 5372)	
1. Appendix 7 “Preliminary Geotechnical Appraisal and Foundation Proposal”: The applicant and his Consultants should refer to the updated 1:20,000-scale geological map Sheet 6 (2nd Edition; GEO, 2019) for latest geological information. According to the updated geological map, the subject site is underlain by marble clast-bearing rocks of the Tuen Mun Formation. The geological descriptions in Section 2.2 of the “Preliminary Geotechnical Appraisal and Foundation Proposal” should be revised accordingly. Our previous comments on the pre-submission (para.1 of comments #5 dated 27.6.2024) are relevant.	The Preliminary Geotechnical Appraisal has been updated with reference to the latest geological map Sheet 6 (2nd Edition; GEO, 2019). The corresponding layer of marble underlain from Carboniferous layer is identified (Annex C refers).
2. Please be reminded that the subject site is located within Schedule Area No. 2 and maybe underlain by cavernous marble. Depending on the nature of foundation, if necessary, of the proposed development at the subject site, extensive geotechnical investigation may be required. Such investigation may require high level involvement of an experienced geotechnical engineer in both the design and supervision of the geotechnical works required at the subject site.	Noted.
Comments from Environmental Protection Department (received on 13 September 2024) (Contact Person: Miss. Zhongming HE, Tel: 2835 2390)	
Noise	Noted.
1. Given practicable and feasible noise mitigation measures could be available, from noise planning point of view, we would not go into technical details due to the unavailability of proposed development details at the	

Comments	Responses
<p>present stage as stated in the EA Report and <u>we shall maintain our previous stance of no objection to this planning application provided that there is a mechanism, e.g. lease conditions</u>, to require the applicant to submit a proper NIA report to review, explore, demonstrate and implement noise mitigation measures for full compliance with the relevant noise criteria and requirements under ProPECC PNs, HKPSG and NCO. The following advisory suggestions are provided to the applicant/consultant to facilitate the integrity and appropriateness of their future submission, if any, as appropriate.</p> <p>Please note that the predicted nighttime fixed noise levels at representative NSRs should also include in the future NIA report and critically review the fixed noise impact assessment and proposed mitigation measures if necessary.</p>	
<p><u>Waste Management</u></p>	
<p>2. Rtc (2) is not addressed. Please remove the phrase “as far as possible”.</p>	<p>Noted. Section 10.3.8 has been revised (Annex D refers).</p>
<p>3. Rtc (6) is not addressed. Please review the whole paragraph and remove the duplicated sentences.</p>	<p>Noted. Section 10.3.8 has been revised (Annex D refers).</p>
<p>4. Rtc (7)(a)(ii), the phrase of “20% of inert C&D materials to be reused onsite” is still unclear. $(2417+483)*0.2$ is not equal to 483. Please review the figure of {Inert C&D Materials Devliered to Public Fill Reception Facilities} and {Inert C&D Materials (or Public Fills) for Onsite Reused}, or you may simply remove the phrase “20% of inert C&D materials to be reused onsite” to avoid confusion.</p>	<p>Table 10-1 has been revised (Annex D refers). The amount of {Inert C&D Materials Delivered to Public Fill Reception Facilities} is revised to 2320 m³. The amount of {Inert C&D Materials (or Public Fills) for Onsite Reused} is revised to 580 m³. The phrase “20% of inert C&D materials to be reused onsite” is removed.</p>
<p><u>Land Contamination</u></p>	
<p>5. Rtc (2) Please update the result with FSD in Table 9-2 if available.</p>	<p>Noted. The reply from FSD is updated, please refer to Table 9-2 (Annex D refers).</p>

Comments	Responses
Comments from Transport Department (received on 13 September 2024) (Contact Person: Mr. Victor MA, Tel: 2399 2422)	
1. Section 3.4: As mentioned in our comment, the narrowest section of the footpath is only about 1m wide. We observe the need to provide local set back at the site boundary for providing 2m wide footpath in rural area according to TPDM, particularly at the pedestrian crossing.	Noted. In order to maintain a 2m footpath in a rural area, setbacks will be provided accordingly. The Applicant will provide setback by surrender and details are subject to the detailed design stage (Drawing No. 2.2 in Annex E refers).
2. Drawing No. 2.1: Please indicate the site boundary of the planning application in the drawing.	Noted. Drawing No. 2.1 in Annex E has been revised.
3. Table 2.1: Please clarify how many consulting rooms will be provided for “Clinics Chinese medicine, Western medicine and Dental service”.	There will be one consultation room per clinic. A total of three consultation rooms will be provided within the Proposed Development.
4. Table 2.2: Please provide taxi/private car lay-by for consulting room and lay-by for ambulances according to HKPSG requirement. Furthermore, please seek confirmation from relevant user departments/parties on the sufficiency of ancillary parking provisions in the development, including the provision of private car parking spaces for health care workers.	Noted. Taxi/private car lay-by and lay-by for ambulances will be provided (Table 2.2 and Drawing No. 2.1 in Annex E refer).
5. Section 6.2.2 and Appendix A: Please check with relevant department on the design of the future road network. For example, straight crossings will be provided at J1 and the current MOC at J1 will be amended to cater for a new pedestrian phase (See Appendix I). Please review your assessment accordingly.	Noted. The new MOC in Appendix I has been adopted in our assessment. The results were submitted to TD on 26 September 2024 for checking and reference. As the junction performance cannot be improved to >15% after checking, as agreed with TD, the improvement works are not required to be mentioned in the report and are also expected to be carried out by others.
Comments from Lands Department (received on 13 September 2024) (Contact Person: Ms. Fiona CHAN, Tel: 2443 3010)	
1. The Application Site comprises of a lot, known as Lot No. 2273 and its Extension in D.D. 125. The Application Site is held by New Grant No. 2882 as varied or modified by two Modification Letters dated 1.3.1982 and 4.7.1983 and Extension Letter dated 8.6.1984. Lot No. 2273 in D.D. 125 is restricted for the use of a non-profit-making residential care and attention home for the aged and such ancillary purposes as may be approved by the Director of Social Welfare (DSW) and the Extension of Lot No. 2273 in D.D. 125 is restricted for the use of amenity purposes in	Noted.

Comments	Responses
<p>connection with the existing non-profit-making residential care and attention home for the aged operating on the Lot No. 2273 in D.D. 125 as shall be approved by the DSW. The Application Site is subject to maximum plot ratio of 1, maximum site coverage of 50% and the building erected on the Application Site shall contain not more than three storeys nor exceed a height of 10.67 metres above the mean formation level of the land on which it stands.</p>	
<p>2. Should the application be approved by the Town Planning Board (TPB), the applicant should apply for a lease modification to the Lands Department (LandsD) for implementation of the proposal.</p>	Noted.
<p>3. Subject to LWB/SWD's confirmation, it seems that the proposed redevelopment at the Application Site is one of the projects under the "Special Scheme on Privately Owned Sites for Welfare Use" launched by the Labour and Welfare Bureau (LWB) and the Social Welfare Department (SWD). Thus, policy support from LWB is required for the proposed lease modification to implement the scheme.</p>	Noted.
<p>4. Besides, it is noted that self-financing welfare-related ancillary facilities with commercial nature are proposed in the redevelopment and approval by higher authority may be required for the proposed lease modification.</p>	Noted.
<p>5. In the event the subject application under S.12A of the Town Planning Ordinance (TPO) is accepted or partially accepted by the 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 Outline Zoning Plan (OZP) has been made) is not required, the land owner may submit request for streamlined processing of lease modification 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 land owner, commence the streamlined processing of the lease modification application on a without</p>	Noted.

Comments	Responses
prejudice and non-committal basis while Planning Department (PlanD) is taking forward the relevant OZP amendment.	
6. The land owner 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 lease modification by land owner to LandsD is still required. Every application submitted to LandsD (including the type of land transaction) 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 lease modification application will eventually be approved by LandsD. If the application for lease modification 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.

Compiled by: KTA

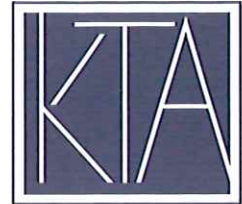
Date: 30 September 2024

By Email and Hand

Our Ref: S3108/58SCLT/24/009Lg

4 December 2024

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



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Dear Sir/Madam,

**Proposed Amendment to the Building Height Restriction of
the "Government, Institution or Community" Zone
for Permitted Social Welfare Facility
(Redevelopment of The Pok Oi Hospital Yeung Chun Pui
Care and Attention Home)
No.58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long, New Territories
(Planning Application No. Y/HSK/1)
- Further Information No. 3 -**

This letter supersedes our previous letter (Ref.No. S3108/58SCLT/24/008Lg) submitted to the Town Planning Board ("TPB") on 29 November 2024.

Reference is made to the captioned S12A Planning Application which was deferred by the TPB on 8 November 2024 and the comments from various Government Departments received via emails from Tuen Mun and Yeun Long West District Planning Office during period from 7 October to 7 November 2024.

To address comments from the relevant Government Departments, FI has been prepared. The set of Indicative Development Scheme enclosed at Annex B is the same as that previously submitted with deletion of the floor area information and addition of a footnote to address comments from Social Welfare Department.

This FI submission consists of:

Responses-to-Comments Table

- Annex A – Replacement Pages of Supporting Planning Statement
- Annex B – Replacement Pages of Indicative Development Scheme
- Annex C – Replacement Pages of Environmental Assessment
- Annex D – Revised Drainage and Sewerage Impact Assessment
- Annex E – Replacement Pages of Visual Impact Assessment
- Annex F – Replacement Pages of Preliminary Geotechnical Appraisal and Foundation Proposal





Should you have any queries in relation to the above and attached, please do not hesitate to contact the undersigned at 3426 8452 or Mr Wilson Man at 3426 3830. Thank you for your kind attention.

Yours faithfully
For and on behalf of
KTA PLANNING LIMITED

A handwritten signature in black ink, appearing to be 'Kitty Wong', written over a horizontal line.

Kitty Wong

Encl. Responses-to-Comments table with Annexes A to F (4 hardcopies)

cc. DPO/TM&YL – Ms Charlotte Lam (by email)
the Applicant & Team

KW/MM/vy

**S12A Amendment of Plan Application
Proposed Amendment to the Building Height Restriction of the
“Government, Institution or Community” Zone
for Permitted Social Welfare Facility
(Redevelopment of The Pok Oi Hospital Yeung Chun Pui Care and Attention Home)
at 58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long, New Territories
(Planning Application No. Y/HSK/1)**

Comments	Responses
Comments from Director of Environmental Protection, Environmental Protection Department (received on 7 October 2024) (Contact Person: Miss. Zhongming HE, Tel: 2835 2390)	
<u>General</u>	
1. Please be reminded that TD's agreement on the road type should be supplemented.	Noted. The endorsement of Transport Department is attached in Appendix 7.3 of the Environmental Assessment (Annex C refers).
<u>Sewerage planning</u>	
<u>P.9, Table 4-2 - Existing Development & Appendix B1 Table 1</u>	
2. ADWF for residents in Table 4-2 (i.e. 27.0 m ³ /day) is inconsistent with the calculation in Appendix B1 (i.e. 27.2 m ³ /day)	Noted. ADWF in Table 4-2 of the Drainage and Sewerage Impact Assessment (DSIA) (Annex D refers) has been revised to 27.2 m ³ /day.
3. Peaking factor in Table 4-2 (i.e. 6) is inconsistent with the calculation in Appendix B1 (i.e. 8). Please be reminded that peaking factor (excluding stormwater allowance) should be adopted for facility with new upstream sewerage (i.e. the proposed sewer connecting FTMH1 and FMH1009620 to be upgraded), while peaking factor (including stormwater allowance) should be adopted for facility with existing upstream sewerage (i.e. other existing sewers not to be upgraded).	Noted. The Peaking Factor in Table 4-2 of the DSIA has been revised to 8 (including stormwater allowance).
4. Please check the calculation of Peak flow in Appendix B1, the peak flow of ADWF = 49.5m ³ /day with peaking factor = 8 is not equal to 0.0006 m ³ /s.	Noted. The peak flow in Appendix B1 of the DSIA has been revised to 0.0046 m ³ /s (Annex D refers).
5. Please delete “+ staff staying overnight (dormitory)” in the title of the calculation of C&A Home.	Noted. The title in Table 4-2 of the DSIA has been revised accordingly (Annex D refers).

Comments	Responses
<u>P.9-12 Table 4-2 - Proposed Redevelopment & Appendix B2 Table 2</u>	
6. Please clarify "(i.e.50)" in the remark of Total no. of persons of HSMH (5/F) in Table 2.	Noted. The remarks of capacity of HSMH in Appendix B2 Table 2 of the DSIA is clarified as 50 nos. of bed refer to the proposed development layout plan (Annex D refers).
7. The worker to resident ratio of HMMH (6/F) in the remark in Table 4.2 (i.e. 0.66 workers / resident) is inconsistent with the calculation in Appendix B2 (i.e. 0.38 workers / resident).	Noted. The worker to resident ratio of HMMH in Table 4-2 of the DSIA has been revised to 0.38 (Annex D refers).
8. Please delete "Generation from Residents + staff staying overnight" the calculation of Elderly Day Care (1/F) as there is no resident nor overnight staff.	Note. Appendix B2 Table 2 has been revised accordingly.
9. Typo on the manholes of Stream B in Appendix B2 Table 2, please check.	Noted and revised accordingly.
<u>P.14, Para. 4.6.1</u>	
10. The sewer connecting the discharge point (FTMH1) in the site to FMH1009620 is proposed to be upgraded from 150mm to 200mm, and further connect to the existing downstream 300mm sewers at FMH1009620. Please review and amend this paragraph.	Noted, Para. 4.6.1 of the DSIA (Annex D refers) has been revised as following. "The discharge point (FTMH1) from the proposed redevelopment will be connected to the existing sewer (S1: FMH1009620). The sewer connecting the FTMH1 and S1 is proposed to be upgraded from 150 mm to 200 mm diameter, and further connect to the existing downstream 300mm sewer at FMH1009620".
<u>Appendix C1</u>	
11. Peaking factor (including stormwater allowance) should be adopted for existing sewers.	Noted. Peaking Factor (including stormwater allowance) has been adopted for existing sewers in Appendix C1 of the DSIA (Annex D refers).
12. Peak discharge of Site – S1 (i.e. 0.003 m ³ /s) is inconsistent with Table 4-2 and Appendix B Table 1 (i.e. 0.0006 m ³ /s). Please check.	Noted. The peak discharge from Site has been revised to 0.0046 m ³ /s.

Comments	Responses
<u>Appendix C2</u>	
13. Peaking factor (including stormwater allowance) should be adopted for existing sewers.	Noted. Peaking Factor (including stormwater allowance) has been adopted for existing sewers in Appendix C2 of the DSIA (Annex D refers).
Comments from Environmental Protection Department (received on 7 November 2024) (Contact Person: Miss. Zhongming He, Tel: 2835 2390)	
<u>General</u>	
1. Please be reminded to address our comments on the FI provided on 7 October 2024.	Noted. Comments provided on 7 October 2024 have been addressed. Please refer to our responses above.
<u>Waste Management</u>	
2. It is noted that the following comments have been revised, however, the relevant sections have not been attached. Please provide the extracts below:	
a) Rtc (2) 10.3.2 & 10.3.8 - The comment that remove the phrase "as far as possible".	Noted. Section 10.3.2 and 10.3.8 of the Environmental Assessment (Annex C refers) have been revised.
b) Rtc (3) 10.3.8 - Please delete the duplicated sentence "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."	Noted. Section 10.3.8 has been revised accordingly.
<u>Land Contamination</u>	
3. Rtc (2) Table 9-2 - It is noted that the reply from FSD dd. 30 Jul 2024 has been received, and Table 9-2 has been updated accordingly. However, the reply letter has not been attached. Please provide the relevant document record.	The FSD reply has been attached in Appendix 9.2 of the Environmental Assessment (Annex C refers).

Comments	Responses
Comments from Director of Social Welfare, Social Welfare Department (received on 7 October 2024) (Contact Person: Ms. Eunice LEUNG, Tel: 3575 8335)	
1. Please further revise the NOFA figures for DE and IVRSC in Table 3.4 of the Supporting Planning Statement on page 25 as follows – (i) It is noted that NOFA of DE shown in Table 3.4 is 511m ² . However, the sum of NOFA of DE facilities in the layout plan of 1/F (Appendix A) is 512.32m ² . The proposed area for the “Staff Changing Room” shown on the proposed SoA (14.9m ²) and the layout plan (16.1m ²) are different. There is a discrepancy in NOFA figures between the proposed SoA (511.12 m ²) and the layout plan (512.32 m ²). If the proposed NOFA of DE is 511 m ² , please amend the figure for the “Staff Changing Room” on the layout plan of 1/F to 14.9 m ² (Appendix A).	Please note that the layout and NOFA provided in the S12A Planning application are indicative only and are subjected to approval by the relevant Government Departments in the TFS and detailed design stage. Table 3.4 of the Supporting Planning Statement (Annex A refers) and layout plan (Annex B refers) have been updated with the footnote added.
(ii) Please revise the NOFA for IVRSC from 451m ² to 452m ² to tally with that in the TFS report.	Table 3.4 of the Supporting Planning Statement (Annex A refers) has been updated accordingly.
2. Please follow-up our comments on Table 2 - Estimation of Sewage Flow from the proposed redevelopment as extracted in Appendix I.	The total ADWF of the estimated sewage flow is 137.2 m ³ /day and the peak flow is 0.0095 m ³ /s as shown in Section 4.2 and Table 4-2 of the DSIA (Annex D refers).
Comments from Chief Town Planner/Urban Design & Landscape, Planning Department (received on 7 October 2024) (Contact Person: Ms. Charlotte KO, Tel: 3565 3946)	
<u>Replacement Pages of VIA</u> <u>Detailed Comment/Advisory Comment</u>	
1. Figure 3 (VP1) – The planned public housing developments under the Planning Application No. A/HSK/452 should appear to be taller and wider, and its extent would partially overlap/be located behind the proposed development.	Noted. Figure 3 has been updated accordingly (Annex E refers).

Comments	Responses
2. Figure 3 (VP1) & Figure 4 (VP2) – As indicated in our previous comments, an proper/complete outline of the planned public housing developments including those parts behind the proposed development could allow clearer and better illustration of the additional visual impact to be caused by the proposed development.	Noted. Figures 3 and 4 have been updated accordingly (Annex E refers).
3. Figure 6 (VP4) – The proposed development should appear to be slightly wider.	Noted. Figure 6 has been updated accordingly (Annex E refers).
4. Despite these above observations, the summary of the VIA in Para. 5 above remains generally applicable.	Noted.
Comments from Civil Engineering and Development Department (received on 7 November 2024) (Contact Person: Ms. Celia YY Yang, Tel: 2762 5362)	
1. R-to-C item (1): The response from the Consultant is noted. The applicant and his Consultants should refer to the updated 1:20,000-scale geological map Sheet 6 (2nd Edition; GEO, 2019) for <u>solid geology</u> for latest geological information. According to the updated geological map, the site is underlain by marble clast-bearing rocks of the <u>Tuen Mun Formation</u> instead of <u>Lok Ma Cha Formation</u> as stated in Section 2.2 of the report. Please revise the geological descriptions in the section accordingly. Our previous comments provided on 29 August 2024 remains valid.	Noted. Section 2.2 of the Preliminary Geotechnical Appraisal and Foundation Proposal (Annex F refers) has been updated accordingly.

Compiled by: KTA

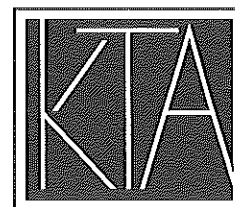
Date: 04 December 2024

By Email and Hand

Our Ref: S3108/58SCLT/24/010Lg

8 January 2025

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



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電郵EMAIL kta@ktaplanning.com

Dear Sir/Madam,

**Proposed Amendment to the Building Height Restriction of
the "Government, Institution or Community" Zone
for Permitted Social Welfare Facility
(Redevelopment of The Pok Oi Hospital Yeung Chun Pui
Care and Attention Home)
No.58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long, New Territories
(Planning Application No. Y/HSK/1)
- Further Information No. 4 -**

Reference is made to the captioned S12A Planning Application which is scheduled for consideration by the Town Planning Board ("TPB") on 24 January 2024, and the comments from Environmental Protection Department received via email from Tuen Mun and Yeun Long West District Planning Office on 3 January 2025.

We would like to supplement the following details for the captioned Planning Application:

Optimisation of Building Height

The building height has already been optimised taking into account the stepped building height profile of the surrounding context as well as the spatial requirements of various social welfare facilities. Furthermore, the proposed welfare facilities would need to be provided above ground to comply with Building (Planning) Regulations and height limit restrictions. Hence, utilisation of underground space is not feasible for the Proposed Development.

Utilisation of 10/F Floor Space

The ventilation and cooling system for the Proposed Development would require considerable amount of floor space on 10/F. Other E&M plant rooms including genset room, solar panel equipment room, fire services pump room and sprinkler pump room could be considered for relocation to 10/F to optimize space utilization. The allocation of different E&M facilities will be devised in detailed design stage.

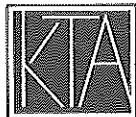
Existing Parking Provision and Non-Building Area

We would like to clarify that there is no parking provision at the existing building. Regarding the location of non-building area as required under lease, please refer to the supplementary figure at Annex A.

Funding Arrangement

The applicant acknowledged that Lotteries Fund is applicable for the construction phase of the project.





To address comments from Environmental Protection Department, FI No.4 has been prepared. This FI submission consists of:

Responses-to-Comments Table

Annex A – Supplementary Plan for Non-Building Area

Annex B – Replacement Pages of Drainage and Sewerage Impact Assessment

Should you have any queries in relation to the above and attached, please do not hesitate to contact the undersigned at 3426 8452 or Mr Wilson Man at 3426 3830.

Thank you for your kind attention.

Yours faithfully
For and on behalf of
KTA PLANNING LIMITED

A handwritten signature in black ink, appearing to be 'Kitty Wong', written over a horizontal line.

Encl. Annexes A and B (4 hardcopies)

cc. DPO/TM&YL – Ms Charlotte Lam (by email)
the Applicant & Team

KW/WM/vy

**S12A Amendment of Plan Application
Proposed Amendment to the Building Height Restriction of the
“Government, Institution or Community” Zone
for Permitted Social Welfare Facility
(Redevelopment of The Pok Oi Hospital Yeung Chun Pui Care and Attention Home)
at 58 Sha Chau Lei Tsuen, Ha Tsuen, Yuen Long, New Territories
(Planning Application No. Y/HSK/1)**

Comments	Responses
Comments from Director of Environmental Protection, Environmental Protection Department (received on 3 January 2025) (Contact Person: Miss. Zhongming HE, Tel: 2835 2390)	
<u>DSIA</u>	
1. P.12, Table 4.2 Please check the difference in peak flow of proposed redevelopment & existing development.	Noted. The difference in peak flow has been revised to +0.0049 m ³ /s.
2. Appendix C1 <ul style="list-style-type: none"> “Percentage Contribution by Proposed Development” should be read as “Percentage Contribution by Existing Development” Please check the percentage Contribution by “Existing” Development for S3 to 10. 	<p>Noted. The “Percentage Contribution by Proposed Development” has been revised as “Percentage Contribution by Existing Development”</p> <p>Noted. The percentage contribution is revised accordingly.</p>
3. Appendix C2 Please supplement in the remark whether stormwater allowance is included or excluded for the peaking factors of existing sewers and upgraded sewer.	Noted. The remark of peaking factor has been supplemented in Appendix C2 of the Drainage and Sewerage Impact Assessment (Annex B refers).

Compiled by: KTA
Date: 08 January 2025

Detailed Comments of Relevant Government Departments

1. Land Administration

Comments of the District Lands Officer/Yuen Long, Lands Department (LandsD):

- (a) 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 (the Board) 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 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 land owner may submit request for streamlined processing of lease modification 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 land owner, commence the streamlined processing of the lease modification application on a without prejudice and non-committal basis while Planning Department is taking forward the relevant OZP amendment; and
- (b) the land owner 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 lease modification by land owner to LandsD is still required. Every application submitted to LandsD (including the type of land transaction) 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 lease modification application will eventually be approved by LandsD. If the application for lease modification 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. Environment

Comments of the Director of Environmental Protection:

The applicant is advised that:

- (a) to strictly comply with relevant pollution control ordinances, including Waste Disposal Ordinance and Water Pollution Control Ordinance; and
- (b) to follow Recommended Pollution Control Clauses for Construction Contracts (available at: http://www.epd.gov.hk/epd/english/environmentinhk/eia_planning/guide_ref/rpc.html) to minimise the environmental impacts during the construction stage.

3. Fire Safety

Comments of the Director of Fire Services:

- (a) detailed fire safety requirements will be formulated upon receipt of formal

submission of general building plans;

- (b) the provision of emergency vehicular access (EVA) shall comply with the requirements as stipulated in Section 6, Part D of the Code of Practice for Fire Safety in Buildings 2011, which is administrated by the Buildings Department; and
- (c) in addition, height restriction as stipulated in relevant regulations governing the proposed social welfare facilities shall be observed. Licensing requirements will be formulated upon receipt of a formal application via the Licensing Authority.

4. Urban Design and Landscape

Comments of the Chief Town Planner/Urban Design and Landscape, Planning Department:

The applicant is reminded that approval of the s.12A application by the Board does not imply approval of the site coverage of greenery requirements under the Practice Notes for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAP) APP-152. The site coverage of greenery calculation should be submitted separately to Buildings Department for approval. Similarly for any proposed tree preservation/removal scheme and compensatory proposal, the applicant should approach relevant authority/ government department(s) direct to obtain necessary approval as appropriate.

5. Food and Environmental Hygiene

Comments of the Director of Food and Environmental Hygiene Department (DFEH):

- (a) no Food and Environmental Hygiene Department's (FEHD) facilities will be affected. If any FEHD facility is affected by the development, FEHD's prior consent must be obtained. Reprovisioning of the affected facilities by the project proponent up to the satisfaction of FEHD may be required. Besides, the project proponent may be required to provide sufficient amount of additional recurrent cost for management and maintenance of the reprovisioned facilities to FEHD;
- (b) proper licence / permit issued by this Department 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;
- (c) 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 Buildings Department, Fire Services Department and Planning Department for comments. 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;
- (d) 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;

- (e) 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;
- (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; and
- (g) 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.

6. **Building Matters**

Comments of the Chief Building Surveyor/New Territories West, Buildings Department:

- (a) presumably the Site abuts on a specified street of not less than 4.5m wide (i.e. Sha Chau Lei Road) and is a Class A site, the development intensity of the proposed building shall not exceed the permissible figures under the 1st schedule of the Building (Planning) Regulations (B(P)R);
- (b) the proposed dormitories for Child Care Centre (CCC), Care & Attention Home for Elderly providing a Continuum of Care (C&A Home), Hostel for Several Mentally Handicapped Persons (HSMH) and Hostel for Moderately Mentally Handicapped Persons (HMMK) in the proposal are domestic use and should be included in domestic site coverage and plot ratio calculations. In the prevailing practice, modification would be favorably considered and granted to treat Residential Care Home for Elderly (RCHE) and Residential Care Home for Persons with Disabilities (RCHD) as non-domestic building for the purposes of site coverage, plot ratio and open space calculations under the Building Ordinance (BO);
- (c) it is noted from the proposal that the proposed vehicular access of the site is via an access road which rests on a strip of government land and leads to Ping Ha Road.

Lands Department should be consulted on whether a right of way will be granted for the proposed access;

- (d) emergency vehicular access shall be provided for all the buildings to be erected on the Site in accordance with the requirements under the regulation 41(D) of the B(P)R;
- (e) justification for the proposed high headroom of G/F (6m) should be provided during building plan submission stage;
- (f) if the proposed plot ratio is based on the assumption that Gross Floor Area (GFA) concession will be granted, the pre-requisites for GFA concession in PNAP APP-151 and the Sustainable Building Design Guidelines stipulated in in PNAP APP-152 should be complied with;
- (g) carparking spaces may be excluded from GFA calculation under the BO. It will be considered on the basis of the criteria set out in PNAP APP-2 during plan submission stage; and
- (h) the proposed uses under application are subject to the issue of a license, the applicant is reminded that any proposed 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.