2 3 NOV 2021

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Form No. S16-I 表格第 S16-I %

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AML TYST/1132 **UNDER SECTION 16 OF**

THE TOWN PLANNING ORDINANCE

(CAP.131)

《城市規劃條例》(第131章) 第16條遞交的許可

Applicable to proposals not involving or not only involving: 適用於建議不涉及或不祇涉及:

Construction of "New Territories Exempted House(s)"; 興建「新界豁免管制屋宇」;

Temporary use/development of land and/or building not exceeding 3 years in rural areas; and

位於鄉郊地區土地上及/或建築物內進行為期不超過三年的臨時用途/發展;及 (iii) Renewal of permission for temporary use or development in rural areas

位於鄉郊地區的臨時用途或發展的許可續期

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.info.gov.hk/tpb/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.info.gov.hk/tpb/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
- & 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 「レ」 at the appropriate box 請在適當的方格内上加上「レ」號

For Official Use Only 請勿填寫此欄	Application No. 申請編號	A141-7457/1132
	Date Received 收到日期	2 3 NOV 2021

- 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.info.gov.hk/tpb/. 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.info.gov.hk/tpb/)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 樓及新界沙田上禾峚路 1 號沙田政府合署 14 樓)索取。
- 3. This form can be downloaded from the Board's website, and obtained from the Secretariat of the Board and the Planning Enquiry Counters of the Planning Department. The form should be typed or completed in block letters. The processing of the application may be refused if the required information or the required copies are incomplete.

 此表格可從委員會的網頁下載,亦可向委員會秘書處及規劃署的規劃資料查詢處索取。申請人須以打印方式或以正楷填寫表格。如果申請人所提交的資料或文件副本不齊全,委員會可拒絕處理有關申請。

	1.	Name of Applicant	申請人姓名/名稱
--	----	-------------------	----------

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

Banyan Services Association

榕光社

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)

Vision Planning Consultants Ltd. 弘域城市規劃顧問有限公司

3.	Application Site 申請地點	
(a)	Full address / location / demarcation district and lot number (if applicable) 詳細地址/地點/丈量約份及地段號碼(如適用)	Government Land (Former Wa Fung School (Part) and Adjoining Government Land), Lam Hau Tsuen, Yuen Long, New Territories
(b)	Site area and/or gross floor area involved 涉及的地盤面積及/或總樓面面 積	☑Site area 地盤面積 2,950 sq.m 平方米☑About 約 □Gross floor area 總樓面面積 sq.m 平方米□About 約
(c)	Area of Government land included (if any) 所包括的政府土地面積(倘有)	2,950 sq.m 平方米 ☑About 約

(d)	Name and number of the related statutory plan(s) 有關法定圖則的名稱及編號 Approved Tong Yan San Tsuen Outline Zoning Plan No. S/YL-TYST/14					
(e)	Land use zone(s) involved					
(f)	現時用途					
		(If there are any Government, institution or community plan and specify the use and gross floor area) (如有任何政府、機構或社區設施,諸在圖則上顯示,				
4.	"Current Land Owner" of A	pplication Site 申請地點的「現行土地	 也擁有人」			
The	applicant 申請人 —					
	is the sole "current land owner"#& (pl 是唯一的「現行土地擁有人」#& (訂	ease proceed to Part 6 and attach documentary proof 青繼續填寫第 6 部分,並夾附業權證明文件)。	of ownership).			
	is one of the "current land owners"# 是其中一名「現行土地擁有人」#&	(please attach documentary proof of ownership). (請夾附業權證明文件)。				
Ø	is not a "current land owner". 並不是「現行土地擁有人」"。		•			
Ø	The application site is entirely on Go 申請地點完全位於政府土地上(請	vernment land (please proceed to Part 6). 繼續填寫第 6 部分)。				
5.	Statement on Owner 1 C	IDI um	· · · · · · · · · · · · · · · · · · ·			
3.	Statement on Owner's Conse 就土地擁有人的同意/通					
(a)	1	f the Land Registry as at				
	application involves a total of	"current land owner(s)" [#] .	(DD/MM YYYY), this 日的記錄,這宗申請共牽			
(b)	The applicant 申請人 —					
	• • • • • • • • • • • • • • • • • • • •	"current land owner(s)".				
	已取得 名「					
	Details of consent of "current	land owner(s)" # obtained 取得「現行土地擁有人	」"同意的詳情			
	「現行土地擁有 Registry w	r/address of premises as shown in the record of the Land here consent(s) has/have been obtained 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 sp	pace of any box above is insufficient. 如上列任何方格的3				

	tails of the "cu	<u> </u>	•	知「現行土地擁有人」	Date of polification
La:	nd Owner(s)' 現行土地擁 人」數目	Land Registry where	e notification(s) ha	own in the record of the s/have been given 也段號碼/處所地址	given (DD/MM/YYYY) 通知日期(日/月/年)
(Plea	se use separate s	sheets if the space of any	box above is insuffi	icient. 如上列王何方格的	空間不足,請另頁說明)
		le steps to obtain cons 以取得土地擁有人的[_	<i>-</i>	
Reas	sonable Steps t	o Obtain Consent of C	Owner(s) 取得土	地擁有人的同意所採取	(的合理步驟
	sent request fe	or consent to the "curr (日/月/年)	rent land owner(s) 向每一名「現行」	' on : 地擁有人 」 "郵遞要求	(DD/MM/YYYY) ^{#&} 同意書 ^{&}
Rea	sonable Steps t	o Give Notification to	Owner(s) 向土 ⁱ	也擁有人發出通知所採	取的合理步驟
	published not 於	ices in local newspape (日/月/年):	ers on <u> </u>	(DD/MM/Y 青刊登一次通知 ^{&}	YYY) ^{&}
	•	in a prominent position (DD/MM)		cation site/premises on	
	於	(日/月/年):	在申請地點/申請	青處所或附近的顯明位	置貼出關於該申請的通
	office(s) or ru 於	ral committee on		_(DD/MM/YYYY)&	id committee(s)/manager 委員會/互助委員會或' ·
<u>Oth</u>	ers 其他				
· 🗆	others (please 其他(記指明				,
-					
	/				· · · · · · · · · · · · · · · · · · ·
					
			•		•

6.	Type(s)	of Application 申請類別				
Ø	Type (i) 第(i)類	Change of use within existing building or part thereof 更改現有建築物或其部分內的用途				
\	Type (ii) 第(ii)類	Diversion of stream / excavation of land / filling of land / filling of pond as required under Notes of Statutory Plan(s) 根據法定圖則《註釋》內所要求的河道改道/挖土/填土/填塘工程				
	Type (iii) 第(iii)類	Public utility installation / Utility installation for private project 公用事業設施裝置/私人發展計劃的公用設施裝置				
	Type (iv) 第(iv)類	Minor relaxation of stated development restriction(s) as provided under Notes of Statutory Plan(s) 略為放寬於法定圖則《註釋》內列明的發展限制				
Ø	Type (v) 第(v)頻	Use / development other than (i) to (iii) above 上述的(i)至(iii)項以外的用途/發展				
註 1 Note	Note 1: May insert more than one 「✓」. 註 1: 可在多於一個方格內加上「✓」號 Note 2: For Development involving columbarium use, please complete the table in the Appendix. 註 2: 如發展涉及靈灰安置所用途,請填妥於附件的表格。					

(i) Eor Types(i) applicate	ion 供第(i	<i>)類申請</i>					
(a) Total floor area involved 涉及的總樓面面積	(B) Nev (C) E&	(A) Existing structures: About 452 sq.m (B) New structures: About 1,048 sq.m (C) E&M: About 162 sq.m Total (A+B): About 1,500 sq.m					
(b) Proposed use(s)/development 擬議用途/發展	Elderly) Excavat (If there are at the use and a	Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") for a Period of 10 years and Proposed Excavation of Land in Association with the Proposed RCHE (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)					
(c) Number of storeys involved 涉及層數		1	成心,調在圖則上顯示 Number of units invo 涉及單位數目		用庭及總接面面積) About 100 beds		
	Domestic p	part 住用部分		sq.m 🏻	字方米 口About 約		
(d) Proposed floor area 擬議樓面面積	Non-dome	stic part 非住用部	邹分1,500	sq.m 직	² 方米 ☑About 約		
	Total 總計	******	1,500	sq.m 环	Z方米 □About 約		
(e) Proposed uses of different	Floor(s) 樓層			Proposed use(s) 擬議用途			
floors (if applicable) 不同樓屬的擬議用途(如適用)	1	Vacant Sch and vacant	nool Premises land	Tempo (RCHI	orary Social Welfare Facilitiy E)		
円) (Please use separate sheets if the space provided is insufficient) (如所提供的空間不足・請另頁語 明)		·					

(ii) For Type (ii) applic	ation 供第间類甲譜	
	□ Diversion of stream 河道改道	
		□About 約 □About 約
(a) Operation involved 涉及工程	Depth of filling 填土厚度 m 米	□About 約 □About 約 ☑About 約
` .		☑About 約
	(Please indicate on site plan the boundary of concerned land/pond(s), and particulars of stream div of filling of land/pond(s) and/or excavation of land) (請用圖則顯示有關土地/池塘界線,以及河道改道、填塘、填土及/或挖土的細節及/或資	•
(b) Intended use/development 有意進行的用途/發展	Temporary Social Welfare Facility (Residential Care Home Elderly) ("RCHE") for a Period of 10 years and Proposed Exof Land in Association with the Proposed RCHE	
(iii) Teorallype (iii) applic	carion /共第(ii)類甲前)	
(fit) For Type (fit) applie	Cation 《共第(iii) 類甲前 □ Public utility installation 公用事業設施裝置 □ Utility installation for private project 私人發展計劃的公用設施裝置	
(til) 3602 Type (til) appli	□ Public utility installation 公用事業設施裝置	
(til) 3502 Type (til) appli	□ Public utility installation 公用事業設施裝置 □ Utility installation for private project 私人發展計劃的公用設施裝置 Please specify the type and number of utility to be provided as well as the dime each building/structure, where appropriate	高度和闊度 installation ()
(a) Nature and scale 性質及規模	□ Public utility installation 公用事業設施裝置 □ Utility installation for private project 私人發展計劃的公用設施裝置 Please specify the type and number of utility to be provided as well as the dime each building/structure, where appropriate 講註明有關裝置的性質及數量,包括每座建築物/模杂物(倘有)的長度、高Number of Name/type of installation 裝置名稱/種類 □ Number of Dimension of each /building/structure (m) (LxWxH) 每個裝置/建築物/構築物的	高度和闊度 installation
(a) Nature and scale	□ Public utility installation 公用事業設施裝置 □ Utility installation for private project 私人發展計劃的公用設施裝置 Please specify the type and number of utility to be provided as well as the dime each building/structure, where appropriate 講註明有關裝置的性質及數量,包括每座建築物/模杂物(倘有)的長度、高Number of Name/type of installation 裝置名稱/種類 □ Number of Dimension of each /building/structure (m) (LxWxH) 每個裝置/建築物/構築物的	高度和闊度 installation
(a) Nature and scale	□ Public utility installation 公用事業設施裝置 □ Utility installation for private project 私人發展計劃的公用設施裝置 Please specify the type and number of utility to be provided as well as the dime each building/structure, where appropriate 講註明有關裝置的性質及數量,包括每座建築物/模杂物(倘有)的長度、高Number of Name/type of installation 裝置名稱/種類 □ Number of Dimension of each /building/structure (m) (LxWxH) 每個裝置/建築物/構築物的	高度和闊度 installation

(iv)	For Type (iv) applica	tion 供第(iv)類申請						
(a)	Please specify the	proposed minor relaxation of sta	ted development restriction(s) and	also All in the				
	proposed use/develop	ment and development particula	rs in part (v) below -					
	請列明擬議略為放寬的發展限制並填妥於第(v)部分的擬議用途/發展及發展細節 —							
	Plot ratio restriction 地積比率限制	From 由	to至					
	Gross floor area restric 總樓面面積限制	tion From 由sq. m	平方米 to 至sq. m 平方÷	*				
	□ Site coverage restrictio 上蓋面積限制	n From 由	% to 至%					
	Building height restrict 建築物高度限制	tion From 由r	n 米 to 至m米					
		From 🖽	mPD 米 (主水平基準上) to 至					
	•		mPD 米 (主水平基準上)					
	. ,	From 由	storeys層 to至store	ys 層				
	Non-building area restu 非建築用地限制	riction	.m to 至m					
	Others (please specify)	1						
ر ا	其他(請註明)			•				
			CONTROL CONTRO	PARTIES HER PARTIES AND THE PA				
(0)	For Type (v) applicati	ion 供第(v)類申讀						
			and the second and the second	AND THE STREET STREET				
		Temporary Social Wolfows Es	dilita (D. 11 di 10 xx a					
	roposed se(s)/development	("RCHE") for a Period of 10 y	cility (Residential Care Home for ears and Proposed Excavation o	r the Elderly) f Land in				
	疑議用途/發展	Association with the Proposed	RCHE	r Dana m				
				•				
ļ		(Please illustrate the details of the propo	sal on a layout plan 請用平面圖說明建議	詳情)				
(b) <u>D</u>	Development Schedule 發展	細節表						
P	roposed gross floor area (G	FA) 擬議總樓面面積	sq.m 平方米	☑About 約				
1	roposed plot ratio 擬議地和		0.51	☑About 約				
1	roposed site coverage 擬議		57	☑About 約				
1	roposed no. of blocks 擬議		1					
P	roposed no. of storeys of ea	ach block 每座建築物的擬議層數	storeys 層	•				
			口 include 包括storeys of basen	nents 層地庫				
			□ exclude 不包括storeys of bas	sements 層地庫				
P	roposed building height of	each block 每座建築物的擬議高度	19 to 21 mPD 米(主水平基準上	-) MAhout 约				
1			5 た 7					
			5 to.7 m 米	☑About 約				

· · · · · · · · · · · · · · · · · · ·	··				
☐ Domestic part		•	—··		
GFA 總模			sq. m 平方米	□About 約	
	f Units 單位數目				
-	nit size 單位平均面		sq. m 平方米	□About 約	
estimated	number of residents	估計住客數目			
		1		- Code	
✓ Non-domestic ✓	-		GFA 總樓面面		
eating pla			sq. m 平方米	□About 約	
□ hotel 酒店			sq. m 平方米	□About 約	
			(please specify the number of rooms	i	
			請註明房間數目)		
□ office 辦		. d== 100	sq. m 平方米	□About 約	
shop and	services 商店及服務	行業	sq. m 平方米	□About 約	
	ent, institution or co 機或社區設施	mmunity facilities	(please specify the use(s) and area(s)/GFA(s) 請註明用途及有關的 樓面面積)	•	

	•		•••••		
☑ other(s) 其他					
		•			
☑ Open space 休	、 憩用地		(please specify land area(s) 請註明		
☑ private o	pen space 私人休憩	用地	About 887 sq. m 平方米 口 Not		
public or	en space 公眾休憩戶	月地	sq. m 平方米 口 Not	less than 不少於	
(c) Use(s) of different	ent floors (if applicat	ole) 各樓層的用途 (如適	用)		
[Block number]	[Floor(s)]		[Proposed use(s)]		
[座數]	[層數]		[擬議用途]		
1	1 1 Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") and M&E				
		.,,			
(d) Proposed use(s)	of uncovered area (if any) 露天地方(倘有)			
2) Greenery at	ea; arking spaces; a	for residents;nd			

7. Anticipated Completion Time of the Development Proposal 擬議發展計劃的預計完成時間								
Anticipated completion time (in month and year) of the development proposal (by phase (if any)) (e.g. June 2023) 擬議發展計劃預期完成的年份及月份 (分期 (倘有)) (例: 2023 年 6 月) (Separate anticipated completion times (in month and year) should be provided for the proposed public open space and Government, institution or community facilities (if any)) (申請人須就擬議的公眾休憩用地及政府、機構或社區設施(倘有)提供個別擬議完成的年份及月份)								
December 2024								
	• • • • • • • • • • • • •							
	• • • • • • • • • • • • •							

***************************************		•••••						
	-							
8. Vehicular Access Arra		4 - 541 - D. J						
擬議發展計劃的行	平沒沒 angemen	t of the Development Proposal						
126.68 28 18 19 17 17	平 烟 旭 	女排						
Any vehicular access to the site/subject building?	Yes 是	□ There is an existing access. (please indicate the street name, where appropriate) 有一條現有車路。(請註明車路名稱(如適用))						
是否有車路通往地盤/有關								
建築物?		☑ 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	(Please refer to Supplementary Planning Statement)						
Any provision of parking space for the proposed use(s)? 是否有為擬議用途提供停車	Yes 是	 ✓ (Please specify type(s) and number(s) and illustrate on plan) 講註明種類及數目並於圖則上顯示) Private Car Parking Spaces 私家車車位 Motorcycle Parking Spaces 電單車車位 Light Goods Vehicle Parking Spaces 輕型貨車泊車位 Medium Goods Vehicle Parking Spaces 中型貨車泊車位 Heavy Goods Vehicle Parking Spaces 重型貨車泊車位 						
位?		Others (Please Specify) 其他 (請列明)						
	No 否							
Any provision of loading/unloading space for the proposed use(s)? 是否有為擬議用途提供上落客貨車位?	Yes 是	 ☑ (Please specify type(s) and number(s) and illustrate on plan) 請註明種類及數目並於圖則上顯示) Taxi Spaces 的士車位 Coach Spaces 旅遊巴車位 Light Goods Vehicle Spaces 輕型貨車車位 Medium Goods Vehicle Spaces 中型貨車車位 Heavy Goods Vehicle Spaces 重型貨車車位 Others (Please Specify) 其他 (請列明) 						
	No 否							

9. Impacts of Development Proposal 擬議發展計劃的影響						
If necessary, please use separate sheets to indicate the proposed measures to minimise possible adverse impacts or give justifications/reasons for not providing such measures. 如需要的話,請另頁表示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。						
	No 否					
Would the development proposal cause any	On traffi On water On drain On slope Affected Landsca Tree Fel Visual II Others (I	onment 對環境 c 對交通 r supply 對供水 age 對排水 s 對斜坡 by slopes 受斜坡影響 pe Impact 構成景觀影響 ling 砍伐樹木 mpact 構成視覺影響 Please Specify) 其他 (請列明)	Yes 會 □	No 不會 IV No 不不會 IV No 不不會 IV No 不不會 IV No 不不會 IV No 不不不不不不不不不不不不不不不不不不不不不不不不不不不不不不不不不不不		
adverse impacts? 擬議發展計劃會否 造成不良影響?	diameter 請註明記 直徑及。 (Pleas	tate measure(s) to minimise the imparat breast height and species of the affer 患量減少影響的措施。如涉及砍伐樹 品種(倘可) se refer to Supplementary Plan	cted trees (if possible) 木,請說明受影響樹木的數目 ning Statement)	、及胸高度的樹幹		

10. 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 Supplementary Planning Statement)	
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	ration 聲明	
I hereby declar 本人謹此聲明	are that the particulars given in this application a 月,本人就這宗申請提交的資料,據本人所知	re correct and true to the best of my knowledge and belief. 及所信,均屬真實無誤。
such material	s to the Board's website for browsing and down	rials submitted in an application to the Board and/or to upload loading by the public free-of-charge at the Board's discretion. 複製及/或上載至委員會網站,供公眾免費瀏覽或下載。
Signature 簽署		□ Applicant 申請人 / ☑ Authorised Agent 獲授權代理人
	CHAN KIM ON	Managing Director
	Name in Block Letters 姓名(請以正楷填寫)	Position (if applicable) 職位 (如適用)
Professional (專業資格	Qualification(s)	會 / □ HKIA 香港建築師學會 / □ HKIE 香港工程師學會 / □ HKIUD 香港城市設計等像 CONSULTAN
on behalf of 代表 .	Vision Planning Consultants L	td.
	🗹 Company 公司 / 🗋 Organisation Name at	nd Chop (if applicable) 機構名稱及蓋章(如適用)
Date 日期	19/11/2021	(DD/MM/YYYY 日/月/年)

Remark 備註

The materials submitted in an application to the Board 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。

For Developments involving Columbarium Use, please also complete the 如發展涉及鹽灰安置所用途,請另外填妥以下資料:	following:
Ash interment capacity 骨灰安放容量®	
Maximum number of sets of ashes that may be interred in the niches 在鑫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 在非鑫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 piches (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)	
Proposed operating Yours 擬議營運時間	
 ② Ash interment capacity in relation to a columbarium means - 就變灰安置所而言,骨灰安放容量指: - the maximum number of containers of ashes that may be interred in each niche in the columbarium; 每個命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 number of sets of ashes that may be interred other than in niches in any area in the columbarium number of sets of ashes that may be interred in the columbarium. - the total number of sets of ashes that may be interred in the columbarium. - 在該骨灰安置所內,總共最多可安放多少份骨灰。 	umbarium; and

consultees, uploaded deposited at the Plan (請 <u>盡量</u> 以英文及中	I to the I ning Enq 文填寫。 署規劃資	uiry Counters of the ,此部分將會發送了 料查詢處以供一般	d's Website for l Planning Departr 名相關諮詢人士、 參閱。)	prowsing and free nent for general in	downloading formation.)	by the public and
Application No. 申請編號	(For Off	icial Use Only) (譜勿	填寫此欄)			
Location/address 位置/地址	Government Land (Former Wa Fung School (Part) and Adjoining Government Land), Lam Hau Tsuen, Yuen Long, New Territories 新界元朗欖口村的政府土地(前華封學校(部分)及毗連政府土地)					
Site area						长☑ About 約
地盤面積	(include	es Government land	of包括政府土	地 2,950	sq. m 平方シ 	ド ☑ About 約)
Plan 圖則		oved Tong Yan S 新村分區計劃大				L-TYST/14
Zoning 地帶	"Village Type Development" ("V") 「鄉村式發展」					
Applied use/ development 申請用途/發展	Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") for a Period of 10 years and Proposed Excavation of Land in Association with the Proposed RCHE 臨時社會福利設施(安老院舍)(為期10年)及附屬挖土工程				f Land in	
(i) Gross floor ar		•	sq.m	平方米	Plot R	atio 地積比率
, and/or plot rai 總樓面面積及 地積比率		Domestic 住用		□ About 約 □ Not more than 不多於		□About 約 □Not more than 不多於
		Non-domestic 非住用	1,500	☑ About 約 □ Not more than 不多於	0.51	☑About 約 □Not more than 不多於
(ii) No. of block 幢數		Domestic 住用			•	
		Non-domestic 非住用		1.		
		Composite 綜合用途			,	

Gist of Application 申請摘要

(iii)	Building height/No.	Domestic	
	of storeys 建築物高度/層數	住用	m 米 □ (Not more than 不多於)
			mPD 米(主水平基準上) □ (Not more than 不多於)
			Storéys(s) 層 口 (Not more than 不多於)
			(□Include 包括/□ Exclude 不包括 □ Carport 停車間 □ Basement 地庫 □ Refuge Floor 防火層 □ Podium 平台)
		Non-domestic 非住用	About 5 to 7 m 米 □ (Not more than 不多於)
			About 19 to 21mPD 米(主水平基準上) □ (Not more than 不多於)
			1 Storeys(s) 層 □ (Not more than 不多於)
	,	·	(□Include 包括/□ Exclude 不包括 □ Carport 停車間 □ Basement 地庫 □ Refuge Floor 防火層 □ Podium 平台)
		Composite 綜合用途	, m . 米 □ (Not more than 不多於)
			mPD 米(主水平基準上) □ (Not more than 不多於)
		,	Storeys(s) 層 □ (Not more than 不多於)
			(□Include 包括/□ Exclude 不包括 □ Carport 停車間 □ Basement 地庫 □ Refuge Floor 防火層 □ Podium 平台)
(iv)	Site coverage 上蓋面積		57 % ☑ About 約
(v)	No. of units 單位數目		About 100 beds
(vi)	Open space 休憩用地	Private 私人	About 887 sq.m 平方米 □ Not less than 不少於
		Public 公眾	sq.m 平方米 🗆 Not less than 不少於

(vii)	No. of parking spaces and loading /	Total no. of vehicle parking spaces 停車位總數	3
	unloading spaces 停車位及上落客貨 車位數目	Private Car Parking Spaces 私家車車位 Motorcycle Parking Spaces 電單車車位 Light Goods Vehicle Parking Spaces 輕型貨車泊車位 Medium Goods Vehicle Parking Spaces 中型貨車泊車位 Heavy Goods Vehicle Parking Spaces 重型貨車泊車位 Others (Please Specify) 其他 (請列明)	3
		Total no. of vehicle loading/unloading bays/lay-bys 上落客貨車位/停車處總數 Taxi Spaces 的士車位	2
	,	Coach Spaces 旅遊巴車位 Light Goods Vehicle Spaces 輕型貨車車位 Medium Goods Vehicle Spaces 中型貨車位 Heavy Goods Vehicle Spaces 重型貨車車位 Others (Please Specify) 其他 (請列明)	2

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	中文	光人	
		Ø	
Master layout plan(s)/Layout plan(s) 總綱發展藍圖/布局設計圖			
Block plan(s) 樓宇位置圖		<u>∵</u> .	
Floor plan(s) 樓宇平面圖		⊠ Ø	
Sectional plan(s) 截視圖		. <u> </u>	
Elevation(s) 立視圖			
Photomontage(s) showing the proposed development 顯示擬議發展的合成照片		. 🗀	
Master landscape plan(s)/Landscape plan(s) 園境設計總圖/園境設計圖		包	
Others (please specify) 其他(請註明) Lot Index Plan		Ŭ	
Reports 報告書			
Planning Statement/Justifications 規劃綱領/理據		\square	
Environmental assessment (noise, air and/or water pollutions)			
環境評估(噪音、空氣及/或水的污染)			
Traffic impact assessment (on vehicles) 就車輛的交通影響評估		Ø	
Traffic impact assessment (on pedestrians) 就行人的交通影響評估			
Visual impact assessment 視覺影響評估			
Landscape impact assessment 景觀影響評估		abla	
Tree Survey 樹木調查		\Box	
Geotechnical impact assessment 土力影響評估		Ø	
Drainage impact assessment 排水影響評估		\square	
Sewerage impact assessment 排污影響評估			
Risk Assessment 風險評估			
Others (please specify) 其他(請註明)		Ø	
Environmental assessment (Noise Impact Assessment, Air Quality Impact Assessment, Water Quality Impact Assessment, Waste Manamgenet Implications) and Preliminary Study of M&E Services Supply			
Note: May insert more than one「レ」. 註:可在多於一個方格內加上「レ」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。

Proposed Temporary Social Welfare Facility
(Residential Care Home for the Elderly)
("RCHE") by Conversion of Former Wa Fung
School (Part) for a Period of 10 Years and
Proposed Excavation of Land in Association with
the Proposed RCHE in "V" Zone, Lam Hau
Tsuen,
Yuen Long,
New Territories

Applicant : Banyan Services Association

Project Architects : Architecture Design and Research Group Limited

Planning Consultants : Vision Planning Consultants Limited

Landscape Architects : Ko Landscape Architects

Traffic Consultants : Ho Wang SPB Limited

Environmental Consultants : Mott MacDonald Hong Kong Limited

M&E Consultants : Talent Mechanical & Electrical Engineers Limited

Structural Engineers : APT Engineering Consultant Limited

Date of Submission : November 2021

Version Number : DRAFT / Lam Hau_Rep-08.docx / 18-Nov-21

Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE in "V" Zone, Lam Hau Tsuen, Yuen Long, New Territories

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- 4. Changes in Social Circumstances
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Plan No. S/YL-TYST/14

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Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE in "V" Zone, Lam Hau Tsuen, Yuen Long, New Territories

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Executive Summary

The present planning application aims to seek a permission from the Town Planning Board ("**TPB**") for: (i) a proposed temporary 'Social Welfare Facility' (Residential Care Home for the Elderly) ("**RCHE**") with about 100 bed spaces for a period of 10 years at a site partly covered by the existing former Wa Fung School site (about 78%) and partly on its adjoining GL, Lam Hau Tsuen, Yuen Long; and (ii) a proposed excavation of land in association with the proposed RCHE.

Apart from direct conversion of the existing affected former School buildings, additional new single-storey Modular Integrated Construction ("MiC") modules are proposed to merge the existing School buildings with covered walkway system into a self-contained single-storey RCHE compound. The whole development scheme amount to a total GFA of about 1,500m². Upon completion in 2024, a total of about 100 RCHE bed spaces will be provided to meet the acute needs of the community.

It has been demonstrated that the proposed temporary RCHE development totally conforms with the Government's policy objective in the supply of RCHE to meet the soaring demand in the community; it represents a 'win-win' project at the right timing and right place benefiting all parties concerned (local labour force, elderly members in the local community, and relives pressure to increase supply of RCHEs); it is fully in line with the short-term planning intention to use the vacant school premises in a smart land-use development manner; and it will not result in any consequential significant adverse or unacceptable impact on the local area in terms of traffic, sewerage or drainage aspects. With the provision of a 2.5m noise barrier wall, the proposed development will not suffer from any adverse or unacceptable traffic and fixed noise sources from its surrounding developments.

The approval of this application represents a good and essential case to meet the needs of the community.

內容摘要

本規劃申請旨在懇請<u>城市規劃委員會</u>(下稱「城規會」)准許擬議:(1)在位於元朗 欖口村部分屬於早前<u>華封學校</u>(約佔78%學校土地面積),以及毗連政府土地,用作為期10年配置約100床位的臨時「社會福利設施」(即安老院舍);及(2)該安老院舍發展相關的挖土工程。

除了直接改裝現有受影響的學校建築外,額外以「組裝合成」建築法提供單層構築物,用上蓋行人道接連,成為自成一家的單層安老院舍。 整個安老院舍合共有 1,500 平方米的建築面積。在 2024 年完工後,可提供約 100 安老院舍床位應對社區迫切需求。

本申請已證實,擬議安老院舍發展,與政府就社區對解決提供安老院舍需求, 所提出的政策目標是完全一致;是一個對本地就業、本地長者和舒緩解決提供安 老院舍需求壓力的適時適地「多贏」項目;完全符合以更「接地氣」的方式,來 善用閒置校舍短期土地的用途意向;及不會對本區帶來任何不良或不可接受的道 路交通、排污或排雨水方面的問題。在提供一幅 2.5 米高的隔音牆後,擬議發展 就能解決因周邊發展而產生的道路交通及固定噪音問題。

批准是次申請是認許它是一個對社區需求有恰當性和實質性的個案。

1. THE APPLICATION

- Services Association (the "Applicant"), a registered charitable institution under Section 88 of the Inland Revenue Ordinance (Cap. 112), to prepare and to submit this planning application on its behalf. The Applicant intends to seek the permission from the Town Planning Board ("TPB") for: (i) a proposed conversion of part of the existing single-storey former rural school, known as Wa Fung School (華封學校) and its adjoining Government Land ("GL") (hereinafter collectively called the "Subject Site") at Lam Hau Tsuen (欖口村), Yuen Long, into a temporary 'social welfare facility' purposely for a 'residential care home for the elderly' ("RCHE") development for a period of 10 years; and (ii) a proposed excavation of land in association with the proposed RCHE development.
- 1.2 The location of the Subject Site is shown in **Figure 1**. **Figure 2** is a Lot plan of the Subject Site.
- 1.3 It is noted that part of the School site comprises one private lot, namely Lot No. 2645 in D.D. 120, and that private lot has been engaged with some liability disputes. In order to avoid such a complicated and lengthy legal proceedings and to re-provide a local footpath to this Lot, the Applicant has decided to exclude part of the eastern School site from this application for the time being. However, if situation allows in future, the Applicant is happy to incorporate this remaining portion of the School site into its proposed RCHE development under a fresh planning application.
- 1.4 The Subject Site falls within an area zoned "Village Type Development" ("V") on the Approved Tong Yan San Tsuen Outline Zoning Plan (the "OZP") No. S/YL-TYST/14 (Figure 1). In the Notes of the OZP for "V" zoning, same as the 'School' development, the proposed 'Social Welfare Facility' is also a Column 2 use that may be permitted with or without conditions on application to the TPB under section 16 of the Town Planning Ordinance (Appendix I). A permission from the TPB for the present proposed temporary RCHE at the

Subject Site is hence required.

- 1.5 The Remarks in the same Notes also states that "Any filling of pond or excavation of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the draft development permission area plan without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance." In view of this and as the proposed temporary RCHE development under application will involve minor excavation works to facilitate the proposed RCHE operation, it also requires a planning permission from the TPB under such circumstances.
- 1.6 To facilitate Members of the TPB to understand the present proposed temporary RCHE development in a holistic manner, this planning statement includes: backgrounds of application and Applicant, a brief description of the site context, an overview of relevant Government policies, relevant impact assessments with respect to traffic, noise, air quality, water quality, waste management, drainage, sewerage, landscape proposals, geotechnical considerations and planning justifications.

2. BACKGROUND OF SUBJECT SITE

The Vacant School Premises

2.1 The Subject Site covers about 78% of the former Wa Fung School site in Lam Hau Tsuen, Yuen Long. The School commenced operation in 1950s¹. It was renovated in 2002 to continue to serve the needs of the local community². However, the School ceased operation in September 2006 for not meeting the minimum threshold number of Primary One students under the policy on

¹ 'Exhibition Panels for the Cheung Ancestral Hall' Available at: https://www.amo.gov.hk/form/cheung-ancestral-hall-panel.pdf

² RNTPC Paper No. A/YL-TYST/333 For Consideration by the Rural and New Town Planning Committee on 3.11.2006

"Consolidation of Under-utilised Primary Schools". According to a written reply by the Secretary for Education in December 2013, the number of classrooms and facilities available therein comprised 5 classrooms and 3 special rooms³.

2.2 Subsequently, the GL portion of this School has then been confirmed as a vacant school premises ("VSP") and reviewed regularly under the Central Clearing House mechanism⁴. In its latest 2020 Review of VSPs announced on 10 May 2021⁵, the Planning Department recommended the GL portion of the former Wa Fung School to be retained for "Government, Institution or Community" ("G/IC") use pending upon the implementation of its permanent use(s).

Previous Applications

- 2.3 Two previous applications, namely Applications No. A/YL-TYST/162 ("Application No. 162") and A/YL-TYST/333 ("Application No. 333"), on the same school site were approved with conditions by the Rural and New Town Planning Committee ("RNTPC") respectively on 1.3.2002 and 3.11.2006.
- 2.4 Application No. 162 was proposed for an extension of the existing school building to upgrade its old facilities to meet the latest standards set out by the Education Department ("ED"). That application was supported by relevant Government departments mainly due to the proposed development was small in development scale and all the extension works were within the existing school boundary without causing any adversely effect on the character of the nearby Lam Hau Tsuen.
- 2.5 Application No. 333 was a proposed temporary social service centre for a period of 3 years. As the applicant of that Application was unable to comply with the approval conditions within the specified limited times for some unknown reasons, that Application was revoked in 2008.

³ Annex 2 to LCQ16: Allocation of land and vacant school premises for education purposes. Available at: https://www.info.gov.hk/gia/general/201312/11/P201312110391.htm

⁴ List of Vacant School Premises Sites Reviewed under the Central Clearing House Mechanism Available at: https://www.pland.gov.hk/pland_en/info_serv/vsp/vsp_list.html#A2

⁵ 'Planning Department updates list of vacant school premises sites reviewed under Central Clearing House mechanism' Available at: https://www.info.gov.hk/gia/general/202105/10/P2021051000266.htm

3. **Background of Applicant**

- 3.1 The Applicant, was formerly known as Banyan Elderly Services Association Limited, which was registered in the Companies Registry of the HKSAR on 21.10.2008, then renamed as Banyan Services Association Limited on 16.12.2015 and on 20.10.2017, it was further renamed as BSA (Appendix II).
- The Applicant has been registered as a charitable institution & trust of a public 3.2 character exempted from tax under section 88 of the Inland Revenue Ordinance since 21.10.2008 (Appendix III). The main objectives⁶ of the BSA are to provide services to elderly people in need in the community. Since 2019, the Applicant has been involving in planning for RCHE services and its first licensed RCHE with a total of 38 bed spaces (including 1 isolation bed) at 1/F of Right Time Building, Playing Field Road, Mong Kok, is expected to be in operation in the 1st Quarter of 2022.
- 3.3 The present proposed development is one of the Applicant's pilot action plans to extend its 'care-and-attention' RCHE services for the elderly in rural areas. Although the proposed development is temporary in nature, it will play an effective role in the present changeover period to relieve the high demand pressure on RCHE bed spaces in the community at least in short to medium terms.
- 3.4 Having considered the fact that it may need to take at least 2 to 3 years to comply with the subsequent required implementation procedures and the licensing application, the Applicant would like to take the liberty to request for a period of 10 years. The primary target users of the proposed RCHE will be the local community (particularly its surrounding villages). It is also the intention of the Applicant to employ staff from its local community for easy and better communication and social purposes Indeed, the approval of this application will help the Applicant to establish an extensive elderly services foundation network to cope with the needs of the community in short, medium and long terms.

⁶ Banyan Services Association. Available at: https://www.banyanservice.org/

4. Changes in Social Circumstances

Soaring Demand for Supply of RCHE

- 4.1 In accordance with the statistics produced by the Social Welfare Department ("SWD")⁷, as at September 2021, a total of 32,183 elderly persons were registered in the Central Waiting List for various types of subsidized residential care services for the elderly. It has been estimated that the average waiting time for care-and-attention places and nursing places is about 19 and 22 months respectively.
- 4.2 **Table 1** summarises the forecasted elderly population⁸ (i.e. 65 years old or over) between 2019 and 2039. The results of the elderly population forecast, as highlighted in **Table 1**, have indicated that the overall estimated elderly population with ages between 65 and above will be increased by some 999,200 in the coming 15 years from 2019 to 2034.

Table 1 Forecasted Elderly Population Between 2019 and 2039 (,000)⁹

Year	2019	2024	2029	2034	2039
65-69	443.4	561.2	614.4	527.1	515.7
70-74	307.5	426.5	540.4	592.6	510.5
75-79	190.7	282.9	398.8	506.3	557.9
80-84	173.4	162.7	248.6	352.5	450.6
85+	206.3	248.4	263.9	342.0	482.3
Total Population	7,180.3	7,363.8	7,476.4	7,553.7	7,566.9
Elderly (≥65)	1,321.3	1,681.7	2,066.1	2,320.5	2,517.0
Elderly %	18.40%	22.84%	27.63%	30.72%	33.26%
Increase in Elderly Population	0.00 (0.00%)	360.4 (27.3%)	744.8 (56.4%)	999.2 (75.6%)	1,195.7 (90.5%)

⁷ Source: 'Statistics on 'Waiting list for subsidised residential care services for the elderly', 'Waiting time for residential care services' and 'Turn for placement offer for cases applying for residential care services' Available at: https://www.swd.gov.hk/storage/asset/section/632/en/LTC_statistics_HP-Eng(202109).pdf

⁸ Source: 'Hong Kong Population Projections 2020-2069' Available at: https://www.censtatd.gov.hk/en/data/stat_report/product/B1120015/att/B1120015082020XXXXB0100.

⁹ Source: Tables B2 and B3 of 'Hong Kong Population Projections 2020-2069' Available at: https://www.censtatd.gov.hk/en/data/stat_report/product/B1120015/att/B1120015082020XXXXB0100. pdf

4.3 Therefore, it is logical to deduce that the demand pressure for supply of RCHE in the next 15 years or so is anticipated to be extremely high. A multi-pronged approach, including the encouragement of private RCHE operations no matter permanent or temporary in nature, would be the most appropriate manner in tackling the acute shortage supply of RCHE in the community for today and the near future.

Government Policy on RCHE Provisions

- 4.4 In the 2018 Policy Address, it highlights that the Government will "continue to adopt the approach of according priority to provision of home care and community care, which are supplemented by residential care, in providing support for frail elderly persons. To meet the different needs of elderly persons living in the community and to offer them choices, [...] The Government will also implement a new scheme to set up day care units for the elderly at qualified private and self-financing Residential Care Homes for the Elderly (RCHEs) to boost the supply of day care services" (paragraph 235).
- 4.5 In the 2020 Policy Address, it gives further impetus for the provision of SWF to meet the needs of the community: "[...] will invite the HKHA and the HKHS to work with DevB to explore increasing the plot ratio of future public housing projects so that about 5% of the gross floor area can be set aside for the provision of social welfare facilities[...]" (paragraph 132).
- 4.6 In the 2021 Policy Address, it further states: the Government "must boost the short, medium and long-term supply of residential care services through a multi-pronged approach, including [...] developing welfare facilities on Government sites [...]" (paragraph 124).
- 4.7 Since July 2003, the Government has encouraged through a policy initiative scheme to provide RCHE premises in new private developments¹⁰. Eligible RCHE premises under such scheme would be exempted from payment of premium under different types of land transactions, including lease modification,

https://www.swd.gov.hk/en/index/site pubsvc/page elderly/sub residentia/id schemetoen/

Source: 'Scheme to Encourage Provision of Residential Care Home for the Elderly Premises' Available at:

land exchange and private treaty grant, with incorporation of certain lease conditions to ensure the delivery of the RCHE premises.

Government Policy on adoption of Modular Integrated Construction ("MiC")

- 4.8 Since 2018, the Government has been promoting the adoption of MiC in the construction industry to enhance the productivity of the construction industry and cost effectiveness of projects. This has been reaffirmed in the 2021 Policy Address by stating that "[wider] use of [...] Modular Integrated Construction (MiC) will also be promoted to shorten construction time, reduce manpower and enhance safety in construction sites" (Paragraph 75 in the 2021 Policy Address).
- 4.9 According to Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers APP-161, "MiC has proven benefits on more efficient and better quality control, less construction waste, shortened construction period, etc".

5. THE SITE AND ITS SURROUNDINGS

- As shown in **Figure 2**, the Subject Site covers a total GL of about 2,950m². Among this total land area, 2,340m² being the School site and 610m² being its adjoining vacant GL. The Subject Site covers about 78% of the former Wa Fung School site. It is the intention of the Applicant to include the adjoining vacant GL, including the former school basketball court (**Figure 2**), for the provision of additional RCHE beds and to accommodate the ancillary facilities, including the EVA, required to support the whole operation. All the structure of all on-site existing buildings are safe and generally in good conditions.
- 5.2 The School site and the basketball court are basically a piece of flat land. The other areas are generally sloping down southward with about 3m in level difference. The Geotechnical Planning Review Report in **Appendix IV** provides more details about the site level conditions.
- 5.3 The main entrance of the School site is located at its north eastern via a flight of stairs (photo 6 in **Figure 3**). At present, no on-site parking facilities are provided within the Subject Site. A local access road with a width ranged from

3m to 6m branches off directly from Shan Ha Road being served the community of Lam Hau Tsuen and its surrounding developments including the School. A Green Mini-Bus ("GMB") Route No. 604 is running between Yuen Long Town Centre and Shan Ha Tsuen via Shan Ha Road about 80m south west of the Subject Site. More elaborated existing traffic and transport arrangements are in Appendix V – the Report of the Traffic Impact Assessment ("TIA").

- 5.4 The Subject Site has no proper public sewerage system in its vicinity. For drainage system, a series of 900mm diameter pipelines has been provided alongside Shan Ha Road about 80m southwest of the Subject Site. Details of existing sewerage and drainage arrangements are in **Appendices VI and VII** respectively.
- 5.5 According to the results of the Tree Survey (Appendix VIII), a total of 80 existing trees in 25 different species have been identified within the Subject Site. Most of these surveyed trees are in poor to fair conditions with low to medium amenity value. Details of these surveyed trees are in Appendix VIII the Landscape Design Proposal.
- 5.6 The Subject Site is surrounded by a mixture of difference land uses, including Lam Hau Tsuen to its east and northeast; vacant GL, graves and local access road to its north and north west; and open storage/vehicle repair workshops to its south (Figure 3).

6. INDICATIVE DEVELOPMENT PROPOSALS

The Scheme

- 6.1 The proposed development is a temporary RCHE operation with about 100 bed spaces. Apart from direct conversion of the existing former School buildings, additional new single-storey Modular Integrated Construction ("MiC") modules are proposed to merge the existing School buildings with covered walkway system into a self-contained single-storey RCHE compound. The anticipated year of completion of the proposed development is 2024.
- 6.2 The overall gross floor area ("GFA") of the proposed development is about

1,500m² (i.e. 452m² being the existing structures and 1,048m² are new ones). **Figures 4 and 5** show the indicative floor layout plan of the proposed development and its indicative sectional diagram respectively. **Table 2** summarizes the key development parameters of the proposed development.

Table 2 Key Development Parameters

Item	Proposed Development
Site Area (Approx.)	2,950m ²
Non-Domestic GFA (Approx.)	1,500m ² of which
	- 452m ² (Existing structures)
	- 1,048m ² (New structures)
	- 162m ² (E&M units – exempted from GFA
	calculation)
Non-Domestic Plot Ratio (Approx.)	0.51
No. of blocks	1 block
Building Height (Approx.) / No. of Storeys	5m to 7m / 1 storey
Site Coverage (Approx.)	57%
No. of beds (Approx.)	100 beds
Private Open Space (Approx.)	$887m^2$
Total Private Car Parking Spaces	3
Total Loading/Unloading Spaces (LGV)	2
Area of Excavation (Approx.)	1,050m ²
Dept of Excavation (Approx.)	1m to 7.5m
Anticipated year of Completion	2024

6.3 The functional planning of whole RCHE development is detailed in **Figure 4**. All open-air activity areas are planned in the southern side to the Subject Site with extensive landscaping treatments. Details of the proposed RCHE will comply with the licensing requirements stipulated in the Residential Care Homes (Elderly Persons) Ordinance, Cap. 459, its subsidiary legislation and the latest version of the Code of Practice for Residential Care Home (Elderly Persons). A total of about 50 staff will be hired to serve the whole operation.

Internal Traffic and Transport Arrangements

- 6.4 The existing pedestrian School entrance will be retained. A 6m wide new vehicular access point, also serves as an EVA, is proposed at the western end of the Subject Site (**Figure 4**). Due to the site limitation, a total of three carparking spaces and two light goods vehicle ("LGV") loading/unloading ("L/UL") bays will only be provided to serve the whole development.
- 6.5 As the proposed RCHE aims to be a local community-based welfare facility, it is anticipated that most of the staff and users are come from families of its

surrounding villages. Therefore, both staff and visitors will be expected to use the local GMB or by walking to and from the proposed development. In addition, a 'visit-by-appointment' system will be adopted for all visitors to ensure an effective crowd control within the development.

6.6 No significant adverse or unacceptable traffic impact due to the proposed RCHE at the Subject Site on the local area is anticipated. Details of the on-site traffic and transport arrangements are provided the report of the TIA in **Appendix V**.

Sewerage Proposals

- 6.7 As paragraph 5.4 mentioned above, there is no existing public sewerage network serving Lam Hau Tsuen area. In order to tackle the short sewage disposal to be generated from the proposed development, two sewage treatment options were considered: Option (1) by regular disposal to nearby Public Sewage Treatment Works via Tanker Away; and Option (2) by provision of an on-site Tertiary Sewage Treatment Plant.
- 6.8 Having considered the following factors, Option (1) has been selected to be the most appropriate option for the proposed temporary RCHE development:
 - i. the proposed RCHE is temporary in nature;
 - ii. the development scale of the proposed RCHE is small;
 - iii. Option (2) involves substantial additional construction and management costs;
 - iv. Option (2) requires a lengthy construction time; and
 - v. Option (2) requires additional spaces for provision of additional power supply and pump systems.
- 6.9 Compared to Option (2), Option (1) only requires a 3m excavation of land (i.e. about 4m lesser than that in Option (2)). Option (1) will entail construction of one 3m underground storage tank with storage capacity of at least 3 days. No sewerage impact due to the proposed development on the local area is anticipated. Details of Option (1) and the SIA are in **Appendix VI**.
- 6.10 The results of the SIA have demonstrated that under both options, the sewage from the proposed development can be sufficiently handled without causing any

adverse or unacceptable impact on the local sewage system and without necessitating upgrading works to the existing sewage network.

Drainage Proposal

6.11 To convey the surface runoff from the proposed development, a series of 525mm diameter pipelines is proposed to collect the on-site surface runoff and to convey them into the existing 900mm pipeline along Shan Ha Road. No significant adverse or unacceptable drainage impact due to the proposed Development on the local drainage system is anticipated. Details of the drainage impact assessment are in **Appendix VII**.

Landscape Proposals

6.12 A total of 51 out of 80 surveyed trees within the Subject Site are proposed to be felled. The loss of these existing trees will be compensated by a minimum of 51 new trees in peripheral areas to offer screening/shading effect and enhance the visual amenity of the development. **Figure 6** shows the indicative landscape proposals for the proposed development. Details of the landscape design proposal are in **Appendix VIII**.

Environmental Aspects – Air and Noise

- 6.13 As paragraph 5.6 mentioned above, some open storage and car repair workshop activities are located south of the Subject Site. Therefore, it is necessary to assess whether the proposed RCHE will be affected by these operations with respect to both air quality and noise (traffic and fixed noise sources) aspects.
- 6.14 The results of the air quality impact assessment ("AQIA") in the Environmental Assessment ("EA") in Appendix IX have demonstrated that the proposed RCHE development will not anticipate to be the subject of any adverse impact in respect to the vehicular emission, or industrial emission, or on-site odour emission (from the sewage off-site by tanker and cooking fume/odour from the kitchen) aspects.
- 6.15 For noise aspect, the results of the noise impact assessment ("NIA") in the EA have concluded that with the provision of silencer and 2.5m tall solid noise barrier wall along the proposed RCHE to block the direct line of sight towards the

existing fixed noise sources, no adverse fixed noise impact is anticipated.

Water Quality Aspect

6.16 As the proposed development will be equipped with an underground sewage storage tank, no water quality impact will be anticipated during the operation phase of the proposed development. Details of the water quality impact assessment ("WQIA") are provided in the EA (Appendix IX).

Waste Management Aspect

6.17 For waste management, with the provision of proper and good practices during construction and operation phases, it is not anticipated that the proposed development will cause any adverse or unacceptable waste management problems in the area. Details of the waste management impact assessment ("WMIA") are provided in the EA (Appendix IX).

M&E Supply Considerations

6.18 A preliminary planning design has been studied for the M&E facilities including utility services availability, power supply and water supply for pumping services and fire services as required by the proposed development. Details of this M&E Study is in **Appendix X**.

Extent of Excavation Works

6.19 **Figure 7** shows the key area will involve an excavation of land for the required site formation works. The overall extent of the excavation area covers about 1,050m². **Figure 5** shows the likely site formation engineering works including minor excavation of land for building footing works in association with the MiC buildings and sewage disposal facilities.

7. PLANNING JUSTIFICATIONS

Conforming with Government Policy Objective

7.1 The proposed RCHE with a total of about 100 bed spaces represents a positive and active scheme to make use of the vacant school premises to meet the pressing demand for 'care-and-attention' RCHE development in the community for short to medium terms. It also represents socially responsive action in providing

warm and user friendly RCHE for the local community (both for the staff and users) in the rural area where welfare resources are rather inadequate when compared to the urban areas.

7.2 Although the present proposed RCHE is temporary in nature, it could be very meaningful for and essential to some families in need not only for the RCHE bed spaces but also provide job opportunities for local skilled and/or non-skilled labour force. The proposed temporary RCHE totally meets the Government's policy objective in boosting the short- and medium-term supply of RCHE in a multi-pronged approach manner as mentioned in paragraphs 4.4 – 4.7 above.

Right Timing and Right Place

- 7.3 Paragraph 4.2 above has highlighted that the projected overall elderly population aged between 65 and above in the coming 15 years will be increased from 1,321,300 (equivalent to 18.4% of overall population) in 2019 to 2,320,500 (equivalent to 30.72% of the overall population) in 2034 (**Table 1**). Noting the fact that as at September 2021, a total of 32,183 elderly persons were registered in the Central Waiting List for various type of subsidised RCHE expecting an average waiting time about 19 and 22 months respectively for care-and-attention places and nursing places.
- 7.4 The proposed temporary RCHE with about 100 bed spaces will provide the community a warm and meaningful effort to relieve its pressing demand pressure. The location of the Subject Site is slightly remote from the Yuen Long Town Centre. The proposed RCHE development at this particular rural location will definitely benefit its surrounding village settlements. The letters issued by the local representatives and members of the local community to support the proposed RCHE have clearly reflected their strong desire for this community-based welfare facility (**Appendix XII**).

In line with Short-term Planning Intention

7.5 The Subject Site involves conversion of the GL portion of the former Wa Fung School, being registered as a VSP, into a temporary RCHE with about 100 bed spaces. Under the Central Clearing House mechanism, this GL portion of the

former Wa Fung School has been recommended by the Planning Department to be retained for "G/IC" uses in the short-term pending implementation of long-term uses.

7.6 Noting the fact that the proposed RCHE development is a welfare facility to serve the community in general. It is also classified as one of the "G/IC" facilities. In this regard, the proposed temporary RCHE development fully in line with general planning intention of the Subject Site at least in the short-term planning intention. Therefore, the approval of this temporary RCHE development will not jeopardize the long-term planning intention of Subject Site.

Smart Use of Inactive land resources

- 7.7 It is noted that the site of the former Wa Fung School that has been left vacant for more than 15 years since 2006. The approval of this planning application represents a positive and active support from relevant Government departments and the TPB about the present proposed smart use of an inactive GL for a much-needed welfare facility to relieve the pressing demand for the RCHE bed spaces in the local area.
- 7.8 The implementation of the proposed temporary RCHE development will also contribute efforts in maintaining a proper management of the Site on the one hand, and, on the other hand, to provide a community-based welfare services in this part of the Lam Hau Tsuen area. It is a "win-win' project benefiting to all parties concerned in the community.

Technically Feasible Scheme

7.9 The results of the geotechnical (**Appendix IV**), TIA (**Appendix V**), SIA (**Appendix VI**), DIA (**Appendix VII**), EA (**Appendix IX**) have demonstrated that the proposed temporary RCHE development will not result in any significant adverse or insurmountable impacts on the local area with respect to geotechnical, traffic, drainage, sewage disposal, water quality or waste management aspects, or will be affected by its surrounding developments with respect to traffic and fixed noise sources or air quality aspects. Therefore, the proposed development under application is technically feasible. No consequential significant adverse

effect due to the proposed temporary RCHE development is anticipated.

7.10 In the light of the above, the approval of the present planning application represents a good and meaningful case benefiting to the community in short-to medium-term.

8. CONCLUSION

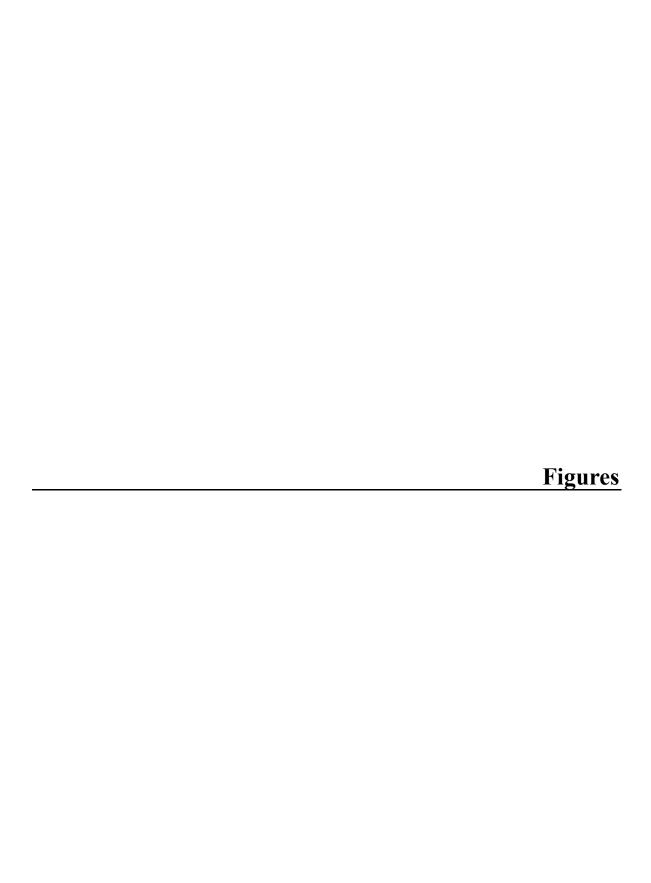
- 8.1 This planning application aims to seek the permission from the TPB for: (i) a proposed temporary 'Social Welfare Facility' (Residential Care Home for the Elderly) ("RCHE") with about 100 bed spaces for period of 10 years at a site partly covered by the existing former Wa Fung School site (about 78%) and partly on its adjoining GL, Lam Hau Tsuen, Yuen Long; and (ii) a proposed excavation of land in association with the proposed RCHE development.
- 8.2 Apart from direct conversion of the existing affected former School buildings, additional new single-storey Modular Integrated Construction ("MiC") modules are proposed to merge the existing School buildings with covered walkway system into a self-contained single-storey RCHE compound. The whole development scheme amount to a total GFA of about 1,500m². Upon completion in 2024, a total of about 100 RCHE bed spaces will be provided to meet the acute needs of the community.
- 8.3 It has been demonstrated that the proposed temporary RCHE development totally conforms with the Government's policy objective in the supply of RCHE to meet the soaring demand in the community; it represents a 'win-win' project at the right timing and right place benefiting all parties concerned (local labour force, elderly members in the local community, and relieves the pressure to increase supply of RCHEs); it is fully in line with the short-term planning intention to use the vacant school premises in a smart land-use development manner; and it will not result in any consequential significant adverse or unacceptable impact on the local area in terms of traffic, sewerage or drainage aspects. With the provision of a 2.5m noise barrier wall, the proposed development will not suffer from any adverse or unacceptable traffic and fixed noise sources.

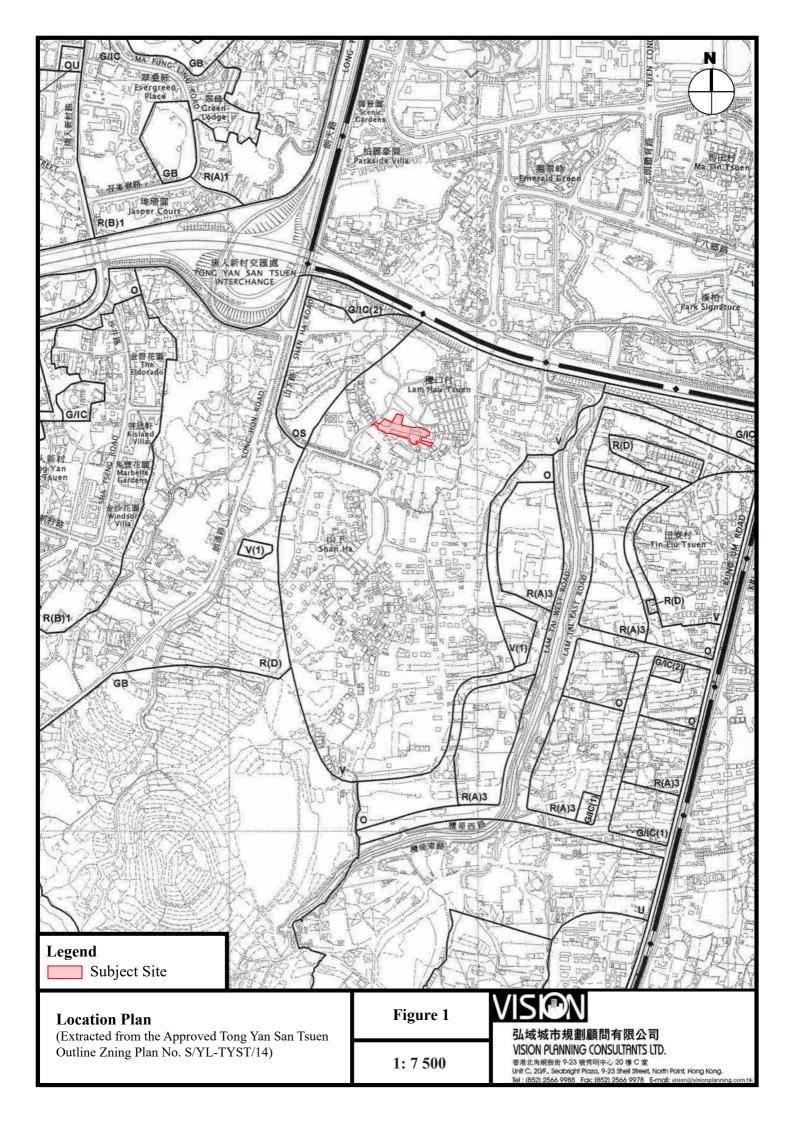
Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE in "V" Zone, Lam Hau Tsuen, Yuen Long, New Territories

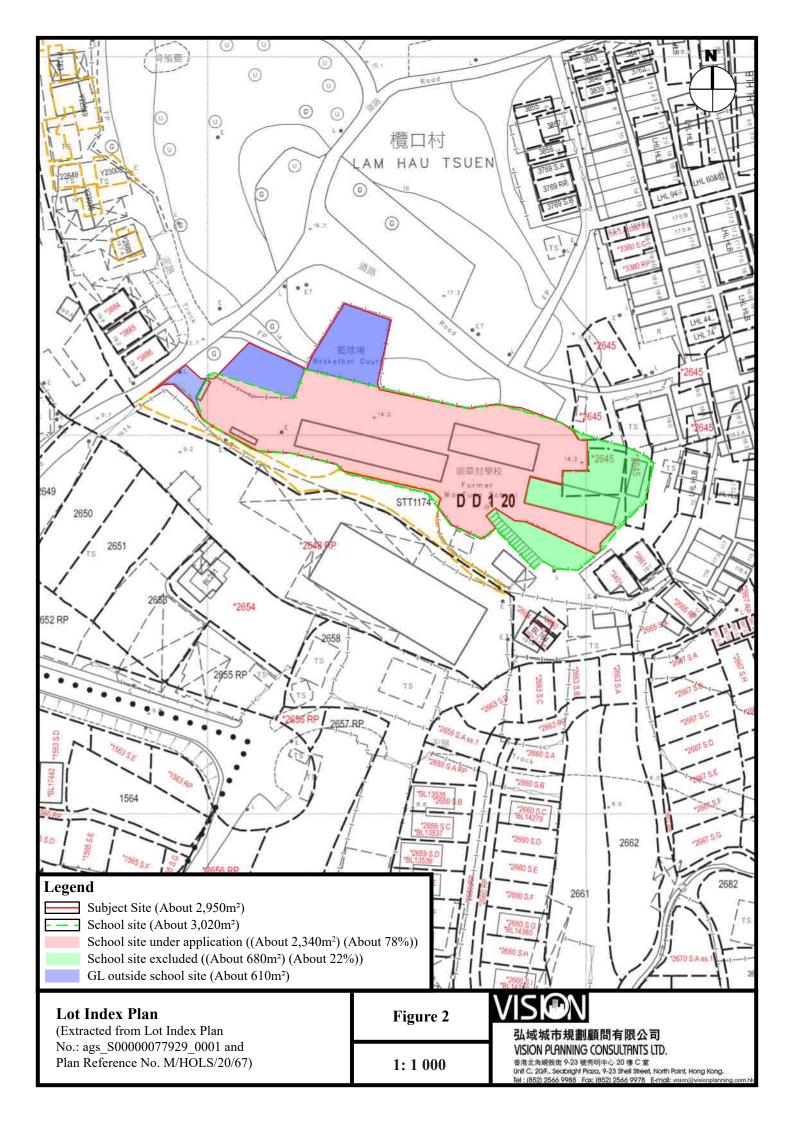
- 8.4 The approval of this application represents a good and essential case to meet the needs of the community.
- 8.5 In view of the above, we respectfully request the Town Planning Board to give a favourable consideration to and approve this meaningful application so as to allow the Applicant to implement the proposed temporary RCHE development project as early as possible.

Vision Planning Consultants Limited

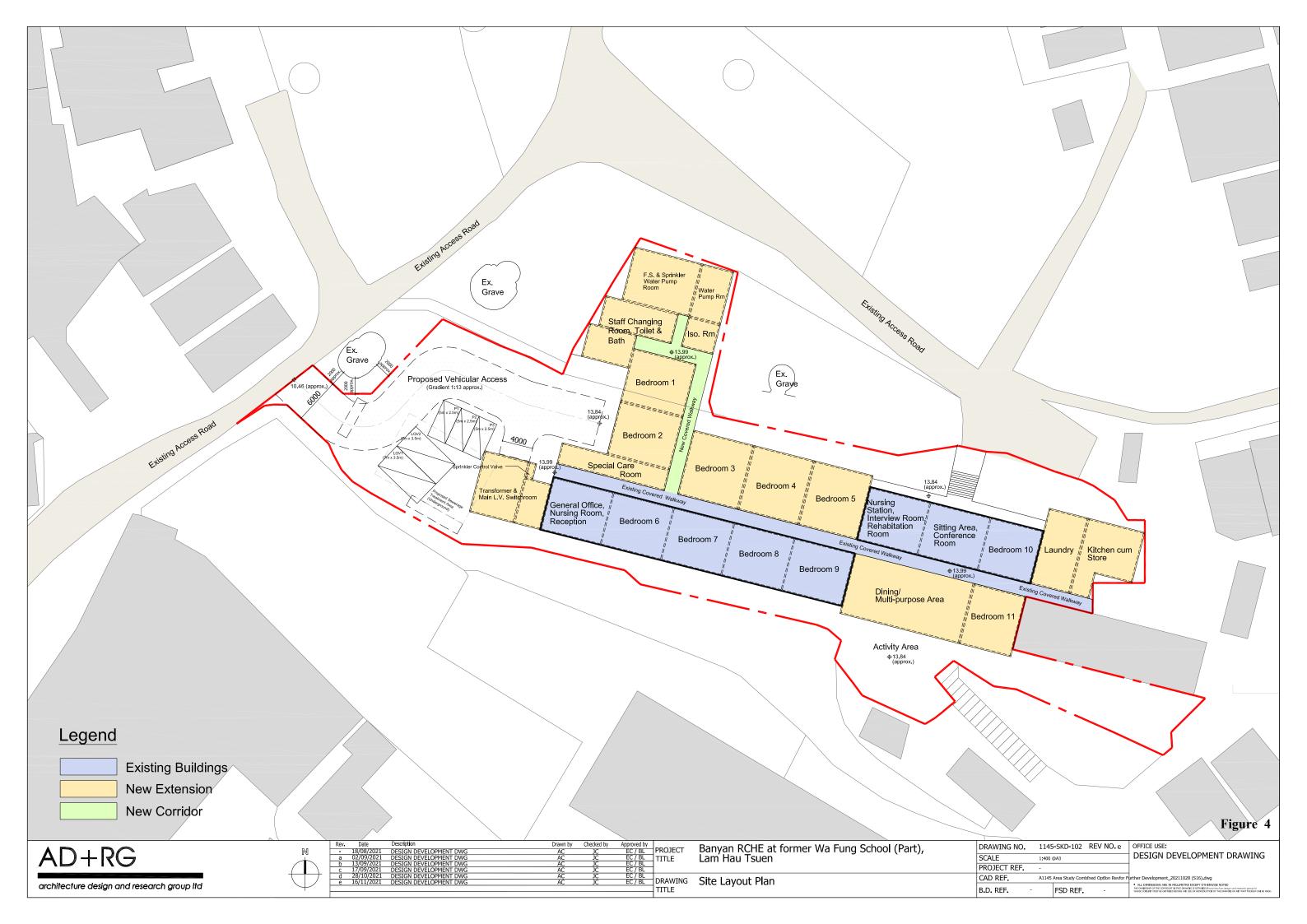
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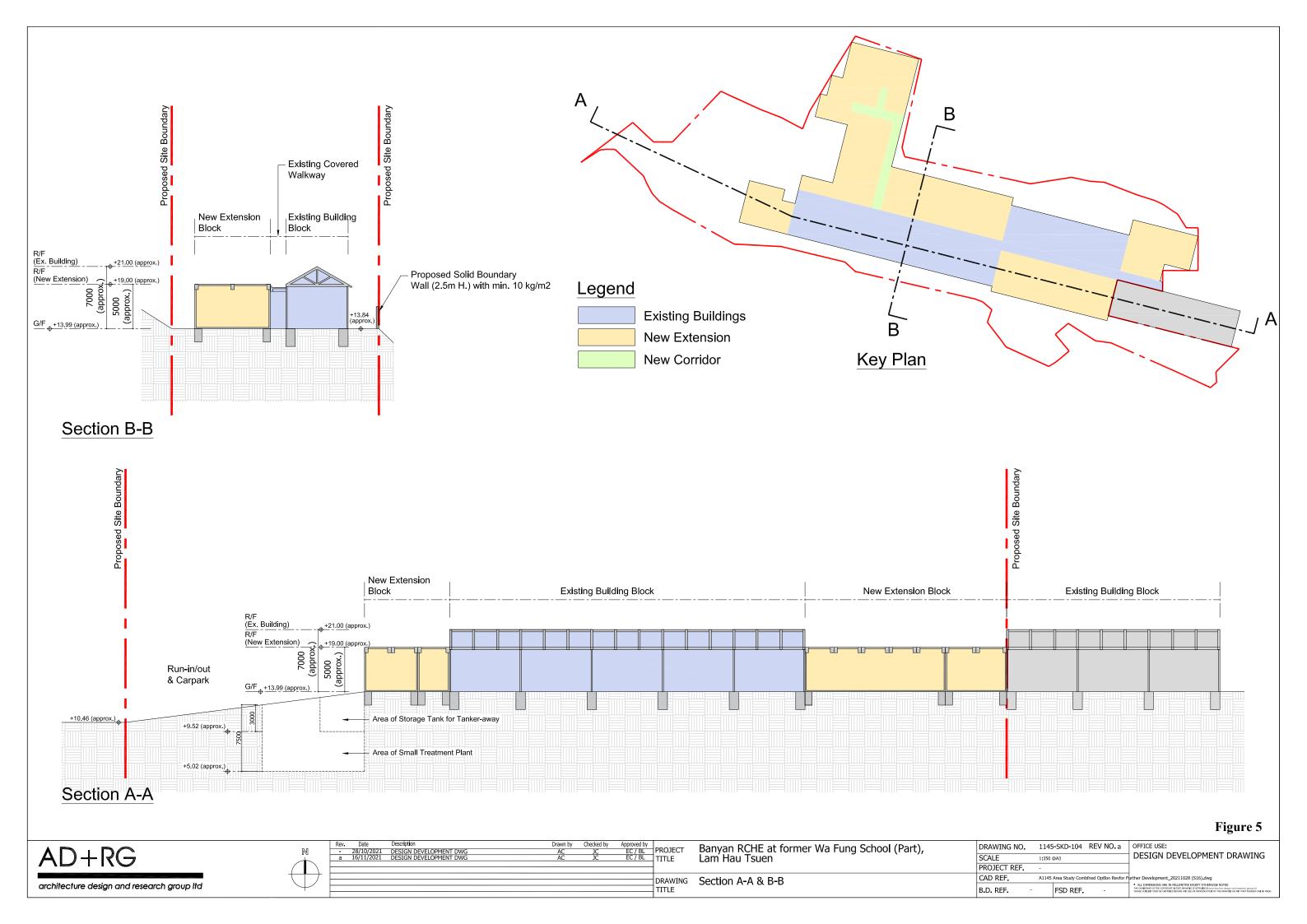


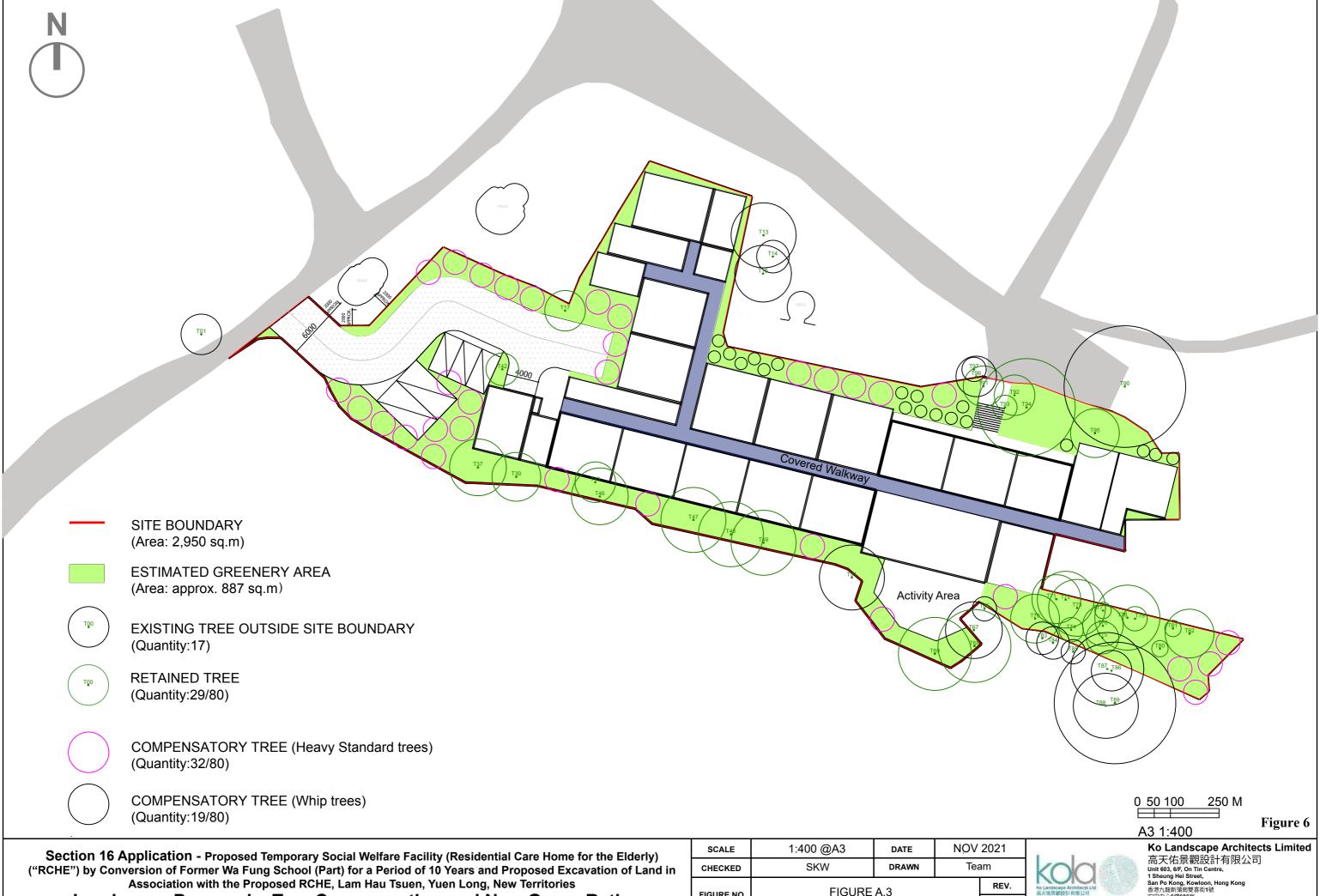










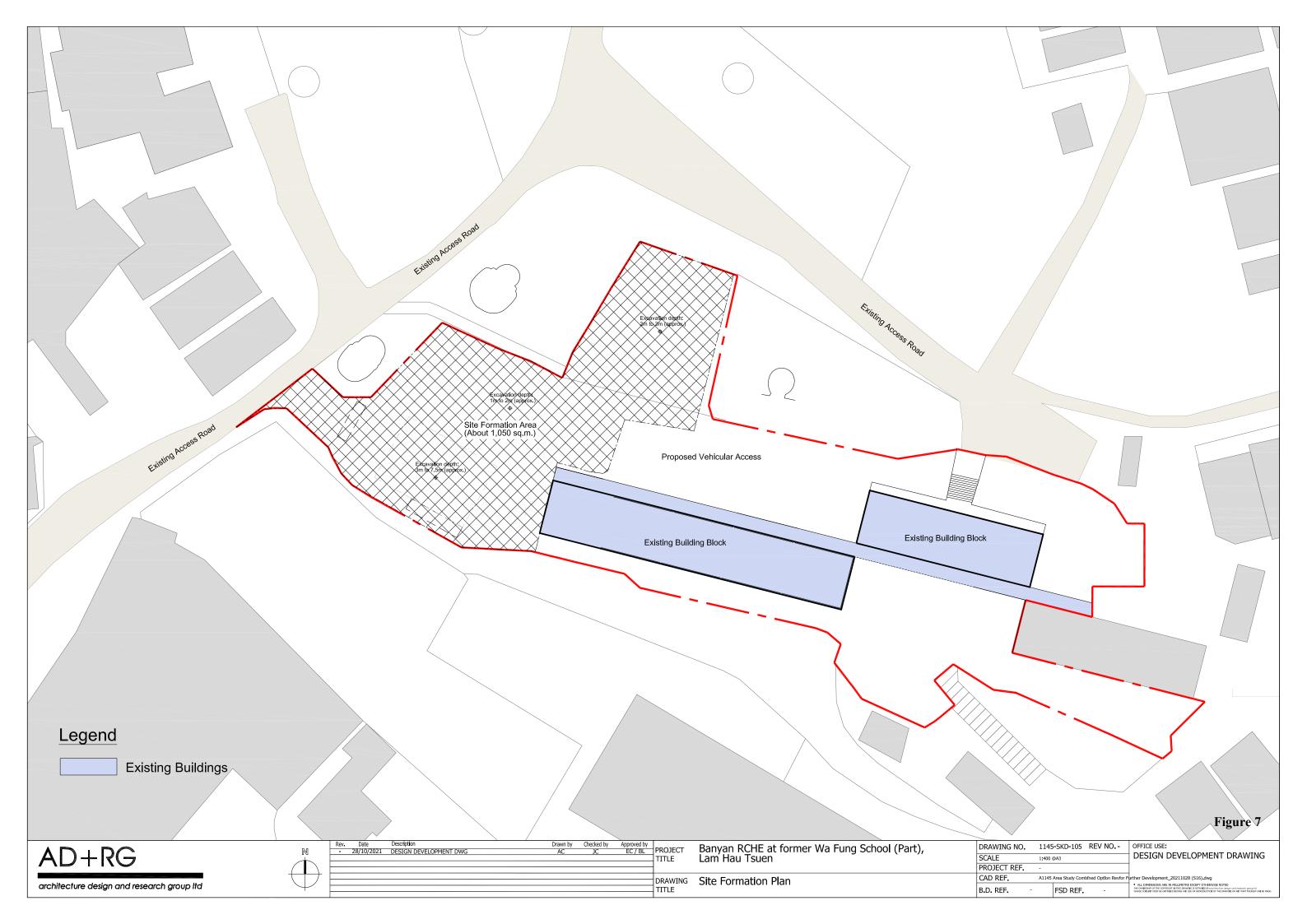


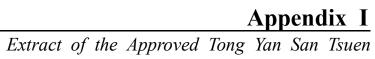
Landscape Proposal – Tree Compensation and New Green Ratio

SCALE	1:400 @A3	DATE	NOV 2021			
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FIGURE NO.	RE NO. FIGURE A.3			REV.		



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Outline Zoning Plan No. S/YL-TYST/14

VILLAGE TYPE DEVELOPMENT

Column 1	Column 2	
Uses always permitted	Uses that may be permitted with or	
	without conditions on application	
	to the Town Planning Board	

Agricultural Use

Government Use (Police Reporting Centre,

Post Office only)

House (New Territories Exempted House only)

On-Farm Domestic Structure

Religious Institution (Ancestral Hall only)

Rural Committee/Village Office

Burial Ground Eating Place

Flat

Government Refuse Collection Point

Government Use (not elsewhere specified) #

House (not elsewhere specified)

Institutional Use (not elsewhere specified) #

Petrol Filling Station

Place of Recreation, Sports or Culture

Private Club
Public Clinic

Public Convenience

Public Transport Terminus or Station

Public Utility Installation #

Public Vehicle Park (excluding container vehicle) Religious Institution (not elsewhere specified) #

Residential Institution #

School#

Shop and Services

Social Welfare Facility #

Utility Installation for Private Project

In addition, the following uses are always permitted on the ground floor of a New Territories Exempted House:

Eating Place Library School Shop and Services

Planning Intention

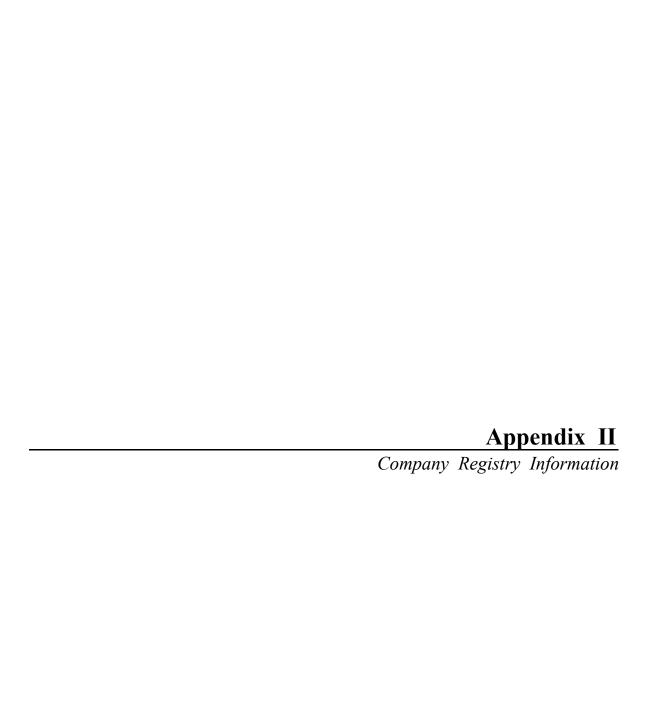
The planning intention of this zone is to designate both existing recognized villages and areas of land considered suitable for village expansion. Land within this zone is primarily intended for development of Small Houses by indigenous villagers. It is also intended to concentrate village type development within this zone for a more orderly development pattern, efficient use of land and provision of infrastructures and services. Selected commercial and community uses serving the needs of the villagers and in support of the village development are always permitted on the ground floor of a New Territories Exempted House. Other commercial, community and recreational uses may be permitted on application to the Town Planning Board. For land designated "Village Type Development (1)", the planning intention is to provide land considered suitable for reprovisioning of village houses affected by Government projects.

(Please see next page)

VILLAGE TYPE DEVELOPMENT (cont'd)

Remarks

- (a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building (except development or redevelopment to those annotated with #) shall result in a total development and/or redevelopment in excess of a maximum building height of 3 storeys (8.23m) or the height of the building which was in existence on the date of the first publication in the Gazette of the notice of the draft development permission area plan, whichever is the greater.
- (b) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height restriction stated in paragraph (a) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.
- (c) Any filling of pond or excavation of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the draft development permission area plan without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.





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Date of Incorporation: 21-OCT-2008

Active Status: Live

Remarks: Licence granted to dispense with "Limited" and/or "有限公司" in company name

Winding Up Mode: -

Date of Dissolution /

Ceasing to Exist:

Register of Charges: Available

Important Note:

Name History

Effective Date Name Used

20-OCT-2017 BANYAN SERVICES ASSOCIATION

榕光社

Banyan Services Association Limited

榕光社有限公司

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Appendix	Ш

List of charitable Institutions & trusts of a public character, which are exempt from tax under section 88 of the Inland Revenue Ordinance

Search for charitable Institutions & trusts of a public character, which are exempt from tax under section 88 of the Inland Revenue Ordinance as at 31 October 2021 搜尋截至 2021年10月31日 根據《稅務條例》第88條獲豁免繳稅的慈善機構及慈善信託

Name of organization: BANYAN SERVICES ASSOCIATION

慈善團體名字: 榕光社

Alias:

別名:

Effective Date:

生效日期:

21.10.2008

Subsidiaries 附屬團體

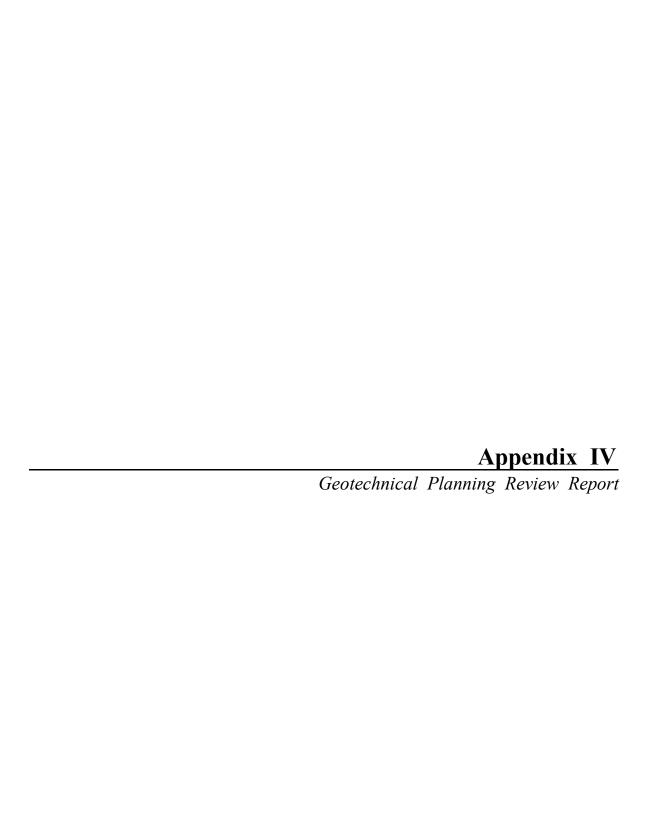
1. 榕光社護老之家

Close 開閉



Last revision date 修訂日期: 31/10/2021

(dd/mm/yyyy) (日/月/年)





Geotechnical Planning Review Report

For

Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories

Prepared by:

APT Engineering Consultant Ltd.
Unit B & C, 16/F King Palace Plaza
55 King Yip Street
Kwun Tong
Kowloon



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APPENDIX

Appendix A: Proposed Layout Plan

Appendix B: Topographical Map

Appendix C: Site Location Plan (GeoInfo Map, GEO, CEDD)

Appendix D: Sections

Appendix E: Site Investigation Report (Vibro)



1 INTRODUCTION

1.1 Background information

This Geotechnical Planning Review Report (GPRR) is prepared to support a proposed temporary Residential Homes for the Elderly ("RCHE") for a period of 10 years and associated excavation of land at former Wa Fung School (part) (the Application Site), Lam Hau Tsuen, Yuen Long.

This report presents the preliminary geotechnical planning review for the proposed RCHE at the Application Site. This report shall assist GEO to identify at an early-stage fundamental geotechnical feasibility and constraints.

2 SITE LOCATION AND PROPOSED RCHE

2.1 Site Description

The proposed RCHE is located at the former Wa Fung School (part), Lam Hau Tsuen. The overall site area is about 2,950 m².

The Application Site is bounded by Yuen Long Highway to its farther west; Shan Ha Road to its North; locally it is bounded by a local vehicular access road to the west and low-rise structures to the south of the site. A location plan showing the vicinity of the Application Site is presented in Figure 1.



Figure 1 – Site Location (Survey and Mapping Office of the Lands Department)



Existing ground level of two existing building is +14.00mPD. Existing level is generally sloping in a north to south direction ranging from +16.24mPD to +13.13mPD. A 24m long ramp with level ranging from +11.83mPD to +14.28mPD is located on the west of the site. A vertical level drop from +14.2mPD to +9.20mPD is located along the south of the site. A topographical map and site layout plan from Hong Kong Map Service 2.0 are presented in Figure 2 and Figure 3 respectively. Sections showing the slopping ground on the south of the site are presented in Figure 4 and Figure 5.

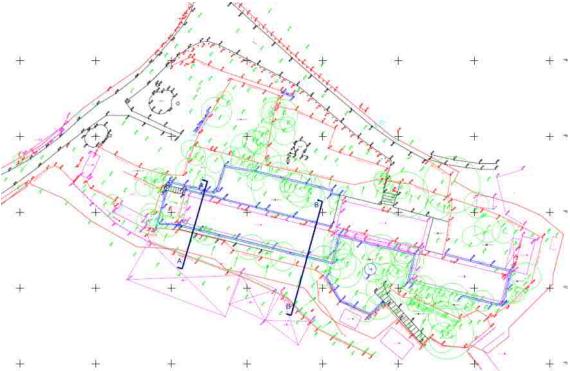


Figure 2 – Site Location (Topographical Map)

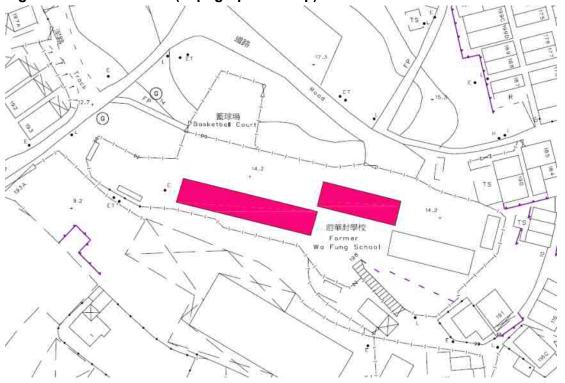




Figure 3 – Site Location (Hong Kong Map Service 2.0 of the Lands Department)

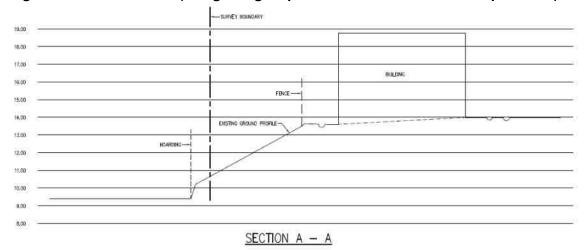


Figure 4 - Section A from Topographical Map

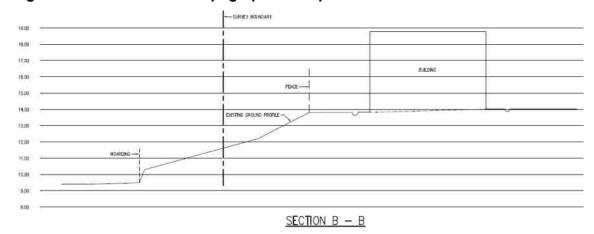


Figure 5 - Section A from Topographical Map

2.2 Existing Structure

Two existing 1-storey buildings with 24m x 7m and 40m x 7m dimension.

2.3 Proposed Works

Two existing structures of former Wa Fung School would be converted into RCHE facilities. A number of new single-storey MiC buildings and one 7.5m-depth underground small treatment plant (STP) are proposed on existing level ground. The proposed structure would be found on shallow foundation. The location of the existing and proposed new structures is shown on Figure 6.



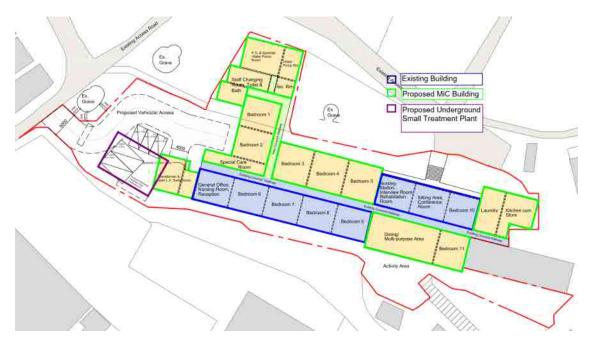


Figure 6 – Site Layout (Existing and Proposed Structures)

3 EXISTING INFORMATION AND SITE GEOLOGY

3.1 Information Retrieval

The basic and detail information of the existing geotechnical features retrieved from the Slope Information System (SIS) and GeoInfo from GEO. Site location plan in GeoInfo from GEO and geology investigation report from Virbo are presented in Appendix C and Appendix D respectively.

3.2 Existing Geotechnical Features

No registered geotechnical feature located inside or adjoining the Application Site. The Application Site is shown in Slope Information System on Figure 7.





Figure 7 – Site Location (Slope Information System by Geotechnical Engineering Office, CEDD)

3.3 Existing Development Type

Since the site is surrounded by developed area (village type development), it is not liable to Natural Terrain Hazards Study (NTHS).

3.4 Enhanced Natural Terrain Landslide Inventory

No previous landslide records in the vicinity of the Application Site are found from the Enhanced Natural Terrain Landslide Inventory (ENTLI).

3.5 Site Geology

According to existing information obtained from GEO, CEDD, a site investigation was conducted within site boundary on Jan 2002. Two 100m-depth boreholes (P487-DH1 & DH2) and four trial pits (P487-TP1 to TP4) are carried out. Completely to moderately decomposed metasandstone / metasiltstone was found around 85m depth from ground level in DH1 and DH2. Moderately to slightly decomposed marble with around 15m depth was found underneath. Loose fill and completely decomposed metasiltstone were found in TP1 to TP4. The existing GI location plan is shown on Figure 8.



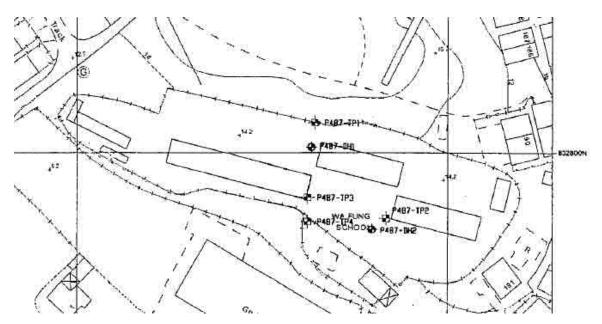


Figure 8 – Existing GI Location Plan (Vibro)

4 GEOTECHNICAL PLANNING REVIEW

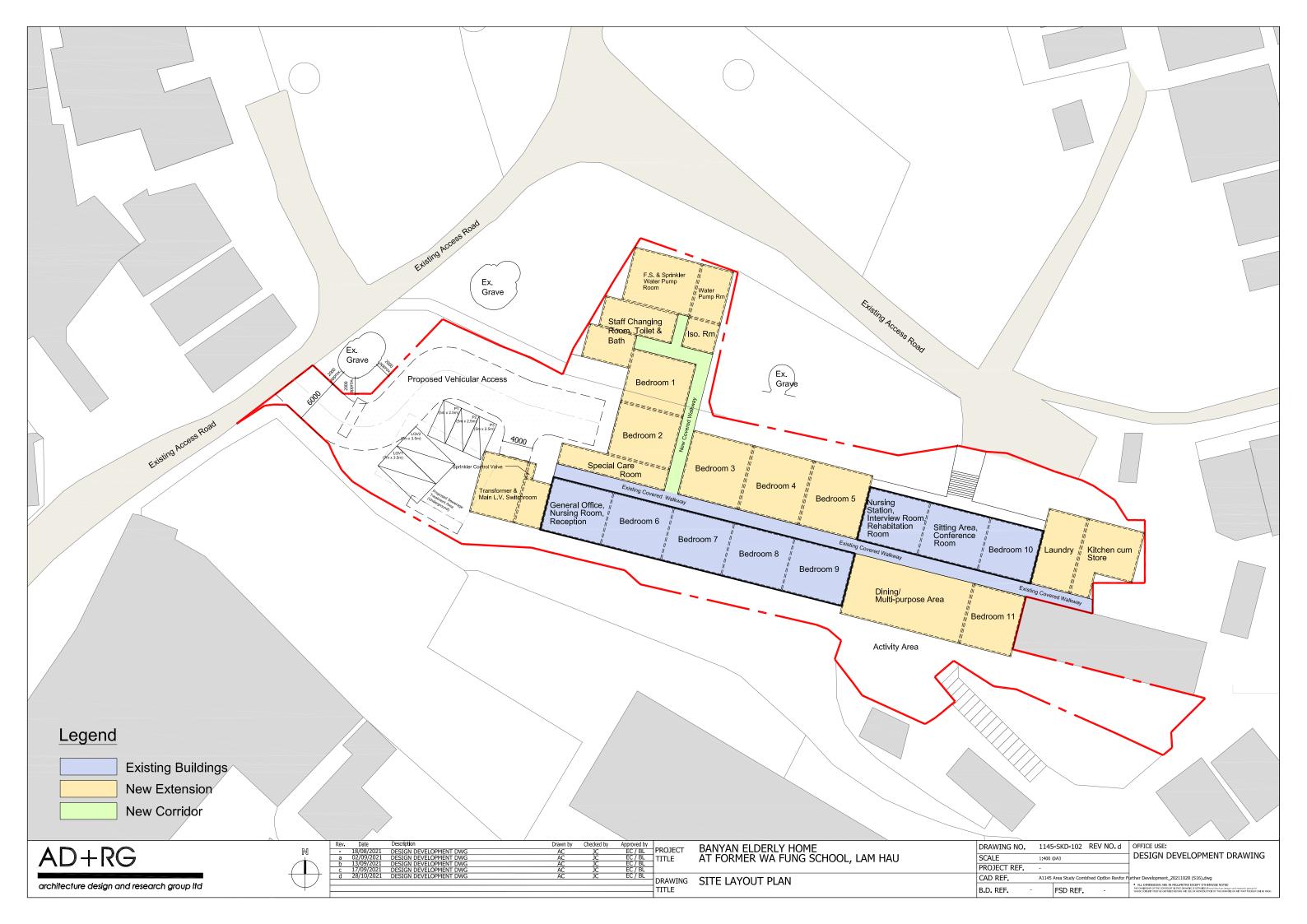
4.1 Effects of the Proposed Works to the Existing Ground

According to the proposed master layout plan, the proposed works comprises a number of new MiC buildings with one 7.5m-depth underground small treatment plant (STP). In view of result from site investigation and building configuration, shallow foundation is considered feasible for the proposed structure. Retaining wall is proposed between the water pump room on north of the site at +13.99mPD and existing access road at +16.7mPD to resist around 2.7m soil level difference. Proposed excavation and lateral support, site formation with retaining wall / slope upgrading work, and foundation shall be considered in detailed design.

5 CONCLUSION

The Application Site covers largely the former Wa Fung School and its adjoining government land and is located at Lam Hau Tsuen, surrounded by developed area. No registered geotechnical features are found inside / around the Application Site. No previous landslide records in the vicinity of the Application Site are found from the ENTLI. NTHS is not required for the Application Site. Based on the above discussion, it can be concluded that the proposed works at the Application Site shall have no adverse effect, and vice versa, to adjacent ground and existing structures. In this relation, the proposed temporary RCHE at the Application Site, Lam Hau is considered geotechnically feasible.

Appendix A Proposed Layout Plan



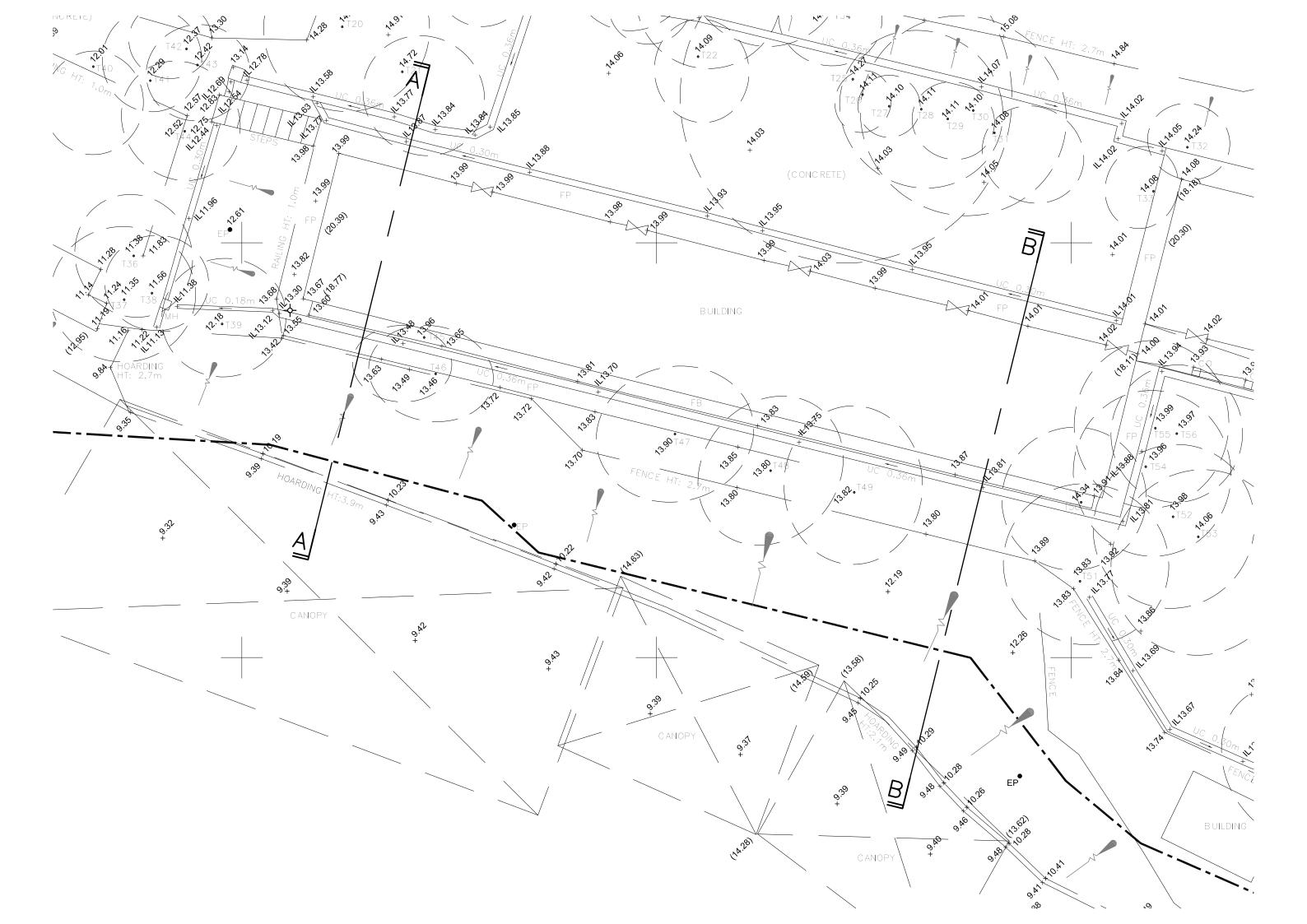
Appendix B Topographical Map

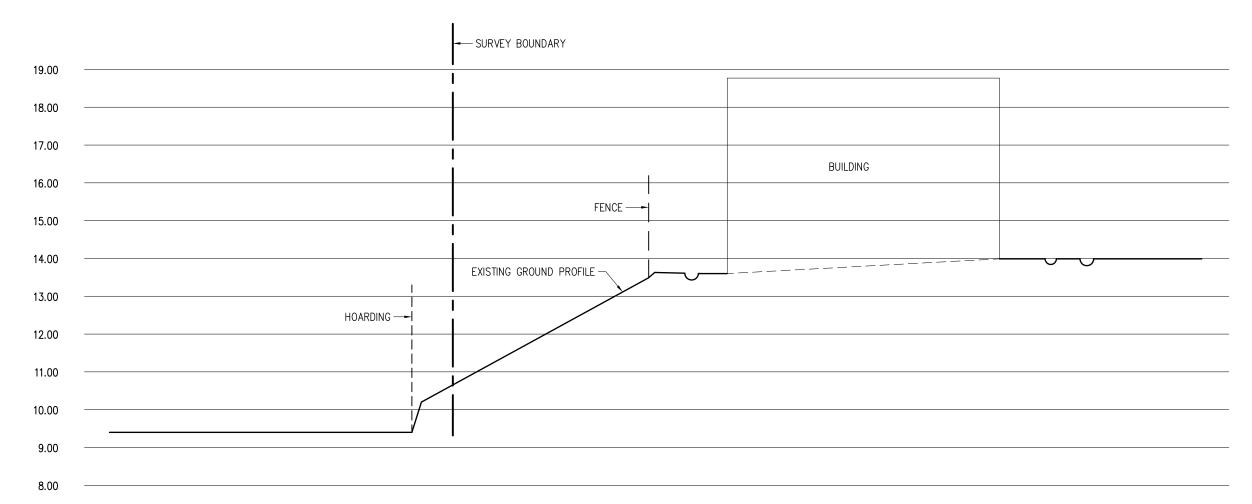


Appendix C Site Location Plan (GeoInfo Map, GEO, CEDD)

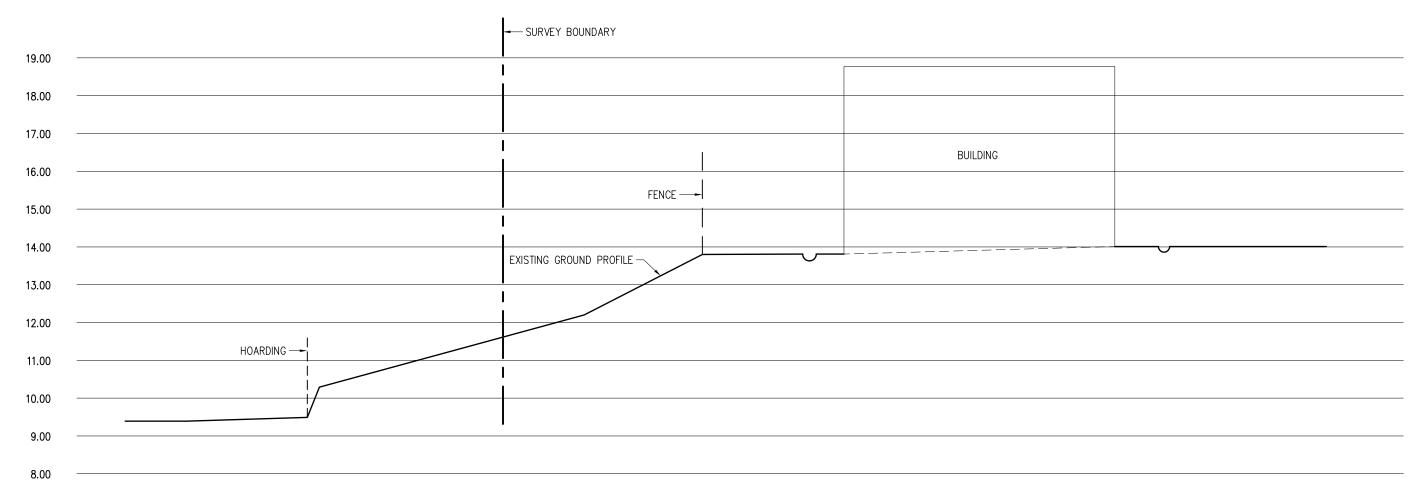


Appendix D Sections





<u>SECTION A - A</u>



SECTION B - B

Appendix E Site Investigation Report (Vibro)





A. S. D. TERM CONTRACT NO. TC J304 FOR GROUND INVESTIGATION AND LABORATORY TESTING











HEAD OFFICE:

27/F., NEW WORLD TOWER, 16 - 18 QUEEN'S ROAD CENTRAL, HONG KONG. TEL: 2522 6171 FAX: 2524 9724

DEPARTMENT OFFICE:

DRAGON SEED BUILDING 10/F., 39 QUEEN'S ROAD CENTRAL, HONG KONG. TEL: 2815 9263 FAX: 2342 3589



SITE INVESTIGATION DEPARTMENT



GEO	GINDERING DEPARTMENT OTECHNICAL MATION UNIT
Report No.	37748
AREA Ref.	

F	INAL FIELDWORK REPORT SCHOOL NO. P487				
CONTRACT No.	TC J304				
WORKS ORDER No.	ASD007206 (Vol. 3 of 9)				
PROJECT	School Improvement Programme Final Phase, (Group 3) - P487 Wa Fung School	Package 5			
CLIENT	Architectural Services Department				
DATE	22 October 2002				
	Y. K Lee Geologist	22/10/0			
COMPETENT PERSONS	Dr. S. K. Kwok Site Supervision	25/10/0 Date			
		73/10/0			



Head Office: G/F Shop 11 & 1st Floor, 2 Landale Street, Wanchai, Hong Kong.

Tel: 2815 9263 Fax: 2342 3589



Architectural Services Department, Queensway Government Offices, 66 Queensway, Hong Kong



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VIBRO (H.K.) LIMITED SITE INVESTIGATION DEPARTMENT

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				CONT	RACT	DATA	SUMI	MARY				
	Contractor	Vibr	o (H. K.)	Limited	ł				Date	Started	11	8/01/2002
Field work	Works Order No. ASD007206 (Vol. 3 of 9)								Work	Comple	ted 0	2/03/2002
Laboratory	Started											
testing	Works Order No.		1-1			tests	Comple	ted				
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				F	ieldwo	rk Sun	nmary	,				
Inspect pit	Total No.		i	2		Total leng			00			
Trial pit	Length of soil (m)	6.	20		Volume of	rock (m)	*:	Others (GCOP)		Block Sample
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Drillhole	Length of rock (m)		Total	43.31	N-size	27.96	H-size	15.35	P-size	ē	
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Testing	No of tests	80	SPT	80	Pressure	emeter	140	Constant	Head		Falling	The street to a sin
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Slope strip		Length o	of soil (m) -	No/Type	of samplin]	=\/		No/Type	e of tests	
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ASD CONTRACT NO. TC J304 TERM CONTRACT FOR GROUND INVESTIGATION AND LABORATORY TESTING FOR WHICH THE ARCHITECTURAL SERVICES DEPARTMENT IS RESPONSIBLE IN HONG KONG, KOWLOON, NEW TERRITORIES AND THE OUTLYING ISLANDS

Works Order No. ASD 007206 Volume 3 of 9 School Improvement Programme Final Phase, Package 12 P487 Wa Fung School

Volume No.	School Name
1	P417 – SKH Kam Tin St. Joseph's Primary School
2	P480 – Tung Koon School
3	P487 – Wa Fung School
4	P488 – Wah Shan Public School
5	P489 – Wai Kwan School
6	P493 - Wing On School
7	P494 – Wo Him School
8	P500 - Yau Tam Mei Primary School
9	P502 – Yin Ying Catholic Primary School



ASD CONTRACT NO. TC J304 TERM CONTRACT FOR GROUND INVESTIGATION AND LABORATORY TESTING FOR WHICH THE ARCHITECTURAL SERVICES DEPARTMENT IS RESPONSIBLE IN HONG KONG, KOWLOON, NEW TERRITORIES AND THE OUTLYING ISLANDS

Works Order No. ASD 007206 Volume 3 of 9 School Improvement Programme Final Phase, Package 12 P487 Wa Fung School

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ASD CONTRACT NO. TC J304 TERM CONTRACT FOR GROUND INVESTIGATION AND LABORATORY TESTING FOR WHICH THE ARCHITECTURAL SERVICES DEPARTMENT IS RESPONSIBLE IN HONG KONG, KOWLOON, NEW TERRITORIES AND THE OUTLYING ISLANDS

Works Order No. ASD 007206

Volume 3 of 9

School Improvement Programme Final Phase, Package 12

P487 Wa Fung School

1. INTRODUCTION

Vibro (H.K.) Limited was awarded a 2 year Term Contract, TC J304, for Ground Investigation and Laboratory Testing for which the Architectural Services Department is Responsible in Hong Kong, Kowloon, New Territories and the Outlying Islands for the Government of the Hong Kong Special Administrative Region.

This report presents the results of the ground investigation, carried out under Works Order No. ASD00706, for School Improvement Programme Final Phase, Package 12 – P487 Wa Fung School. The fieldwork was carried out between 18th January 2002 and 2nd March 2002.

2. THE SITE

The site, , is located between Shan Ha Tsuen and Lam Hau Tsuen and at about 40m north of Shan Ha Road, Yuen Long. The site can be located between Hong Kong 1980 Grid coordinates E 819860 and E 819885, and N 832775 and N 832805.

All exploratory hole locations are indicated on the Ground Investigation Plan, presented with this report. Co-ordinates and ground levels of the centre point of the exploratory hole locations are presented in Table 1 (Survey Record).



3. GEOLOGY

According to the 1:20,000 scale, HGM20 Series Solid and Superficial Geology Map published by the Geotechnical Engineering Office Sheet 6 (Edition 1 – 1988), the site is underlain by the metasiltstone and phyllite with the metasandstone of San Tin Group of the Carboniferous Period from the Palaeozoic Era.

The geological sequence encountered during the investigation can be summarised as follows:

Fill was encountered at ground level at both drillhole locations with thicknesses of 2.00m and 1.50m. This stratum comprised sandy silt or sandy clayey silt with some gravel.

Cavity infilled deposit was encountered at both drillhole locations at depth of 86.20m (-72.42mPD) to a depth of 88.50m (-74.72mPD) and at a depth of 85.20m (-71.26mPD) to a depth of 86.65m (-72.71mPD) at drillhole locations P487-DH1 and P487-DH2 respectively. This stratum comprised sandy clay or sandy silty clay with some gravel.

Saprolitic soil was encountered at both drillhole locations. This stratum was encountered to depths of 85.20m (-71.42mPD) and 85.20m (-71.26mPD) at the location of drillholes P487-DH1 and P487-DH2 respectively. This stratum comprised completely decomposed and completely to highly decomposed metasiltstone and metasandstone.

Weathered rock and corestones were encountered at the drillhole location P487-BH1 and proven to a depth of 85.75m (-71.97mPD).

Bedrock defined as Grade III or better rock with not less than 90% total core recovery was encountered at both drillhole locations. Bedrock was encountered at 88.50m (-74.75mPD) and 86.65m (-72.71mPD) at drillhole locations P487-DH1 and P487-DH2 respectively. The drillholes were terminated 10m into bedrock, as instructed by the works order, at 100.41m (-86.63mPD) and 100.14m (-86.20mPD), at drillhole locations P487-DH1 and P487-DH2 respectively.

4. FIELDWORK

The fieldworks comprised drilling at two drillhole locations (-DH1 and -DH2) and the excavation of four trial pits (-TP1 to -TP4). The works at these investigation stations were carried out to depths and at locations specified in the works order, or amended where necessary by the Engineer's Representative.

4.1 Drilling

Rotary drilling techniques, using a hydraulic-feed type drilling rig, were adopted for this contract. S (168mmØ), P (140mmØ), H (115mmØ) and N (89mmØ) casing, equipped with tungsten carbide cutting shoes, was used to advance the boreholes and prevent collapses from occurring. Arisings from the drilling process were removed from the drillholes using water flush.

In superficial deposits and soils derived from the in situ weathering of rock, a wash boring technique was used.



Where hard strata in common ground or rock materials were encountered, a T2101 or TNW double tube core barrel was used to recover core samples.

Undisturbed mazier samples were taken at depths specified by the Engineer, using a mazier triple tube retractable core barrel fitted with a removable 72mm diameter, 1000mm long rigid PVC inner tube. A retractable cutting shoe projecting from a tungsten carbide core bit was used to penetrate the material being sampled and thus isolate the material from the detrimental effects of the circulatory fluid.

Photographs were taken of all rotary cored material in the core boxes. Where jars and core samples are present in the same box the jar lids have been removed prior to photography to display the disturbed samples. The drillhole records and relevant photographs are presented in Appendices D and E respectively.

4.2 Trial Pitting

The trial pits were excavated by hand at positions specified by a representative of the Architectural Services Department (See ground investigation plan). Each trial pit face was logged and a photographic record was taken. The trial pit records and relevant photographs are presented in Appendices H and I respectively.

Upon completion the trial pits were backfilled with suitable material compacted in 150mm layers and the surfaces were reinstated to match the original condition.

4.3 Field Testing

Standard Penetration Tests with liner samples were taken at both drillhole locations at depths specified in the Works Order. The tests were conducted according to BS1377 (1990 Part 9 Method 3.3).

The numbers of blows to drive a standard split-spoon sampler for the first 150mm penetration (seating drive) in 75mm increments and those for each 75mm penetration for the subsequent 300mm were recorded. The 'N' value was taken as the sum of the blows for the last 300mm penetration. During the test, the water level in the drillhole was maintained at or above the observed ground water level. Disturbed samples were retrieved from the cutting shoes and stored as jar samples.

The depth of tests and the 'N' values were recorded and are presented in the drillhole records in Appendix D.

4.4 Field Installation

A single standpipe was installed at the location of drillhole P487-DH1 with the standpipe tip at 15.00m (-1.22mPD). The standpipe comprised a perforated 19mm PVC pipe in a gravel response zone. The response zones were sealed with bentonite pellets.

After installation, a response test was undertaken to ensure the operation of the instrument. The instrument installation details and monitoring record and the instrument response test record are presented in Appendices F and G respectively.



5. SOIL AND ROCK DESCRIPTIONS

The rocks encountered in the investigation have generally been described according to Geoguide 3, Guide to Rock and Soils Descriptions. The classification and definitions of the descriptive terms are presented in Appendix A.

The delineation of various strata was primarily based on the examination of core samples recovered from the drillholes and from the examination of the exposed surfaces in the trial pits. The results in the form of Drillhole and Trial Pit records are presented in Appendices D and H respectively.

The legends used in the records are summarized in Appendix B.

The density and consistency terms were determined using the supplementary table for the classification of weathered soil issued by the Geotechnical Unit of the Architectural Services Department. The table is presented in Appendix C.

APPENDIX A

SOIL & ROCK DESCRIPTIONS

CHECKLIST FOR SOIL DESCRIPTION

GEOTECHNICAL ENGINEERING OFFICE, HONG KONG

STRENGTH (Compactness & Consistency)

Soil Type Very Coarse (COBBLES & BOULDERS)	Term Loose Dense	Identification By inspection of voids and particle packing in the field.
,	Very loose	SPT 'N' value 0-4.
	Loose	SPT 4-10; can be excavated with
Coarse	Medium	spade; 50mm peg easily driven. SPT 10-30.
(SANDS &	dense	3F1 10-30,
GRAVELS)	Dense	SPT 30-50; requires pick for excavation; 50mm peg hard to drive.
	Very dense	SPT >50.
	Very soft	Undrained shear strength (USS) <20 kPa; exudes between fingers when squeezed in hand.
,	Soft	USS 20-40 kPa; moulded by light
Fine	55/1	finger pressure.
(CLAYS &	√ Firm	USS 40-75 kPa; can be moulded by strong finger pressure.
SILTS)	Staff	USS 75-150 kPa; cannot be mouided by fingers; can be indented by thumb.
	Very stiff	USS >150 kPa; can be indented by
	or hard	thumbnail.
Organic	Compact	Fibres already compressed together.
(ORGANIC CLAYS, SILTS	∫ Spongy ≺	Very compressible and open Structure.
SANDS & PEATS)	Plastic	Can be moulded in hand and smears fingers.

Terms applicable only to transported soils. For soils derived from insitu rock weathering, record actual values of quantitative tests (e.g. SPT 'N' value) as part of the description, where

COLOUR

Parameter	Terms
Value	Light, Dark
Chroma	Pinkish, Reddish, Yellowish, Orangish, Brownish,
	Greenish, Bluish, Purplish, Greyish
Hue	Pink, Red, Yellow, Orange, Brown, Green, Blue,
	Purple, White, Grey, Black

For uniform colour distribution, choose a hue, supplemented by a value and/or chroma if

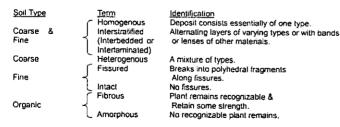
For non-uniform distribution, repeat this procedure using one of the following descriptors; spotted, mottled, dappied, streaked, striped (e.g. light yellowish brown mottled with red). State whether sample was wet or dry when described.

PARTICLE SHAPE & COMPOSITION

Characteristic	<u>Terms</u>
Form	Equidimensional, Flat, Elongate, Flat, & Elongate
Angularity	Angular, Subangular, Subrounded, Rounded
Surface Texture	Smooth, Rough, Glassy, Honeycombed, Pitted, Striated

Describe composition of coarse particles where appropriate. Gravel and larger particles are usually rock fragments (e.g. granite, tuff); and particles are usually individual minerals (e.g. quartz, feidspar)

STRUCTURE



Describe spacing of bedding planes, fissures, shell bands, etc using the spacing terms given in items 6 & 7 for rock description (see next page).

Above terms applicable only to transported soils. For soils derived from insitu rock weathering, describe relict structures in accordance with item 6 of rock description (see next page).

WEATHERING

Soils Derived from Insity Weathering of Rocks
There are two main types; saprolites (rock texture/structure retained) and residual soils (rock texture/structure completely destroyed). Describe state of weathering in accordance with items 4 & 8 for rock description (see next page).

<u>Sedimentary (Transported) Soils</u>

Coarse soils ; Describe overall discolouration of soil and degree of decomposition of gravel and larger particles (see item 4, next page). Also note any signs of disintegration of large

particles where apparent.

Fine Soils: Describe overall discolouration of soil where apparent.

SOIL NAME 6.

A. <u>Basic</u>	<u> </u>			
Soil Type		Particle Si		Identification
BOULDERS			>200	Only seen complete in pits or exposures.
COBBLES			60-200	Often difficult to recover from boreholes.
GRAVELS	$\left\{ \right.$	Coarse Medium Fine	20-60 6-20 2-6	Easily visible to naked eye; particle shape and grading can be described. Well-graded: wide range of grain sizes. Poorly-graded: not well-graded (split further into uniform or gap-graded).
SANDS	$\Big\{$	Coarse Medium Fine	0.6-2 0.2-0.6 0.06-0.2	Visible to naked eye; very little or no cohesion; grading can be described. May be well-graded or poorly-graded (uniform or gap-graded) as for gravel.
SILTS	{	Coarse Medium Fine	0.02-0.06 0.006-0.02 0.002-0.006	Only coarse silt barely visible to naked eye; exhibits little plasticity and marked dilatancy; slightly granular or silky to the touch. Disintegrales in water; lumps dry quickly; possesses cohesion but can be powdered easily between fingers.
CLAYS		_	<0.002	Dry lumps can be broken by hand but not Powdered between the fingers. Disintegrates in water more slowly than silt; smooth to the touch; exhibits plasticity but no dilatancy; slicks to the fingers and dries slowly; shrinks appreciably on drying, usually showing cracks. These properties more noticeable with increasing plasticity.
ORGANIC CLAYS, SILTS OR SANDS			varies	Contains much organic vegetable matter; often has a noticeable smell and changes colour on oxidation.
PEATS		<u>.</u> .	varies	Predominantly plant remains; usually dark brown or black in colour, often with distinctive smell; low bulk density.

B. <u>Composite</u>	Soil Types (Mixtures	of Bas	ic Types)	
Principal Soil Type	Terminology		Term for Secondary	% of Secondary
Very coarse (BOULDERS &	Sequence Secondary constituents	ſ	Constituent With a little	Constituent < 5
COBBLES) (>50% of soil	(finer material) •	\exists	With some	5 – 20
>60mm)	and principal	Ĺ	With much	20 - 50
			Slightly (sitty, clayey or silty/clayey) # - (silty, clayey	< 5
Coarse	Secondary		or silty/clayey) * Very (silty, clayey	5 15
(GRAVELS & SANDS) (>65% gravel &	constituents Before principal (excluding cobbles	$\left\{ \right.$	or silty/clayey) * AND/OR Slightty (gravelly	15 - 35
sand sizes)	& boulders)+		or sandy) # - (gravelly	< 5
			or sandy) # Very (gravelly	5 15
		(or sandy) *	20 - 50
Fine	Secondary		Slightly (gravelly	
(SILTS & CLAYS)	constituents before principal	\downarrow	or sandy or both) #	< 35
(>35% silt & clay sizes)	(excluding cobbles & boulders)+		 (gravelly or sandy) * 	35 - 65

Full name of finer material should be given (see examples below).

Secondary soil type as appropriate; use 'silty/clayey' when a distinction cannot be made between the two.

If cobbles or boulders are also present in a coarse or fine soil, this can be indicated by using one of the following terms relating to the very coarse fraction after the principal: 'with occasional' (<5), 'with some' (5-20), 'with many' (20-50), where figures in brackets are % very coarse material expressed as a fraction of the whole soil (see examples below).

Examples: Slightly silty/clayey, sandy GRAVEL. Slightly gravelly, sandy SILT, Very gravelly SAND. Sandy GRAVEL with occasional boulders. BOULDERS with much finer material (silty/clayey, very sandy gravel).

For fine soil, plasticity terms should also be described where possible, viz ; 'non-plastic' (generally silts), ;'intermediate plasticity' (lean clays), 'high plasticity' (fat clays).

DISCONTINUITIES

Full description of discontinuities, where necessary, should be made using the methods and terms given in item 7 for rock description (see next page).

ADDITIONAL GEOLOGICAL INFORMATION

Record geological name which indicates geological origin or soil type (e.g. Alluvium, Coluvium, Marine sand etc.). Refer to HKGS maps & memoirs for further information.

NOTES:

- Mass characteristics of soils (i.e. structure, weathering, discontinuities) can only be described satisfactorily in undisturbed field exposures or large undisturbed samples. For full descriptions of soils derived from insitu rock weathering:
 - (a) saprolites - describe as rocks, supplemented by soil strength and soil name
 - (b) residual soils – describe as soils, supplemented by name of parent rock where apparent from field evidence.

CHECKLIST FOR ROCK DESCRIPTION

GEOTECHNICAL ENGINEERING OFFICE, HONG KONG

STRENGTH

Extremely weak Verv weak

Easily crumbled by hand; indented deeply by thumbnail. Crumbled with difficulty; scratched easily by thumbnail; peeled

easily by pocket knife.

Broken into pieces by hand; scratched by thumbnail; peeled by pocket knife; deep indentations (to 5mm) by point of geological pick; hand-held specimen easily broken by single light hammer blow.

Moderately weak

Broken with difficulty in two hands; scratched with difficulty by thumbrail; difficult to peel but easily scratched by pocket knife; shallow indentations easily made by point of pick; hand-held specimen usually broken by single light harmer blow. Scratched by pocket knife; shallow indentations made by firm blow with point of pick; hand held specimen usually broken by single firm hammer blow. Point load strength (PLS) 0.5 – 2 MPa. Firm blows with point of pick cause poly superficiel surface.

Moderately strong

Strong

Weak

Firm blows with point of pick cause only superficial surface damage; hand-held specimen requires more than one firm hammer blow to break, PLS 2 – 4 MPa.

Very strong

Many hammer blows required to break specimen. PLS 4 – 8 MPa.

Extremely strong

Specimen only chipped by hammer blows. PLS >8 MPa.

COLOUR

Parameter Chroma

Terms

Light, Dark Pinkish, Reddish, Yellowish, Orangish, Brownish,

Greenish, Bluish, Purplish, Greyish Pink, Red, Yellow, Orange, Brown, Green, Blue,

Purple, White, Grey, Black

For uniform colour distribution, choose a hue, supplemented by a value and/or chroma if

For non-uniform distribution, repeat this procedure using one of the following descriptors: spotted, mottled, dappled, streaked, striped (e.g. light pinkish grey spotted with black). State whether sample was wet or dry described.

TEXTURE / FABRIC

<u>Texture Terms</u> (Applicable Mainly to Igneous Rocks)
Equigranular, Inequigranular, Megacrystic, Porphyritic, Crystalline, Cryptocrystalline, Aphanitic

Describe preferred orientation of grains/crystals where apparent. Describe intensity, spacing, continuity and any preferred orientation of microfractures where apparent.

MATERIAL WEATHERING / ALTERATION

Decomposition Term	Grade Symbol	Typical Characteristics
Residual Soil	VI	Original rock texture completely destroyed; can be rumbled by hand and finger pressure into constituent grains.
Completely Decomposed	V	Original rock texture preserved; can be crumbled by hand and finger pressure into constituent grains; easil indented by point of geological pick; slakes in water; completely discoloured compared with fresh rock.
Highly Decomposed	IV	Can be broken by hand into smaller pieces; makes a dull sound when struck by hammer; not easily indente by point of pick; does not stake in water; completely discoloured compared with fresh rock.
Moderately Decomposed	IH	Cannot usually be broken by hand; easily broken by hammer; makes a dull or slight ringing sound when struck by hammer; completely stained throughout.
Slightly Decomposed	H	Not broken easily by hammer; makes a ringing sound when struck by hammer; fresh rock colours generally relained but stained near joint surfaces.
Fresh Rock	I	Not broken easily by hammer; makes a ringing sound when struck by hammer; no visible signs of decomposition (i.e. no discolouration).

This classification is applicable to igneous and volcanic rocks and other rocks of equivalent

<u>Disintegration</u>
Describe small-scale cracking and fracturing caused by mechanical weathering, where apparent.

Describe state of atteration (e.g. mineralised, kaolinised) where apparent.

5. ROCK NAME (Including Grain Size)

Coarse- (6-20mm), Medium- (2-6mm) & Fine- (0.06-2mm) grained GRANITE; GRANODIORITE. Very Fine-grained (<0.06mm)

RHYOLITE; BASALT. (Common types only, see Geoguide 3 for others). PYROCLASTIC BRECCIA (>60mm), Lapilli TUFF (2-60mm).

Pyroclastic

Coarse ash TUFF (0.06-2mm), Fine ash TUFF (<0.06mm), Foliated - SCHIST (>0.06mm), PHYLLITE (<0.06mm).

Metamorphic :

Sedimentary

Non-foliated - MARBLE, QUARTZITE, FAULT BRECCIA.
CONGLOMERATE, BRECCIA (-22mm), SANDSTONE (0.06-2mm),
MUDSTONE (<0.06mm) = SILTSTONE (0.002-0.06mm) + CLAYSTONE
(<0.002mm). (Common types only).

If rock name cannot be identified, describe grain size quantitatively, including textural term where appropriate.

6. STRUCTURE

Structural Term Bedded, Laminated, Massive Massive, Flow-banded Foliated, Banded, Cleaved

Rock Type Sedimentary Igneous, Pyroclastic

Spacing of Planar Structures
Very thick (>2m), Thick (0.6-2m), Medium (200-600mm),
Thin (60-200mm), Very thin (20-60mm),
Thickly-laminated (Sedimentary) (6-20mm) or Narrow (Igneous, Metamorphic) (6-20mm), Thinly-laminated (Sedimentary) (<6mm) or Very narrow (Igneous, Metamorphic) (<6mm).

Examples: Thickly-bedded SANDSTONE, Narrowly flow-banded RHYOLITE.

DISCONTINUITIES

Nature (Type of Discontinuity)

Fault zone Cleavage Schistocity

Bedding

Joint

Shear plane

Tension crack Foliation

<u>Location and Orientation</u>

Record location as co-ordinates or relative position along datum line, preferably on map or

Record orientation as dip direction/dip in degrees (e.g. 032/55)

Extremely widely-spaced (>6m), Very widely-spaced (2-6m), Widely-spaced (0.6-2m), Medium-spaced (200-600mm), Closely-spaced (60-200mm), Very closely-spaced (20-60mm), Closely-spaced (60-200mm), Very closely-spaced (20-60mm), Very closely-spaced (20 Extremely closely-spaced (<20mm):

In exposures, supplement spacing with description of rock block shape were possible. Descriptors: Blocky, Tabular, Columnar, Polyhedral.

Roughness Waviness (large-scale): Estimate/measure wavelength and amplitude in metres.

Unevenness (small-scale), use one term from the following: Rough stepped Smooth stepped

Rough undulating Rough planar

Smooth undulating Smooth planar

Slickensided stepped Slickensided undulating Slickensided planar

Aperture Size
Wide (>200mm), Moderately wide (60-200mm), Moderately narrow (20-60mm),
Narrow (6-20mm), Very narrow (2-6mm), Extremely narrow (>0-2mm), Tight (zero).

Infilling (Nature) Clean

Non-cohesive soil Calcite

Surface staining Manganese

Decomposèd/ disintegrated rock Quartz

Other (Specify) Kaolin Give full description of infill materials/minerals where appropriate.

<u>Seepage</u> Dry

Damp/wet

Seepage present (estimate quantity in t/sec or l/min)

<u>Fracture State</u>
In borehole cores, measure the following : Total Core Recovery (TCR), Solid Core Recovery (SCR), Rock Quality Designation (RQD), Fracture Index (FI). See Geoguide 3 for definitions.

MASS WEATHERING

Term	Zone Symbol	Typical Characteristics
Residual Soil	RS	Residual soil derived from Institu weathering; mass structure and material texture/fabric completely destroyed: 100% soil
	/ PW	Less than 30% rock
	0/30	Soil retains original mass structure and material texture/fabric (i.e. saprolite)
		Rock content does not affect shear behaviour of mass, but relict discontinuities in soil may do so.
Partially		Rock content may be significant for investigation and construction.
Weathered	< PW	30% to 50% rock
Rock	30/50	Both rock content and relict discontinuities may affect shear behaviour of mass.
	PW	50% to 90% rock
	50/90	Interlocked structure.
	PW	Greater than 90% rock
	90/100	Small amount of the material converted to soil along discontinuities.
Unweathered	UW	100% rock
Rock		May show slight discolouration along discontinuities.

ADDITIONAL GEOLOGICAL INFORMATION

Record geological formation name if known, Avoid conjecture. Refer to HKGS maps & memoirs for further information.

NOTES:

Rock material description normally includes : strength, colour, texture/labric, material weathering/alteration and ROCK NAME.

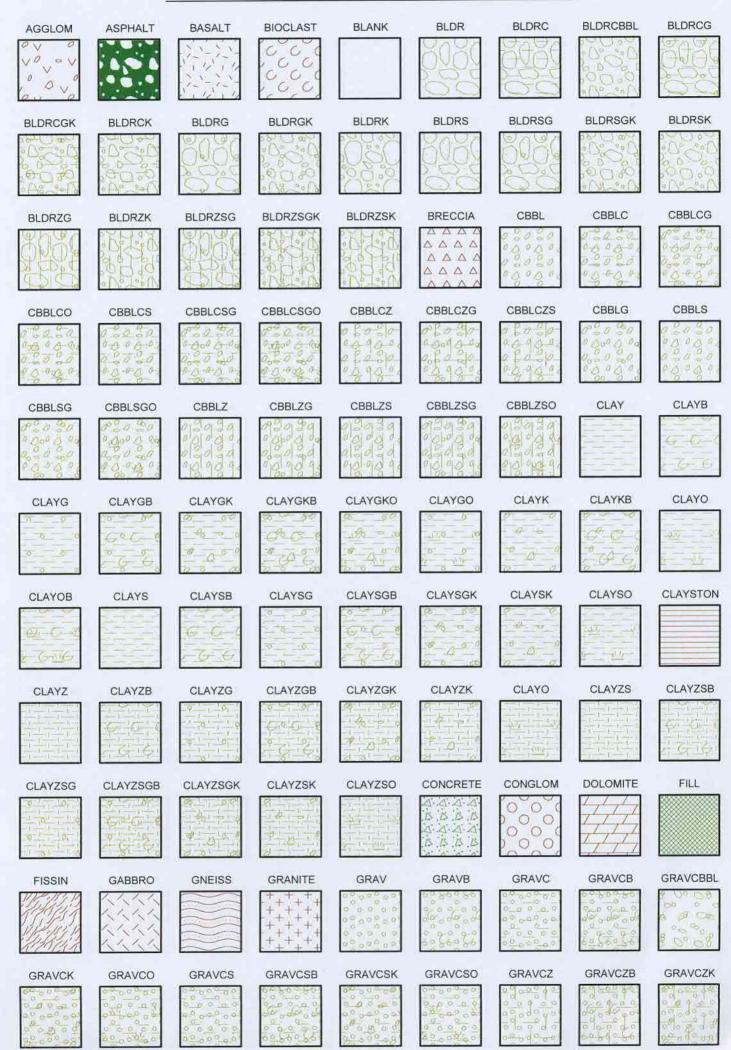
weathering/attention and ROCK NAME.

Rock mass description normally includes: strength, colour, structure, mass weathering, ROCK NAME, discontinuities and additional geological information. Can be supplemented with more detailed information on texture/fabric and material weathering / attention of different materials within the mass where necessary.

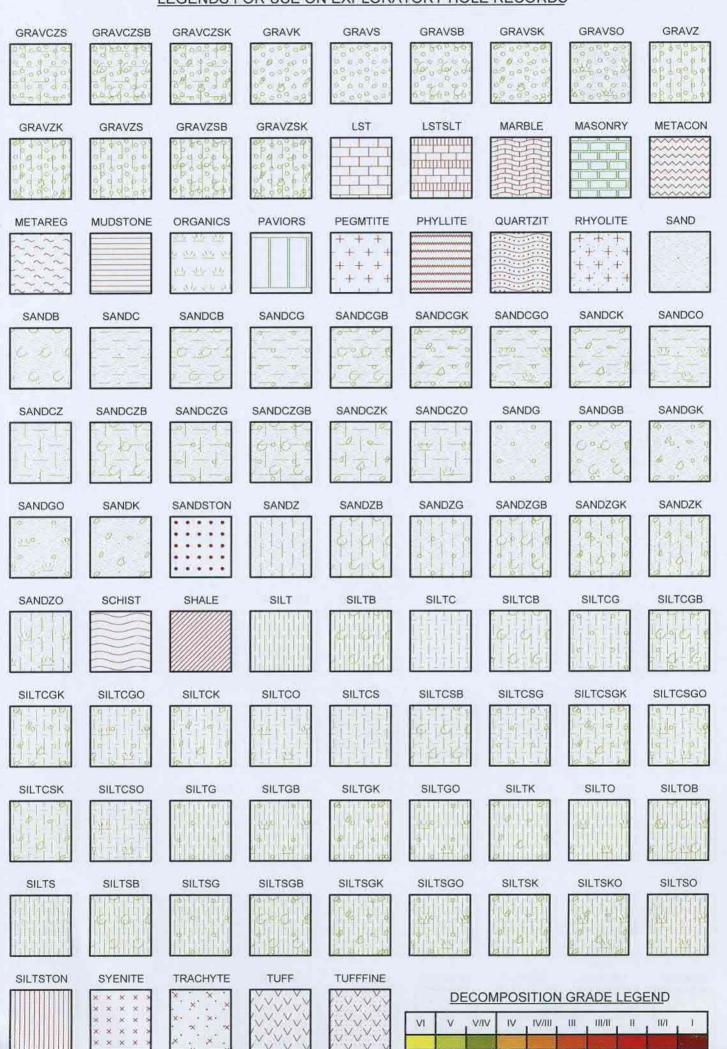
APPENDIX B

LEGENDS FOR USE IN EXPLORATORY HOLE RECORDS

LEGENDS FOR USE ON EXPLORATORY HOLE RECORDS



LEGENDS FOR USE ON EXPLORATORY HOLE RECORDS



List of Material Codes for the Log Legend

Material Code	<u>Description</u>
AGGLOM	Agglomerate
ASPHALT	Asphalt
BASALT	Basalt
BIOCLAST	Shells
BLANK	Material not recovered
BLDR	Boulders
BLDRCBBL	Boulders and Cobbles
BRECCIA	
CBBL	Sedimentary Breccia Cobbles
CLAY	
CLAYSTON	Clay
CONCRETE	Claystone
CONGLOM	Concrete
DOLOMITE	Conglomerate
	Dolomitic Limestone
FILL	Artificial Fill
FISSIN	Fissure Infill
GABBRO	Gabbro, Lamprophyre
GNEISS	Gneiss
GRANITE	Granite
GRAV	Gravel
GRAVCBBL	Gravel and Cobbles
LST	Limestone
LSTSLT	Interbedded Limestone and Siltstone
MARBLE	Marble
METACON	Metamorphic Rock - contact
METAREG	Metamorphic Rock - regional
MUDSTONE	Mudstone
ORGANICS	Organic, Peat
PEGMTITE	Pegmatite
PHYLLITE	Phyllite, Mylonite
QUARTZIT	Quartzite
RHYOLITE	Rhyolites
SAND	Sand
SANDSTON	Sandstone
SCHIST	Schist (Medium grained Metamorphic Rock)
SHALE	Shale
SILT	Silt
SILTSTON	Siltstone
SYENITE	Granodiorite, Syenite, Monzonite
TRACHYTE	Trachyte

Notes

TUFF

TUFFFINE

In common ground the following codes are added to the main descriptor in the order stated below to denote secondary constituents :

Fine Ash Tuff

(i)	C - Clay	(v)	K - Cobbles
(ii)	Z - Silt	(vi)	O - Organic
(iii)	S - Sand	(vii)	B - Shells
(iv)	G - Gravel		

Coarse Ash Tuff, Lapilli Tuff

e.g. a silty CLAY with occasional shells and organic material is coded as CLAYZOB

APPENDIX C

SUPPLEMENTARY TABLE FOR THE CLASSIFICATION OF WEATHERED SOILS

SUPPLEMENTARY TABLE FOR CLASSIFICATION OF WEATHERED SOILS

Table 2a Classification of Granular Soils based on SPT (after Terzaghi & Peck, 1948)

Relative density of	of cand	SPT valu	ies
Relative density	or sand	Uncorrected	Corrected*
Very loose	(Dr < 0.15)	< 4	< 3
Loose	(Dr = 0.15 - 0.35)	4 - 10	3 - 8
Medium dense	(Dr = 0.35 - 0.65)	10 - 30	8 - 25
Dense	(Dr = 0.65 - 0.85)	30 - 50	25 - 42
Very dense	(Dr = 0.85 - 1.00)	> 50	> 42

^{*}SPT value corrected as described in Skempton (1986)

Table 2b Classification of Cohesive Soils based on SPT (after Terzaghi & Peck, 1948)

Clay consistency	SPT va	lues	Undrained cohesion
y	Uncorrected (N)	Corrected* (N)	(kPa)
Very soft	< 2	< 2	< 25
Soft	2 - 4	2 - 3	25 - 50
Medium	4 - 8	3 - 6	50 - 100
Stiff	8 – 15	6 - 11	100 - 200
Very stiff	15 - 30	11 - 23	200 - 400
Hard	> 30	> 23	> 400

^{*}SPT value corrected as described in Skempton (1986)

Table 3 Classification of Transported Soils in Hong Kong based on SPT and Dry Density

State of soil	• • • • • • • •		C.	lass	ificatio	on criteria ir	accor	dance wit	h N	& τ _d
Very soft	••••		Ň	· · - · · · · · · · · · · · · · · ·	1	or	· · · · · · · · · · · · · · · · · · ·		τ	≤ 0.80 Mg/m³
Soft or very loose	1	<	N	≤	3	or	0.80	$Mg/m^3 <$	Ta	$\leq 1.15 Mg/m^3$
Medium firm or loose	3	<	Ν	≤	8	or				$\leq 1.45 \text{ Mg/m}^3$
Stiff to very stiff or medium dense	8	<	Ν	≥	24	or				$\leq 1.80 \text{ Mg/m}^3$
Hard or dense	24	<	N	≤	42	or	1.80	$Mg/m^3 <$	Ta	$\leq 2.00 Mg/m^3$
Very dense	42	<	Ν			and	2.00	$Mg/m^3 <$	τ_d	-

Table 4 Classification of Weathered Soils in Hong Kong based on SPT and Dry Density

State of soil			Cla	ssit	ication	criteria i	n accordance w	ith N &	τ_d
Very loose to loose	••••		N	≤	20	or		τ _d	$\leq 1.400 \mathrm{Mg/m^3}$ $\leq 1.600 \mathrm{Mg/m^3}$
Medium dense	20	<	Ν	≤	50	or	1.400 Mg/m³	< τ _σ	$\leq 1.600 \mathrm{Mg/m^3}$
Dense	50	<	Ν	5	100	or	1.600Mg/m³	< τ _d	$\leq 1.750 \mathrm{Mg/m^3}$
Very dense	100	<	Ν			and	1.750Mg/m ³	$< \tau_d$	

Extract from Wong, H.Y. (1994). Relationship between Standard Penetration Test (SPT)
Value and In-situ Density from Soils in Hong Kong. <u>Operation Manual</u>
(Technical) No. 9/92000/GEN/G/TOM/8 issued by Geotechnical Unit of Arch.S.D.

APPENDIX D

DRILLHOLE RECORDS



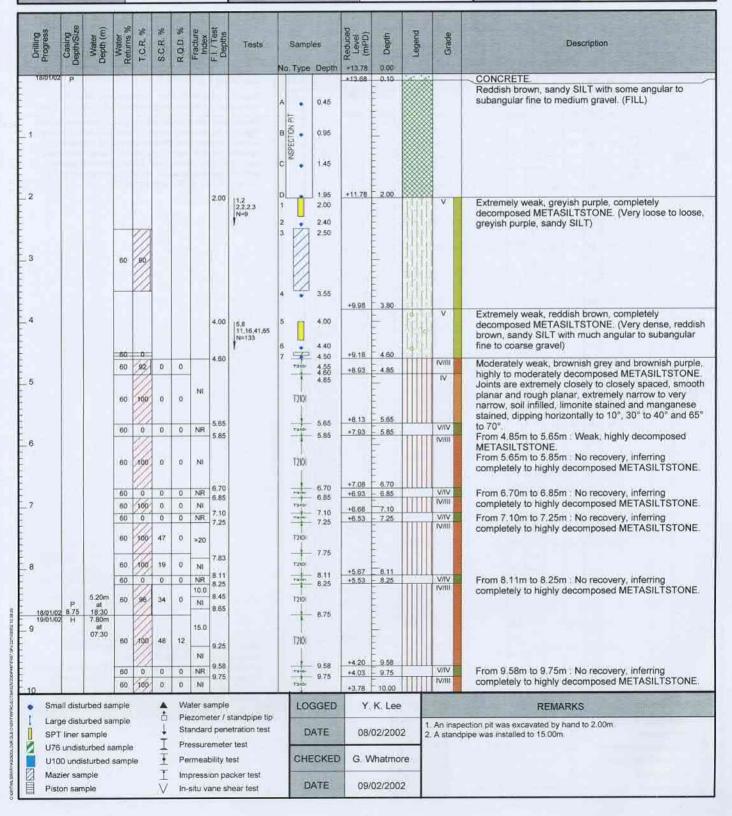
SITE INVESTIGATION DEPARTMENT

DRILLHOLE No.
P487-DH 1

DRILLHOLE RECORD

SHEET 1 OF 11

PROJECT	School Improvement Programme Final Phase, Package 5 (Group 3) - P487 Wa Fung School										
METHOD	Rotary	CO-ORDINATES	E 819879.58 N 832779.61	CONTRACT No.	TC J304						
MACHINE & No.	BM50	GROUND LEVEL	+ 13.78 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)						
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	18/01/2002 to 06/02/2002						





SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 1

DRILLHOLE RECORD

SHEET 2 OF 11

PROJECT	School Improvement Programme Final Phase, Package 5 (Group 3) - P487 Wa Fung School											
METHOD	Rotary	CO-ORDINATES	E 819879.58 N 832779.61	CONTRACT No.	TC J304							
MACHINE & No.	BM50	GROUND LEVEL	+ 13.78 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)							
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	18/01/2002 to 06/02/2002							

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	T.C.R. %	S.C.R.%	R.Q.D. %	Fracture	F.I. / Test Depths	Tests	Samples	Reduced Level (mPD).	Depth	Legend	Grade	Description
	-	-77								No Type Depth	+3.78	10.00		IV/III	See sheet 1 of 11
			60	100	0	0	NI NR	10.24		10.24	+3.54	10.24 - 10.35	ШЦ	V/IV	From 10.24m to 10.35m : No recovery, inferring
			60	100	54	0	>20	10.65		T2101	+3.13			IV/III	completely to highly decomposed METASILTSTONE.
11				//			3.4			10.90				IV/III	Moderately weak, brownish grey and brownish purple, highly to moderately decomposed METASILTSTONE.
		6.50m at 18:30	60	98	90	81	Seta	11.24		T2101					Joints are extremely closely spaced to medium spaced, smooth planar and rough planar, extremely
19/01/02 21/01/02		7.90m at					>20	11.50		11.32					narrow to very narrow, soil infilled, limonite stained and manganese stained, dipping horizontally to 10°,
2000		07:30	50	98	61	52	5.5			T2101					20° to 30°, 40° to 50° and 60° to 70°.
12			3					40.00							
				#			>20	12.23		12.35					
			50	98	67	56	7.9	12.73		T2I0I			110.		
13							>20								
								13.40		13.22					
			50	98	37	0	15.3	100100		T2101					
14							15.5			11111111					
				1/		П		14.12		14.12					
			50	96	12	0				12101					
15		4.90m at					>20	é	,	10.50	=				
21/01/02 22/01/02	-	18:30 7.90m at		\mathcal{H}	H					15.13					
		07:30		20	141			15.40		Talai					
			50	97	54	29				T2101					
16				44						16.18					
							10.1								
			50	98	69	27				TOIN					
17			50		OB.	21				T2101					
							NI	17.58		17.58					
18				1				18.00							
			50	94	17	0	9.5	18.42		T2101					
				A			>20	10.42							
9							7.4	18.88		18.88		e L			
			50	96	33	22	NI	19.15		T2101	-5.37	19.15		IV	Weak, brownish grey and reddish brown, highly
				4			12.7	19.40		19.66					decomposed METASILTSTONE. Joints are extremely closely to closely spaced, smooth
20			50	16	38	0	1,541			19.95	-6.17	19.95	ЩЩ		planar and rough planar, extremely narrow to very narrow, soil infilled, limonite stained and manganese
	l distur	bed sar	nple		A			mple	ALMA FRANCISCO	LOGGED	Υ.	K. Lee			REMARKS
250000		bed sar	nple		đ 1				andpipe tip tration test	DATE	00%	12/2000			
-	liner sa undistu	ample Irbed sa	mple		İ			meter		DATE	08/0	2/2002			
U100	undis	turbed s		e	Ŧ			ility te		CHECKED	G. W	hatmor	9		
Mazie Pisto	er sam				I	Imp	ressi	on pac	ker test	DATE	L.E.Y.	2/2002			



SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 1

DRILLHOLE RECORD

SHEET 3 OF 11

PROJECT	School Improvement Programme Final Phase, Package 5 (Group 3) - P487 Wa Fung School										
METHOD	Rotary	CO-ORDINATES	E 819879.58 N 832779.61	CONTRACT No.	TC J304						
MACHINE & No.	BM50	GROUND LEVEL	+ 13.78 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)						
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	18/01/2002 to 06/02/2002						

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	T.C.R. %	S.C.R. %	R.Q.D. %	Fracture	F.I. / Test Depths	Tests		ples e Depth	Reduced Level (mPD)	under 20.00	Legend	Grade	Description
21								20.00	8,11 12,17,24,33 N=86	9	20.00			111111	V	\stained, dipping horizontally to 10°, 20° to 30° and 40° \to 50°. Extremely weak, yellowish brown, completely decomposed METASANDSTONE. (Dense, yellowish brown, very slity fine SAND)
22								22.00	37,33 40,40 26,24/55mm (200/430mm) 1 N>200	0	22.00 22.38	-1.42	21.20		V/IV	Very weak, reddish grey, completely to highly decomposed METASILTSTONE. (Very dense, reddish grey, sandy SILT)
24 22/01/02 23/01/02	2	2.80m at 18:30 2.90m at 07:30						24.00	60.00/55mm	3	24.00 24.23	-9.42	23.20		V/IV	Very weak, purplish brown, completely to highly decomposed METASANDSTONE. (Very dense, purplish brown, silty fine SAND)
25								26.00	20,23,36,65 N=144	14	26.00 26.40	-11.42	25.20	0 0 0	V	Extremely weak, yellowish brown, completely decomposed METASANDSTONE. (Very dense, yellowish brown, silty fine SAND with much subangular fine to medium gravel)
27								28.00	34,42 ,38,62/55mm	16	28.00 28.38	-13.42	27 20		VAV	Very weak, dark yellowish brown, completely to highly decomposed METASANDSTONE. (Very dense, dark yellowish brown, silty fine SAND)
29													29.20		V	Extremely weak, brown, completely decomposed METASILTSTONE. (Medium dense, brown, sandy SILT)
Sma		urbed s			å		iter sa	2.5		LO	OGGED		K. Lee		W	REMARKS
SP	Standard penetration test		1000	DATE	08.	/02/200	2									
U10		turbed isturbed			III	Pe	Pressuremeter test Permeability test Impression packer test			CI	HECKED	G. V	Vhatmo	re		
	zier sa ton sar				V				hear test		DATE	09	/02/200	2		



SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 1

DRILLHOLE RECORD

SHEET 4 OF 11

PROJECT	Schoo	Improvement Programme	Final Phase, Packag	ge 5 (Group 3) - P487 W	a Fung School
METHOD	Rotary	CO-ORDINATES	E 819879.58 N 832779.61	CONTRACT No.	TC J304
MACHINE & No.	BM50	GROUND LEVEL	+ 13.78 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	18/01/2002 to 06/02/2002

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	T.C.R. %	S.C.R. %	R.O.D %	Fracture	F.I. / Test Depths	Tests		amples	Reduced Level	Depth Depth	pueßerj	Grade	Description
								30.00	7,8,10,13 N=38	19	30.00 30.40		30.00		V	See sheet 3 of 11
31												-17.42	31.20		_	
32								32.00	2,3 8,11,20,35 N=74	20 21	32.00				V	Extremely weak, yellowish brown, completely decomposed METASANDSTONE. (Dense, yellowish brown, silty fine SAND)
33				j												
34 23/01/02 24/01/02		7.60m at 18:30 7.90m at 07:30						34,00	5,6 10,12,16,17 N=55	22 23	34.00 • 34.40					
35		37,000										-21.42	35,20			Extremely weak, yellowish brown, completely
36							3	36.00	4,10 20,14,43,46 N=123	24 25	36.00 • 36.40					decomposed METASANDSTONE. (Very dense, yellowish brown, silty fine SAND)
37												-23.42	37.20		V/IV B	Vanuusak vallaviish hraum completely to highly
38								38,00	6.7 28.39 ,110,10/5mm (200/380mm) N>200	26 27	38.00				JAV.	Very weak, yellowish brown, completely to highly decomposed METASANDSTONE. (Very dense, yellowish brown, silty fine SAND)
39				ł								26.42	39.20			
												-20,92	39.20		v	Extremely weak, yellowish brown, completely decomposed METASANDSTONE. (Dense, yellowish brown, silty fine SAND)
10												100	40.00			Property and an observable
Larg		urbed sa urbed sa			Å	Pie		ter/s	standpipe tip		LOGGE		K. Lee	-		REMARKS
SPT	liner	sample turbed s			İ				etration test r test		DATE	08	/02/200	2		
U10		sturbed			Ī		meat	199	est ocker test	(CHECKE	D G.	Whatmo	е		
-	on san	A			V	- 1		7.0	near test	100	DATE	09	/02/2002	2		



SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 1

DRILLHOLE RECORD

SHEET 5 OF 11

PROJECT	Schoo	I Improvement Programme	Final Phase, Packag	ge 5 (Group 3) - P487 W	a Fung School
METHOD	Rotary	CO-ORDINATES	E 819879.58 N 832779.61	CONTRACT No.	TC J304
MACHINE & No.	BM50	GROUND LEVEL	+ 13.78 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	18/01/2002 to 06/02/2002

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns % T.C.R. %	S.C.R. %	R.O.D. %	Index F.I. / Test Depths	Tests	Sample		Level (mPD)	Depth	Legend	Grade	Description
						40.00			Depth 3	26.22	40.00		v	See sheet 4 of 11
2						42 00	2.3 4.7.9.14 N=34		42 00	27.42	41.20		V	Extremely weak, reddish brown, completely decomposed METASILTSTONE. (Medium dense, reddish brown, sandy SILT)
3 4 24/01/0	H 02 44.45	2,80m at 18:30				44,00	9,13,22,26 N=70		44.00	29.42	43.20		y	Extremely weak, yellowish brown, completely decomposed METASILTSTONE. (Dense, yellowish brown, sandy SILT)
25/01/0 5	IZ N	7.80m at 07:30				46.00	18,33 ,45,90/45mm (200/420mm)	4	46.00	31.42	45.20		V/IV	Very weak, yellowish brown, completely to highly decomposed METASILTSTONE. (Very dense, yellowish brown, sandy SILT)
17 48						48.00	N=200	36	48.00	33.42	47.20		V	Extremely weak, brown, completely decomposed METASILTSTONE. (Very dense, brown, sandy SILT)
49							N=115	17		-35.42 -36.22			VIIV	Very weak, brownish grey and yellowish brown, completely to highly decomposed METASILTSTONE. (Very dense, brownish grey and yellowish brown, sandy SILT)
Sn	mall dist	turbed s	ample	A		er samp		LOC	GED	1000	K. Lee			REMARKS
La	C. Williams	turbed s		1			standpipe tip netration test	D	ATE	08/	02/200	2		
U7	76 undi	sturbed	sample	Į Į	Pre	ssureme			CKED	Auton	/hatmo	-		
1.12	100 und	disturbe	d sample	1	Imp	meability	1621	OFIC	UNED	U. VI	· iatiiio	9		



SITE INVESTIGATION DEPARTMENT

P487-DH 1

DRILLHOLE RECORD

SHEET 6 OF 11

PROJECT	School	ol Improvement Programme	Final Phase, Packag	ge 5 (Group 3) - P487 W	a Fung School
METHOD	Rotary	CO-ORDINATES	E 819879.58 N 832779.61	CONTRACT No.	TC J304
MACHINE & No.	BM50	GROUND LEVEL	+ 13.78 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	18/01/2002 to 06/02/2002

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	T.C.R. %	S.C.R. %	R.O.D.%	Fracture Index	Depths Depths		о Тур	nples be Depth	Reduced Level (mPD)	Depth 00.00	Legend	Srade Srade	Description See sheet 5 of 11
_51									17,22 22,62 1,77/55mm (200/355mm) N>200		50.31				MAX	See Sileer 3 Of 11
_51						2	53	2.00	[3,5 9,17,30,136 N=192	· [52.00	-37.42	51.20		v	Extremely weak, brownish grey and yellowish brown, completely decomposed METASILTSTONE. (Very dense, brownish grey and yellowish brown, sandy SILT)
_53							-		4	•	52.40	-39.42	53.20		V/IV	Very weak, brownish grey and yellowish brown, completely to highly decomposed METASILTSTONE.
_54 _25/01/0 _26/01/07	12	11.60m at 18:30 7.50m at 07:30					5	4.00	8,13 23,37 97,22/5mm (200/380mim) 43 N>200		54.00 54.33					(Very dense, brownish grey and yellowish brown, sandy SILT)
_55 _56							51	6.00	5,7 10,12,17,35		56.00	-41.42	55.20		V	Extremely weak, yellowish brown, completely decomposed METASILTSTONE. (Dense, yellowish brown, sandy SILT)
_57									N=74 4:		56.40	-43.42	57.20		V	Extremely weak, brown, completely decomposed
_58							5	8.00	5,10 11,18,28,55 N=112 47		58.00 58.40					METASILTSTONE. (Very dense, brown, sandy SILT)
_59 60												-46.22	-9100-110-11			
		urbed sa urbed s			4	Pie		er/s	tandpipe tip	LC	OGGED	Y.	K. Lee	100	-	REMARKS
SP"	T liner	sample turbed s			Ţ		ndard ssurer		etration test r test		DATE	08/0	02/2002	2		
U10		sturbed			Ī	Imp		n pa	cker test	100	HECKED	2000	/hatmor			
Pist	iton san	nple			V	In-s	situ var	ne sh	ear test		DATE	09/0	02/2002	<u>'</u>		



SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 1

DRILLHOLE RECORD

SHEET 7 OF 11

	100 Kg		**************************************		
PROJECT	Schoo	Improvement Programme	Final Phase, Packa	ge 5 (Group 3) - P487 W	a Fung School
METHOD	Rotary	CO-ORDINATES	E 819879.58 N 832779.61	CONTRACT No.	TC J304
MACHINE & No.	BM50	GROUND LEVEL	+ 13.78 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	18/01/2002 to 06/02/2002

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	T.C.R. %	S.C.R. %	R.Q.D. % Fracture	F.I. /Test Depths	Tests		Samples		(Odw)	Depth 00.00	Legend	Grade	Description
26/01/02 29/01/02		12.10m at 18:30 7.80m at 07:30					60.00	11,17 23,35,40,47 N=145	49	60.40 60.40	à	1.22	50.00		V	See sheet 6 of 11
52							62.00	19,48 80,53/55mm 7/200/280mm N>200	50	62.00		1.42	61.20		V/IV	Very weak, greenish grey, completely to highly decomposed METASILTSTONE. (Very dense, greenish grey, sandy SILT)
33 14							64.00	14.7 25.42 1.122/45mm (200/345mm N>200	52	64.00 64.30		9.42	63.20		V/IV	Very weak, brownish grey and yellowish brown, completely to highly decomposed METASILTSTONE (Very dense, brownish grey and yellowish brown, sandy SILT)
6							66.00	7.10 12.24 .37,110/65m Y-200/440mm N>200	54 m) 55	66.39						
9							68.00	12.18 25.42 , 103/40mm (200/340mm N>200	56	68.25		5.42	69.20			
70		11.80m									-56	3.22	70.00	0	V/IV	Very weak, brown, completely to highly decomposed METASILTSTONE. (Very dense, brown, sandy SILT with some subangular fine to medium gravel)
		urbed saurbed sa			å		sample meter /	e standpipe ti	р	LOGGE)	Υ.	K. Lee			REMARKS
SPT	liner:	sample turbed s			ţ	Stand		etration tes		DATE		08/0	02/2002			
U10		isturbed			Ī	Perm	eability			CHECKE	D	G. W	hatmor	е		
	on san				V			hear test		DATE	3	09/0	02/2002			



SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 1

DRILLHOLE RECORD

SHEET 8 OF 11

DDOUGOT		NA VENOVINA	20 VAN 10 1		
PROJECT	Schoo	I Improvement Programme	Final Phase, Packa	ge 5 (Group 3) - P487 W	a Fung School
METHOD	Rotary	CO-ORDINATES	E 819879.58 N 832779.61	CONTRACT No.	TC J304
MACHINE & No.	BM50	GROUND LEVEL	+ 13.78 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	18/01/2002 to 06/02/2002

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	T.C.R.%	S.C.R. %	R.O.D %	Fracture	F.I. / Test Depths	Tests	Sam	nples	Reduced Level (mPD)	Depth	Legend	Grade	Description
- Sentinue	Sec. 11	at	J 03			10200		70.00	18,182/60mm E	No. Typ	e Depth	-56.22 -56.37	70.00	ф	V/IV	See sheet 7 of 11
		18:30 7:50m at 07:30	50	92	O.	o	9.1	-70.15 -70.37 -71.00	N>200	inw J	70.09 70.15 - 70.75 71.00 71.22	-56.59	70.15		III IV/III V/IV	Moderately weak, brownish grey, highly to moderately decomposed METASANDSTONE. Joints are extremely closely to closely spaced, smooth planar and rough planar, extremely narrow to very narrow, soil infilled, manganese stained and limonite stained, dipping 10° to 20°, 60° to 70° and 70° to 80°. From 70.15m to 70.37m: Moderately strong, moderately decomposed METASANDSTONE. Very weak, brownish grey, completely to highly decomposed METASILTSTONE. (Very dense, brownish grey, sandy SILT)
_73								73.00	18,40	²	73.00 73.31					
.75 .39/01/02 .31/01/02 .76		11.30m at 18:30 7.60m at 07:30						75.00	10,10 B 13,14,24,50 N=101 B	4	75.00 75.40	-60 42	74.20		V	Extremely weak, greyish brown, completely decomposed METASILTSTONE. (Very dense, greyish brown, sandy SILT)
77								77.00	13.16 54 14.17 1.140/35mm 6 (200/335mm) N>200		77.00 77.29	-62.42	76.20		VIV	Very weak, brownish grey, completely to highly decomposed METASILTSTONE. (Very dense, brownish grey, sandy SILT)
79									6.11 5.16,28 N=70 56		79.00 79.40	-64.42 -66.10			V	Extremely weak, yellowish brown, completely decomposed METASILTSTONE. (Dense, yellowish brown, sandy SILT)
80 Small	10.40-0-0	tion of	50	90						1000	79,88			-	17/111	Waltedier 2 a 5 and 5 and 5
(A)		rbed sar			古			imple ter / s	standpipe tip	LO	GGED	Υ	K. Lee	100	VIII COM	REMARKS
5 75 7 7 7 7	liner sa				‡	Star	ndard	i pene	etration test	D	ATE	08/0	2/2002			
U100	o undis	irbed sa turbed s			Ī	Pen	meab	mete oility te	est	СНІ	ECKED	G. W	hatmor	e		
	er sam	ple			I	Imp	ressi	on pa	cker test		EXCIL RO					



SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 1

DRILLHOLE RECORD

SHEET 9 OF 11

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PROJECT	Schoo	I Improvement Programme	Final Phase, Packag	ge 5 (Group 3) - P487 W	a Fung School
METHOD	Rotary	CO-ORDINATES	E 819879.58 N 832779.61	CONTRACT No.	TC J304
MACHINE & No.	BM50	GROUND LEVEL	+ 13.78 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	18/01/2002 to 06/02/2002

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	T.C.R %	S.C.R %	R.O.D.%	Fracture	F.I. / Test Depths	Tests		npies	Reduced Level N (mPD)	Depth 00.00	Legend	Grade	Description
31/01/02 8101/02/02		11.50m at 18.30 8.20m at 07.30	50	90	30	۵	>20 9.4 >20	80.30 80.62 81.00	7.8 5.7.6.12 N=32	IN	80.88	-66.52 -66.84	80.30		III IV/III V	Moderately weak, brownish grey, highly to moderately decomposed METASANDSTONE. Joints are extremely closely to closely spaced, smooth planar and rough planar, extremely narrow to very narrow, soil infilled, limonite stained and manganese stained, dipping horizontally to 10°, 10° to 20° and 70° to 80°. From 80.30m to 80.62m: Moderately strong, moderately decomposed METASANDSTONE. Extremely weak, brown, completely decomposed METASILTSTONE. (Medium dense, brown, sandy SILT)
83 <u>01/02/02</u> 02/02/02 02/02/02 04/02/02		7.00m at 18:30 7.80m at 07:30 6.50m at 07:30						83.00	12.37 48.67 1,35/50mm (200/350mm) N-200		83.00	-68 42	82.20		V/IV	Very weak, brownish grey, completely to highly decomposed METASILTSTONE. (Very dense, brownish grey, sandy angular to subangular fine to coarse GRAVEL)
85	N 85.12		.50	57	43	36	12.2 NI NA	05.05	173.127/45mm 7 (200/120mm) N>200	ı IN	85.07 85.24		85.75 85.75	000000	1115	Moderately weak to moderately strong, brownish grey moderately decomposed MARBLE. Joints are very closely to closely spaced, rough planar, extremely narrow to very narrow, limonite stained and manganese stained, dipping horizontally to 10° and 70° to 80° From 85.75m to 86.20m; Cavity. Stiff, brown, sandy CLAY with some subangular fine t medium gravel. (CAVITY INFILL DEPOSIT)
88			50	96	99	99	3:2	88.50	2,3,11,11 N=27	5 [88.40 88.50	74.72	88.50		111/01	Moderately strong to strong, grey, moderately to slightly decomposed MARBLE. Joints are closely to medium spaced, rough planar, extremely narrow to very narrow, limonite stained,
04/02/0 05/02/0 90	2	11.60m at 18:30 8.50m at 07:30		100	100	100	1.0	89.44		1)	89 44	-75.66 -76.22	89.44	HARRI	1	dipping horizontally to 10°. Strong, grey and greyish white, slightly decomposed MARBLE. Joints are widely spaced, rough planar, extremely
• Sm		urbed s			À.			sampl		Ţ	.OGGED	Y	K. Lee			REMARKS
SP	T liner	turbed s sample			±	SI	tanda	rd per	standpipe tip netration test	1	DATE	08	/02/200)2		
NO.		sturbed listurbed			I	P		remet ability	er test test	C	HECKED	G. V	Whatmo	ore		
121	zier sa ton sa				I				acker test shear test		DATE	09	/02/200	12		



SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 1

DRILLHOLE RECORD

SHEET 10 OF 11

PROJECT	Schoo	ol Improvement Programme	Final Phase, Packa	ge 5 (Group 3) - P487 W	a Fung School
METHOD	Rotary	CO-ORDINATES	E 819879.58 N 832779.61	CONTRACT No.	TC J304
MACHINE & No.	BM50	GROUND LEVEL	+ 13.78 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	18/01/2002 to 06/02/2002

Drilling	Casing Depth/Size	Water Depth (m)	Water Returns %	T.C.R. %	S.C.R. %	ROD %	Fracture	Tests Tests	Samples	(CMPD)	Depth 00.00	Legend	Grade	Description
1			50	100	100	100			1W 90.97				11	narrow to very narrow, calcite infilled and clean, dipping horizontally to 10° and 40° to 50°.
			50	99	99	99	1.0		INW					
							-20 2.8		BZ 32	-78.54 -78.82 -79.02	92.32 92.60 92.80		III III III III III III III III III II	Moderately strong to strong, greyish white and grey, moderately to slightly decomposed MARBLE. Joints are closely to medium spaced, rough planar, extremely narrow to very narrow, calcite infilled and
			50	99	99	83	11.5	93.05	93.83	-80.05 -80.14	93.83		-HL	clean, dipping horizontally to 10° and 10° to 20°. From 92.60m to 92.80m : Moderately strong, moderately decomposed MARBLE. From 93.83m to 93.92m : Moderately strong,
			50	89	95	88	1.8	94.42	INW				HI/II	moderately decomposed MARBLE.
			50	99	99	95	7.3	95.53	95.36	A-1750				
05/02/02 05/02/02	200	6.68m at 18:30 8.40m at 07:30						96,35	96.83	-82.57	96.35		Ш	Strong, greyish white and grey, slightly decomposed MARBLE. Joints are closely to widely spaced, rough planar, extremely narrow to very narrow, calcite infilled, chlorite coated and clean, dipping 10° to 20° and 30° to 40°.
			50	186	100	100	0,3		98.28			THE PROPERTY OF THE PROPERTY O		
			50	100	100	100			TAN					
0			50	100	100	87	1.2	99.50	99.78	-86.22	100.00	蓋		
Larg		irbed sa irbed sa			1	Pie		mple ter / standpipe tip I penetration test	LOGGED	-	K. Lee			REMARKS
U76	3 undist 00 undi:	turbed s sturbed			İ	Pre	essure rmeat	emeter test pility test	CHECKED	6.	Vhatmo			
	zier san ton sam				IV			on packer test ane shear test	DATE	09/	02/200	2		



SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 1

DRILLHOLE RECORD

SHEET 11 OF 11

PROJECT	Schoo	Improvement Programme	Final Phase, Packa	ge 5 (Group 3) - P487 W	a Fung School
METHOD	Rotary	CO-ORDINATES	E 819879.58 N 832779.61	CONTRACT No.	TC J304
MACHINE & No.	BM50	GROUND LEVEL	+ 13.78 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	18/01/2002 to 06/02/2002

Drilling	Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	T.C.R. %	S.C.R. %	R.Q.D. %	Fracture	F.I. / Test Depths	Tests	Sampl	les Depth	Reduced No. 1846 No.	thdad 100.00	Legend	Grade	Description
06	/02/02		7,00m at 13:00	50	100	100	87	1.2	100.31		THE		-86.63	100.41	期	H	See sheet 10 of 11
101	102/02		13.00					10.0								10	End of Investigation Hole at 100.41m.
102																	
103															-		
	_												2000				
105													(Management of the Control				
106 106	-																
107													200 CO				
108																	
109													100 mm (100 mm)				
110	Small	l distu	irbed sa	ample	ا		Wa	iter sa	mple	0	LOG	GED	Y	K. Lee			REMARKS
1	Large	e distu	irbed sa sample	ample		i	Pie	zome	ter/s	standpipe tip etration test		ATE		02/200	- 100		1,500 / 1,000
1	U76 (undist	urbed s sturbed	sample		I		essure		r test est		CKED		/hatmo	\dashv		
0	Mazio Pisto	er san	nple			I	Imp	oressi	on pa	cker test near test	-	ATE	-	02/2002	-		



SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 2

DRILLHOLE RECORD

SHEET 1 OF 11

050 F05		12.4		5 (O - 0) D407 W	- Form Cale al
PROJECT	School	ol Improvement Programme	Final Phase, Packa	ge 5 (Group 3) - P487 W	a rung School
METHOD	Rotary	CO-ORDINATES	E 819863.37 N 832801.41	CONTRACT No.	TC J304
MACHINE & No.	BM48	GROUND LEVEL	+ 13.94 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	25/01/2002 to 05/02/2002

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	T.O.R. %	S.C.R. %	R.Q.D %	Fracture	Depths	Tests	San	nples	Reduced	Depth	Legend	Grade	Description
The second			ш	New	N.C.				,	No. Typ	e Dep	th +13.9	4 0.00			CONCRETE
25/61/02 1	S									NSPECTION PIT	0.95					CONCRETE. Firm, reddish brown, sandy clayey SILT with some angular to subangular fine to medium gravel. (FILL)
2								2.00	1.2 2.3,2,3 N=10	D 1 2 .	1.95 2.00 2.40	+11.9	Ė		V	Extremely weak, reddish brown and yellowish brown, completely decomposed METASILTSTONE. (Reddish brown and yellowish brown, sandy SILT) Extremely weak, reddish brown and yellowish brown, completely decomposed METASILTSTONE. (Very loose to loose, reddish brown and yellowish brown, sandy SILT)
4	\$ 4.00 P	=						4 00	1.2 2.2.2.3 N=9	3 4	4.00 4.40		grand had produc			
6								6.00	10,11,13,14 N=48	5	6.00		5,20		V	Extremely weak, reddish brown and yellowish brown, completely decomposed METASILTSTONE. (Mediun dense, reddish brown and yellowish brown, sandy SILT)
8								8.00	1,2 3,9,12,12 N=36	7 8	8.00 8.40		7.20		V	Extremely weak, brownish grey, completely decomposed METASILTSTONE. (Medium dense, brownish grey, sandy SILT)
9													9.20		V	Extremely weak, greyish brown and brown, completel decomposed METASILTSTONE. (Dense, greyish brown and brown, sandy SILT)
retur-	all distu	urbed sa	mple			Wa	ter sa	mple		10	OGGE		Y. K. Le	9		REMARKS
3		irbed sa			đ	Pie	zome	ter/s	tandpipe tip						. An insp	ection pit was excavated by hand to 2.00m.
U 76	undist	sample turbed s			İ	Pre	ssure	meter		100	DATE		8/02/20	02	rosenti Paris III Are	uvreview । १ व व व व व व व व व व व व व व व व व व
The same	0 undi	sturbed nple	sample	9	Ī	lmp	ressi		est cker test ear test	100	DATE		Whatm 9/02/200			



SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 2

DRILLHOLE RECORD

SHEET 2 OF 11

PROJECT	Schoo	ol Improvement Programme	Final Phase, Packag	ge 5 (Group 3) - P487 W	a Fung School
METHOD	Rotary	CO-ORDINATES	E 819863.37 N 832801.41	CONTRACT No.	TC J304
MACHINE & No.	BM48	GROUND LEVEL	+ 13.94 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	25/01/2002 to 05/02/2002

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	T.C.R. %	S.C.R.%	R.O.D. %	Index	Depths	Tests		amples		Reduced Level (mPD)	though 10.00	Puegen	Grade	Description
					000		16	0.00	4,10 11,16,19,19 N=65		ype De		+3.94	-	HH	V	See sheet 1 of 11
								1		10	• 10,	40		I NEW S			
11						1											
					1									TO THE SECOND			
12	12.00 H						12	00.3	8,13 13,16,22,30 N=81	11	12.0	00					
							١	1	14-01	12	• 12.	40					
13				ľ				1									
					1		d										
14							14	.00	2,7 12,14,14,14 N=54	13	14:0	00					
								,	N=54	14	• 14.4	40					
15												1					
16							16	3.00		15	16:0	00					
									11,11,11,18 N=51	16	• 16.4	40					
17																	
					1							ł	-3.26	17.20		V	Extremely weak, greyish brown and brown, completely decomposed METASILTSTONE. (Very dense, greyish
18							15	00.		17	18.0	20					brown and brown, sandy SILT)
								,	18,23,33,37 N=111	W.	• 18.4						
19																	
													-5.26	19.20		V	Extremely weak, brownish grey and greyish purple, completely decomposed METASILTSTONE. (Very
101					١										Ì		dense, brownish grey and greyish purple, sandy SILT)
	nall dist			Ï	4.1	Wate			na also tierne "klass"		LOGGE	ED	-	20.00 K. Lee			REMARKS
SI	rge distr PT liner :	ample			Ţ		dard p	enetr	ration test	See See	DATE		08/	02/200	2		
U	76 undis 100 undi azier sar	sturbed		Ĉ.	Ŧ	Perm	eabili	ty tes	t		CHECK	ED	G. V	Vhatmo	e		
(2)	azier sar ston san				5977				er test ar test		DATE	š.,	09/	02/200	2		



SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 2

DRILLHOLE RECORD

SHEET 3 OF 11

PROJECT	Schoo	ol Improvement Programme	Final Phase, Packa	ge 5 (Group 3) - P487 W	a Fung School
METHOD	Rotary	CO-ORDINATES	E 819863.37 N 832801.41	CONTRACT No.	TC J304
MACHINE & No.	BM48	GROUND LEVEL	+ 13.94 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	25/01/2002 to 05/02/2002

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	T.C.R.%	S.C.R. S	R.Q.D.%	Index F.I. / Test	Tests		Samp	oles Depth	Reduced Devel (mPD)	Depth 20.00	Puegend	Grade	Description
25/01/02 25/01/02		0.80m at 18:30 8.10m at 07:30					20.0	00 18,10 15,37,33,4 N=134	9 20		20.40				V	See sheet 2 of 11
_22							22.0	00 6.14.56,79 N=155	21		22.00					
.24							24.0	7.8 19,25,38,3 N=121	23 9 24		24.00 24.40					
.25 .26							26.	17,11 25,58 1,99/20mm (200/320m N>200	25 26 im)	Ū	26,00 26,27	-11.26	25 20		VIV	Very weak, brownish grey and purplish brown, completely to highly decomposed METASILTSTONE. (Very dense, brownish grey and purplish brown, sandy SILT)
_28 _29							28.	00 19,43 101,47/15 (200/240m N>200	27 mm 28 m) 28	O	28.00 28.19					
30	all distu	irbed sa	imple		<u> </u>	Wate	er samp	le		LO	GGED	_	30.00 K. Lee			REMARKS
Larg SPT	e distu liner s	irbed sa sample	mple		å Į	Piezo Stan	ometer dard pe	/ standpipe tenetration tes			DATE		02/200		10. 11.	
U10	0 undi	urbed s sturbed			Ī	Perm	eabilit			СН	ECKED	G. V	Vhatmo	re		
Part of the Control o	ier san on sam							packer test shear test	v .	C	DATE	09/	02/200	2		



SITE INVESTIGATION DEPARTMENT

P487-DH 2

DRILLHOLE RECORD

SHEET 4 OF 11

PROJECT	Schoo	I Improvement Programme	Final Phase, Packag	ge 5 (Group 3) - P487 W	a Fung School
METHOD	Rotary	CO-ORDINATES	E 819863.37 N 832801.41	CONTRACT No.	TC J304
MACHINE & No.	BM48	GROUND LEVEL	+ 13.94 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	25/01/2002 to 05/02/2002

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	T.C.R. %	S.C.R.%	R.Q.D. %	Fracture	F.I. / Test Depths	Tests		mples	Reduced B Level	30.00	Legend	Grade	Description
31								30.00		9	30.14				VIV	See sheet 3 of 11
32						8		32.00	43,72	1 2	32.00 32.29					
33								34.00	14,17,21,34 N=86	3 4	34,00 34,40	-19.26	33.20		V	Extremely weak, yellowish brown, completely decomposed METASILTSTONE. (Dense, yellowish brown, sandy SILT)
3626/01/02 28/01/02		0.80m at 18:30 8.00m at 07:30						36.00	28,145 3 *29/10mm (200/166mm) N>200		36.00 36.11	-21.26	35.20	0 0 0 0	V/IV	Very weak, reddish brown, completely to highly decomposed METASANDSTONE. (Very dense, reddish brown, silty fine to medium SAND with some subangular fine to medium gravel)
37								38,00	11,21 15,11,14,17 N=57		38.00 38.40	-23.26	37.20	9	V	Extremely weak, brownish grey, completely decomposed METASILTSTONE. (Dense, brownish grey, sandy SILT)
39												-25.26 -26.06		9 6	V/IV	Very weak, yellowish brown, completely to highly decomposed METASANDSTONE. (Very dense, yellowish brown, silty fine SAND with occasional subangular fine to medium gravel)
		rbed sa			▲			ample		L	OGGED		K. Lee			REMARKS
SPT	liner s	irbed sa ample			+	Sta	ndar	d pene	tandpipe tip atration test		DATE	08/	02/2002			
U100	0 undis	urbed saturbed		è	1	Per	meal	ometer cility te	est	CI	HECKED	G. W	/hatmor	е		
-	ier sam on sam	All and			I	0)(0)			cker test near test		DATE	09/	02/2002			



SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 2

DRILLHOLE RECORD

SHEET 5 OF 11

	*	DRILL	HOLL KL	OND	SINELL S SI III
PROJECT	Schoo	Improvement Programme	Final Phase, Packag	ge 5 (Group 3) - P487 W	a Fung School
METHOD	Rotary	CO-ORDINATES	E 819863.37 N 832801.41	CONTRACT No.	TC J304
MACHINE & No.	BM48	GROUND LEVEL	+ 13.94 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	25/01/2002 to 05/02/2002

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	TCR %	ROD %	Fracture	F.I. / Test Depths	Tests		pies e Depth	Reduced Level 9 (mPD)	thoo Oepth	Puegen	Grade	Description
41							40.00	11,19 78,92/45mm (209/270mm) N>200	39 40	40.00 40.22	1000		9 6 9	VIIV	See sheet 4 of 11
12	H 42.00 N	8.00m at 18:30			*		42.00	25,27,54,58 N=164	41	42.00 42.40	-27.26	41.20		V	Extremely weak, yellowish brown, completely decomposed METASANDSTONE. (Very dense, yellowish brown, silty fine SAND)
28/01/02 29/01/02 43	2	8.30m at 07:30					44.00	6,24 44,32,23,32	43	44.00	-29 26	43.20		v	Extremely weak, yellowish brown, completely decomposed METASILTSTONE. (Very dense, yellowish brown, sandy SILT)
45								N=131	44 •	44.40	-31.26	45.20		V	Extremely weak, dark brownish yellow, completely decomposed METASILTSTONE. (Dense, dark brownish yellow, sandy SILT)
46 47							46:00	8,16 22,22,19,22 N=85	46	46.00 46.40	-33.26	47.20		V/IV	Very weak, yellowish brown, completely to highly decomposed METASANDSTONE. (Very dense,
48							48.00	11,28 27,67 ,69/40mm (200/340mm) N>200	47	48.00 48.29			yellowish brown, silty fine SAND)		
	Small disturbed sample				L	OGGED	-	50.00 K. Lee			REMARKS				
SPT liner sample Standard penetration test				DATE 08/02/2002 CHECKED G. Whatmore DATE 09/02/2002		08/02/2002									
U76 undisturbed sample U100 undisturbed sample □ Mazier sample □ Piston sample □ Piston sample □ Un-situ vane shear test □ Un-situ vane shear test						CI	re								
						100	2								



SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 2

DRILLHOLE RECORD

SHEET 6 OF 11

PROJECT	School Improvement Programme Final Phase, Package 5 (Group 3) - P487 Wa Fung School													
METHOD	Rotary	CO-ORDINATES	E 819863.37 N 832801.41	CONTRACT No.	TC J304									
MACHINE & No.	BM48	GROUND LEVEL	+ 13.94 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)									
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	25/01/2002 to 05/02/2002									

Drilling Progress	Casing Depth/Size	Depth (m)	Returns % T.C.R. %	S.C.R. %	R.Q.D.%	Fracture Index F1 / Tast	DOMESTIC OF	Tests		Samp	Depth	Reduced 9 Level	1000	pueden	Grade	Description
_51						50	0.00	18,24 168/70mm (200/220mm N>200	50	Ų	50.00 50.17				V/IV	See sheet 5 of 11
_52						52	2.00	16,33 55,96/65mm (200/290mm N>200	51	Q	52 00 52 24	-37,16	51.10		V/IV	Very weak, brownish grey, completely to highly decomposed METASILTSTONE. (Very dense, brownish grey, sandy SILT)
_53											201221	-39.26	53.20		V/IV	Very weak, reddish pink, completely to highly decomposed METASANDSTONE. (Very dense, reddish pink, silty fine SAND)
.55						54		8,12 17,56 ,107/50mm (200/350mm) N>200	53	Į	54.30	-41.26	55.20		V	Extremely weak, yellowish brown, completely
56						56	.00	7,9 12,24,34,60 N=130	55		56.00 56.40					decomposed METASILTSTONE. (Very dense, yellowish brown, sandy SILT)
5829/01/02 30/01/02	118	00m st 3:30 20m at 7:30				58		4,7 13,18,21,23 N=75	57 58		58.00 58.40	-43.26	57.20		V	Extremely weak, brown, completely decomposed METASILTSTONE. (Dense, brown, sandy SILT)
59												-45.25 -46.06	59.20	0 0	V	Extremely weak, brownish grey and brown, completely decomposed METASILTSTONE. (Very dense, brownish grey and brown, sandy SILT with occasional subangular fine to medium gravel)
Small	l disturbe			A		er sami		indpipe tip	7	LOC	GED		K. Lee			REMARKS
SPT	e disturbe liner sam	ple		1	Stan		enetr	ation test		DA	ATE	08/	02/2002	2		
U100	undisturb) undistur er sample	bed sam		Ī	Perm	neabilit	y tes			CHE	CKED	G. W	/hatmoi	е		
	n sample			Λ.	90		180	ar test		DA	ATE	09/	02/2002			



SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 2

DRILLHOLE RECORD

SHEET 7 OF 11

		DRILL	HOLL KL	CORD	OTTELL TOT TO
PROJECT	School	Improvement Programme	Final Phase, Packa	ge 5 (Group 3) - P487 W	a Fung School
METHOD	Rotary	CO-ORDINATES	E 819863.37 N 832801.41	CONTRACT No.	TC J304
MACHINE & No.	BM48	GROUND LEVEL	+ 13.94 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	25/01/2002 to 05/02/2002

Drilling	Casing Depth/Size	Water Depth (m) Water	T.C.R.%	S.C.R. %	R.Q.D.%	Fracture	F.I. / lest Depths	Tests	Sam o. Typi		A Level	Depth 60:00	Pregend	Grade	Description
61							50.00	5.12 22,31,50,80 N=183 S6		60.40			0 0	V	See sheet 6 of 11
62						E	32.00	4.8 5 18,38,68,66 N=188 6		62.00 62.40			9 9 9		
63						Æ	64.00	12,23 6: 1165/40mm 6- (200/190mm) N>200		64.00 64.14	-49.28	63.20	Survey survey survey survey	VIIV	Very weak, yellowish brown, completely to highly decomposed METASANDSTONE. (Very dense, yellowish brown, silty fine SAND)
35 36						¥	56.00	7,14 B1 28,15 39,97/85mm (200/430mm) bi		66.00 66.38	-51.26	65.20		V/IV	Very weak, brownish grey and yellowish brown, completely to highly decomposed METASILTSTONE. (Very dense, brownish grey and yellowish brown, sandy SILT)
68						×	58.00	11,189 5 *(200/150mm) _{Bi} N>200	7 B	68.00 68.10					
70	Small disturt			A			mple ter/s	tandpipe tip	LC	OGGED	-56.06 Y.	70.00 K. Lee			REMARKS
	SPT liner sa U76 undistur U100 undist Mazier samp Piston samp	mple bed samp urbed sam ble	le	→ IIIIV	Sta Pre Per Imp	ndard ssure meab ressio	pene meter ility te on par	etration test r test	СН	DATE ECKED DATE	G. W	02/200 hatmo 02/200	re		



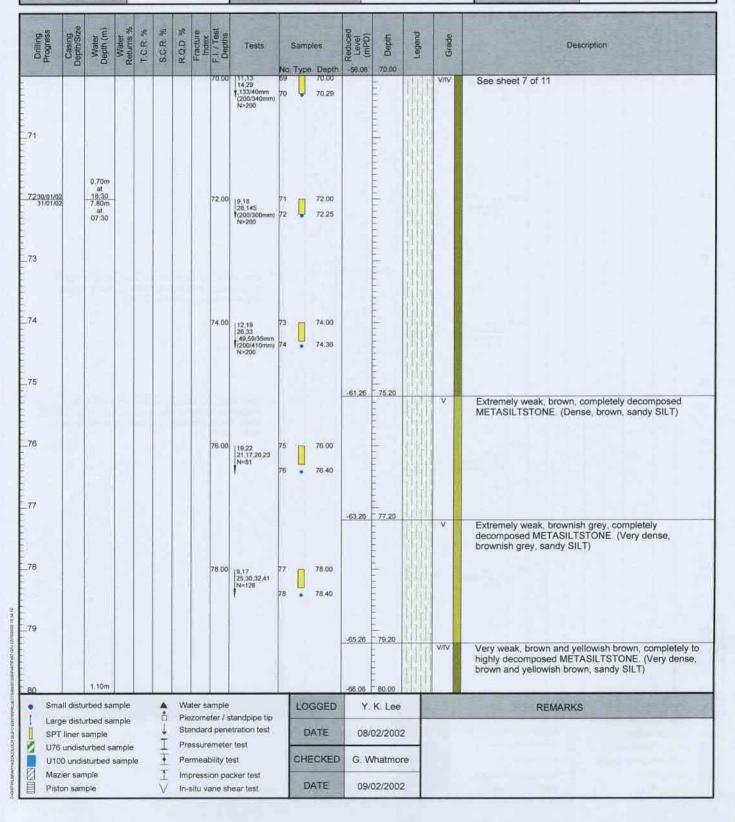
SITE INVESTIGATION DEPARTMENT

P487-DH 2

DRILLHOLE RECORD

SHEET 8 OF 11

PROJECT	School Improvement Programme Final Phase, Package 5 (Group 3) - P487 Wa Fung School													
METHOD	Rotary	CO-ORDINATES	E 819863.37 N 832801.41	CONTRACT No.	TC J304									
MACHINE & No.	BM48	GROUND LEVEL	+ 13.94 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)									
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	25/01/2002 to 05/02/2002									





SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 2

DRILLHOLE RECORD

SHEET 9 OF 11

PROJECT	Schoo	ol Improvement Programme	Final Phase, Packaç	ge 5 (Group 3) - P487 W	a Fung School
METHOD	Rotary	CO-ORDINATES	E 819863.37 N 832801.41	CONTRACT No.	TC J304
MACHINE & No.	BM48	GROUND LEVEL	+ 13.94 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	25/01/2002 to 05/02/2002

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	T.C.R. %	S.C.R. %	ROD %	Index	Depths	Tests		amples	ALC: UNKNOWN	(mPD)	Depth 00.08	Legend	Grade	Description
31/01/02 01/02/02		at 18:30 8.00m at 07:30			- 41		8	0.00	25,104 /	9	80.0	0				V/IV	See sheet 8 of 11
1													67.16	81.10		V	Extremely weak, brown and yellowish brown, completely decomposed METASILTSTONE. (Dense, brown and yellowish brown, sandy SILT)
2							8	2,00	6.9 13,16,21,27 N=77	31	82.0	ta.					
3													69.26	83.20	000	V/IV	Very weak, brown, completely to highly decomposed METASILTSTONE. (Very dense, brown, slightly sand angular to subangular fine to medium GRAVEL)
4								34.00	31,24 33,23/5mm	83 84	84.0	175.27			000000000000000000000000000000000000000	0	
5													-71,26	85,20	9 1	4	Very stiff, brown, sandy silty CLAY with some subangular fine to medium gravel. (KARST SURFAC DEPOSIT)
6	N	1.00m						96,00	19,191/65mm *(200/140mm) N>200	85	. 86.1	880			75 1 -1 -1 -1 -1 -1 -1 -1	4	DET GOTTY
01/02/03 02/02/03 7	86.65	18:30 8.10m at 07:30	50	99	99	99	3.0	86.65			1NW	65	-72.71 -73.26	86.65	THE PARTY IN THE P	1 H/N	Moderately strong to strong, grey, moderately to slightly decomposed MARBLE. Joints are medium spaced, rough planar, extremely narrow to very narrow, calcite infilled and clean, dipping horizontally to 10°.
18			50	98	98	91		87,64			87. TNW 88.	J			HHHH		Strong, grey, slightly decomposed MARBLE. Joints are medium to widely spaced, rough planar, extremely narrow to very narrow, calcite infilled and clean, dipping 10° to 20° and 40° to 50°.
39			50	100	100	100	0.7	89.10			INN				HHHH		
02/02/0 04/02/0 90	22	0.80m at 12:00 8:00m at 07:30	50	99	99	85	2.7	89.85			89.	63	-75.91	89.85	WHILE WHILE	10/0	Moderately strong to strong, grey, moderately to
		urbed sa			å		ater sa		standpipe tip		LOGG	ED	Y	K. Le	е		REMARKS
SP U7	T liner 6 undis	urbed sa sample sturbed s listurbed	ample	а	Ī	Sta		d pen emete	etration test er test		DAT			/02/20 Whatm			
	zier sa				I				ncker test hear test	1	DAT	F	09	/02/20	2		



SITE INVESTIGATION DEPARTMENT

DRILLHOLE No. P487-DH 2

DRILLHOLE RECORD

SHEET 10 OF 11

PROJECT	School Improvement Programme Final Phase, Package 5 (Group 3) - P487 Wa Fung School													
METHOD	Rotary	CO-ORDINATES	E 819863.37 N 832801.41	CONTRACT No.	TC J304									
MACHINE & No.	BM48	GROUND LEVEL	+ 13.94 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)									
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	25/01/2002 to 05/02/2002									

Drilling Progress	Casing Depth/Size	Water Depth (m)	Water Returns %	TOR %	S.C.R. %	R.Q.D. %	Fracture	F.L. / Test Depths	Tests	Samples	Reduced Level (mPD)	Depth	Legend	Grade	Description
00 July	7.75	- 00		//		100	100			No Type Depth	-76.06	90.00	4		slightly decomposed MARBLE.
1			50	99	99	85	6.1			91.13					Joints are closely to medium spaced, rough planar and smooth planar, extremely narrow to very narrow, calcite infilled and chlorite coated, dipping horizontally to 10°, 10° to 20° and 30° to 40°.
				1/				91.32			-77.38	91,32		11	Strong, greyish white and grey, slightly decomposed
2			50	100	100	95	2.2			TNW			開開		MARBLE. Joints are medium to widely spaced, rough planar, extremely narrow to very narrow, calcite infilled, clean and chlorite coated, dipping 10° to 20°, 30° to 40°, 50
- 1			50	100	100	100				92.22 TNW			題		to 60° and 70° to 80°.
				#	(1052)	-		92.67		92.67			盘		
													至		Maria di Libia di Libia di
			50	99	99	99	0.7			TNV			至		
						l lest							莊		
													辩		The Market Co. 1
							3.5	94.10		94.10			至		
							Detail	94.67		1 1 1			至		
			50	100	100	92				TNW			至		
													至		
				4						95.60			益		
													選		
			50	100	100	100				TNW			部		
							72						田田		
		1.00m at 18:30	50	100	100	100	1.2			96.92	-82,98	96,92	棄	ID/8	From 96.92m to 97.65m : Moderately strong to strong
04/02/02 05/02/02		8,10m at	50		,,,,	100				97.12			至		moderately to slightly decomposed MARBLE
		07:30									-83.71	97.65	至		
			50	100	100	100				TW			至	.11	
													蓝	-1	
				4						98.64	04.04	00.75	郅		
							6.7	98.75			-84.81	98,75	图	101	From 98.75m to 99.20m : Moderately strong, moderately decomposed MARBLE.
			50	100	100	100		99.20		TOW	-85.26	99.20	图	-0	moderatery decomposed MARBLE.
			00		100	100	171			180			超		
,							100				-86.06	100.00	辯		
	II distu	rbed sar	nple		A			mple	2001 01	LOGGED	-	K. Lee			REMARKS
	e distu liner s	rbed sar ample	mple		İ				ndpipe tip ation test	DATE	08/0	02/200		-	
U76	undist	urbed sa	-		Ī			meter te			Cassant	1000 100 100			
	0 undis ier sam	iturbed s iple	sampl	е	Ī			oility test on pack		CHECKED	G. W	/hatmo	е		
	on sam				V			ane shea		DATE	00/0	02/2002	9		



SITE INVESTIGATION DEPARTMENT

P487-DH 2

DRILLHOLE RECORD

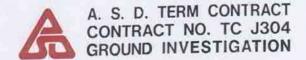
SHEET 11 OF 11

PROJECT	Schoo	ol Improvement Programme	Final Phase, Packa	ge 5 (Group 3) - P487 W	a Fung School									
METHOD	Rotary	CO-ORDINATES	E 819863.37 N 832801.41	CONTRACT No.	TC J304									
MACHINE & No.	BM48	GROUND LEVEL	+ 13.94 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9)									
FLUSHING MEDIUM	Water	ORIENTATION	Vertical	DATE	25/01/2002 to 05/02/2002									

Drilling Progress		Water Depth (m)	o Returns %	00 T.C.R. %	S.C.R. %	Nicola .	- Fracture	F.I. / Test Depths	Tests	No Type Depth	Reduced (mPD)	∰de Q 100.00 100.14	Legend	= Grade	Description See sheet 10 of 11 End of Investigation Hole at 100.14m.
101															
102														=	
103															
104										-					
105															
_106 										=					
109													4		
110	200	sturbed s			_	LAX-	la.	imple		LOGGED	· ·	K Lee			DESAS DICO
1 1	arge dis	sturbed s	ample		å	Pie	zome	ter / s	tandpipe tip tration test	DATE		02/2002	-		REMARKS
2	J76 und	r sample isturbed t	sample		İ	Pre	ssure	meter	test	CHECKED		/hatmoi			
0 1	J100 un Mazier s Piston sa		samp	ie	III	Imp	oressi	on pa	cker test ear test	DATE		02/2002			

APPENDIX E

DRILLHOLE CORE PHOTOGRAPHS



DH1 Hole No. :

to 8.25 Depth (m): 0.00

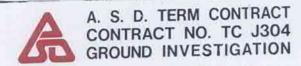
Box No.

0.5m 0m

Works Order No.: ASD007206

Photo Date : 15 - 3 - 2002





Hole No. : DH1

Depth (m): 8.25 to 12.35

Box No.

0m

2

of

8

Works Order No. : ASD007206

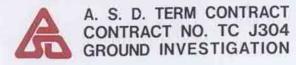
Photo Date

: 15 - 3 - 2002





0.5m



惠保 (香港) 有限公司 VIBRO (HK) LIMITED

Site: P487 Wa Fung School

Hole No. : DH1

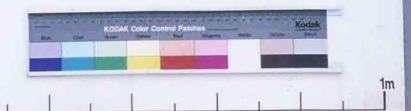
Depth (m): 12.35 to (16.08)

Box No. : 3 of 8

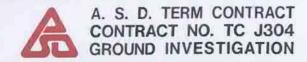
Om 0,5m

Works Order No.: ASD007206

Photo Date : 15-3-2002







Hole No. : DH1

Depth (m): (16.08) to 19.66

Box No.

4

of

8

Photo Date

Works Order No. : ASD007206

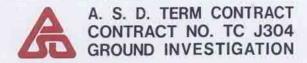
: 15-3-2002

1m



(16.08) 19.66 18.88

0.5m



KODAK Color Control Patches

Site: P487 Wa Fung School

DH1 Hole No. :

Depth (m): 19.66 to 80.88

Box No. of

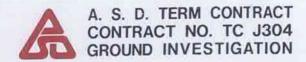
0.5m 0m

Works Order No.: ASD007206

Photo Date : 15-3-2002

1m







KODAK Color Control Patche

Site: P487 Wa Fung School

Hole No. : DH1

Depth (m): 80.88 to 92.32

Box No. : 6

of 8

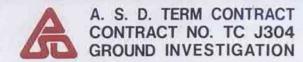
Om 0,5m

Works Order No. : ASD007206

Photo Date

: 15-3-2002





Hole No. : DH1

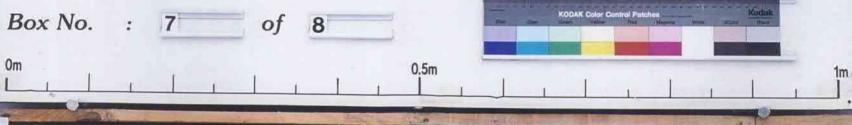
Depth (m): 92.32 to (97.29)

Box No.

Works Order No.: ASD007206

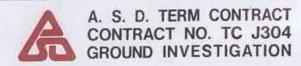
Photo Date

: 15-3-2002



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Site: P487 Wa Fung School

Hole No. : DH1

Depth (m): (97.29) to [100.41

Box No. : 8 of 8

0m 0.5m

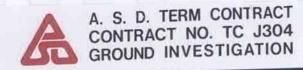
Works Order No.: ASD007206

Photo Date

KODAK Color Control Patche

: 15-3-2002





Hole No. : DH2

Depth (m): 0.00 to 87.64

Box No. : 1 of 4

Works Order No.: ASD007206

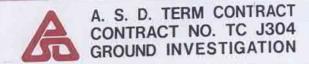
Photo Date

KODAK Color Control Patcher

: 15-3-2002

87.64





Hole No. :

DH2

Depth (m): 87.64 to 92.22

Works Order No.: ASD007206

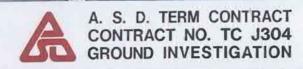
KODAK Color Control Patch

Photo Date

: 15-3-2002

Box No.





DH2 Hole No. :

Depth (m): 92.22 to 96.92

Works Order No.: ASD007206

Photo Date

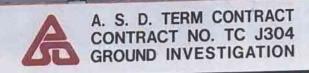
: 15-3-2002

Box No.

0m



0.5m



惠保(香港)有限公司 VIBRO(HK) LIMITED

KODAK Color Control Patches

Site: P487 Wa Fung School

DH2 Hole No. :

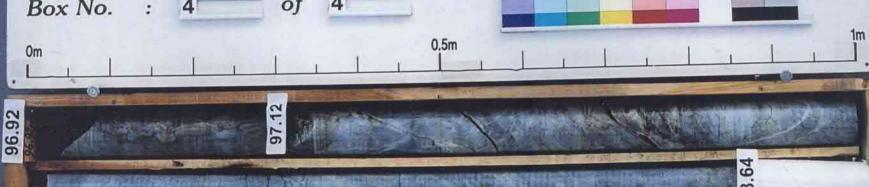
Depth (m): 96.92 to 100.14

Box No.

Works Order No.: ASD007206

Photo Date

: 15-3-2002



100.14 END

APPENDIX F

INSTRUMENT INSTALLATION DETAIL AND MONITORING RECORDS



SITE INVESTIGATION DEPARTMENT

HOLE No. **P487-DH 1**

INSTALLATION DETAILS & GROUNDWATER RECORD

SHEET 1 OF 1

PROJECT	School	School Improvement Programme Final Phase, Package 5 (Group 3) - P487 Wa Fung School														
INSTALLED BY	C. Chau 07/02/2002	CO-ORDINATES	E 819879.58 N 832779.61	CONTRACT No.	TC J304											
TESTED BY DATE	P. Chu 09/02/2002	GROUND LEVEL	+ 13.78 mPD	WORKS ORDER No.	ASD007206 (Vol. 3 of 9											
CHECKED BY DATE	G. Whatmore 18/03/2002	STOP WATCH ID	VSW001	DIP METER ID	DM619											
INSTRUMENT TYPE	A Standpipe	INSTRUMENT DEPTH	A 15.00m	RESPONSE ZONE	A 0.50m TO 15.50m											

DATE 09/02/2002	DEPTH		2.2.20000	LOCKABLE COVER	(NOT TO SCALE
09/02/2002	(m)	REDUCED LEVEL (mPD)	GROUND LEVEL +13.78mPD		CONCRETE SURFACE BOX PVC CAP WITH VENT HOLE 19mm I.D. PERFORATED PVC
	8.30	+5.48			PIPE WITH 2 LAYERS OF NYLON MESH
18/02/2002	8.26	+5.52		0.000	DRAIN HOLE BENTONITE/CEMENT GROUT
19/02/2002	8.24	+5.54			BENTONITE/CEMENT GROOT
20/02/2002	8.25	+5.53			
21/02/2002	8.27	+5.51			
22/02/2002	8.31	+5.47			
23/02/2002	8.29	+5.49			
		RESPONSE ZONE	RESPONSE ZONE (A)		GRANULAR FILTER
			15.50m -1.72mPD	STANDPIPE 15.00m (-1.22mPD)	
			_15.50m -1.72mPD		BENTONITE PELLETS
					BENTONITE/CEMENT GROUT

APPENDIX G

RESPONSE TEST RECORD

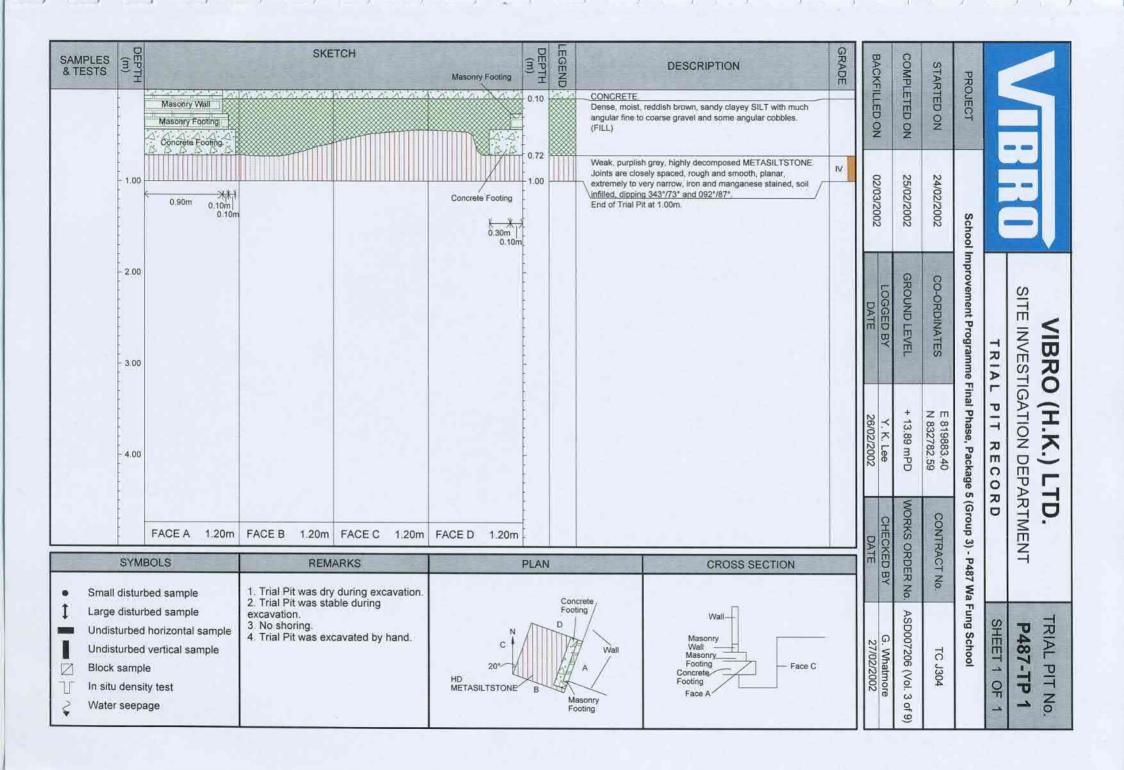
	H	D	n	SITE	INVES	TIGATI	ON DE	IMITED EPARTMENT	DRILLHOLE NC P487-DH 1
W			U		RESP	ONSE T	EST RE	CORD	SHEET 1 OF
PROJECT School Improvement 3)		Programme Final Phase, Package 5 (Group - P487 Wa Fung School				CONTRACT No.	TC J304		
INSTALLED BY C. C. DATE 07/02/		iau .	U CO-ORDINATES		E 819879.58		WORKS ORDER No.	ASD007206 (Vol. 2 of	
TESTED BY		P. C	hu			N 832779.61		GROUND LEVEL	+ 13.78 mPD
		09/02/2 G. Wha			TCH ID	VSW001		INITIAL	
DATE DATE		18/03/2002		DIP METER ID		DM619		WATER LEVEL	8.30m bGL
INSTRUMENT TYPE		STANDPIPE		INSTRUMENT DEPTH		15.00m		RESPONSE ZONE	0.50m TO 15.50m
Time lapsed, t minutes)	Water Depth, d t (m)	ht	h _t /h _O	Time Elapsed, t (minutes)	Water Depth, d (m)	t ht	ht/ho	d = 0.019	_m
0	0.00	8.30	1.00		· · · · · · · · · · · · · · · · · · ·			D = <u>0.129</u>	_ m
0.25	1.41	6.89 6.56	0.83			-		L = <u>15.00</u>	_m
0.5 0.75	1.74	6.34	0.79					-	Diameter of standpipe
1	2.15	6.15	0.74					d	or piezometer tube
1.5	2.53	5.77	0.70						
2	2.81	5.49	0.66	ļ		<u> </u>			<u>-</u>
3	3.57 3.91	4.73 4.39	0.57 0.53	-					Cement / Bentonite G
5	4.25	4.05	0.53	1		-			
6	4.56	3.74	0.45					d _t	Water level at t = 0
7	4.87	3.43	0.41	ļ					
8	5.17	3.13	0.38	_				4 4	
9 10	5.46 5.73	2.84	0.34	 		1		1 1	h _o
15	6.83	1.47	0.18]	
20	7.76	0.54	0.07						Water level after time t
25	8.08	0.22	0.03						
30 45	8.17 8.30	0.13	0.02	-		-			h _t
	0.30	0.00	0.00			 		1	
									Initial ground
									Water level
		· · · · · · · · · · · · · · · · · · ·	 				-	1	
	-			1			-		
	<u> </u>							Bentonite	
1 +				, ,				Pellets	0.50 m b
e.0									Top of tested zone
0.8								Standpipe 0	L = Length of
0.7									Response Zone
0.6								10mm single ^p size aggregate	45.50
0.5	,							Bentonite	Base of tested zone
-								Pellets Bentonite /	==
(0 0.4 0 0.37 4)								Cement Ball	
<u>,</u>								D	Bottom of hole
0.3								Diameter of Di	rillhole
	- - -				++			Shape Factor:	AπI
0.0								F = 2.	$+ \sqrt{1 + (1.2 \frac{L}{D})^2}$
0.2							\rightarrow 1	l saef , D	Λ (. <u>P</u>)]
								= 20.08	m
								Permeability :	
								·	00 40 -8
0.1								k = A = 2.	90 x 10 ⁻⁶ m/sec
o Notes	2 3 :	4		a ne t { minute:	10 5)	12 1	4 16	Material Surro	unding Response Zone
ht T	= d ₁ -d _t (fall is time wher	ing head) 1 h _t / h _c = 0			τ =	486	sec	FILL, completerly	decomposed and highly to
•			area of drillh		$\left(\frac{d}{2}\right)^2 \pi = $		m ²	j moderately decon	nposed METASILTSŤONE

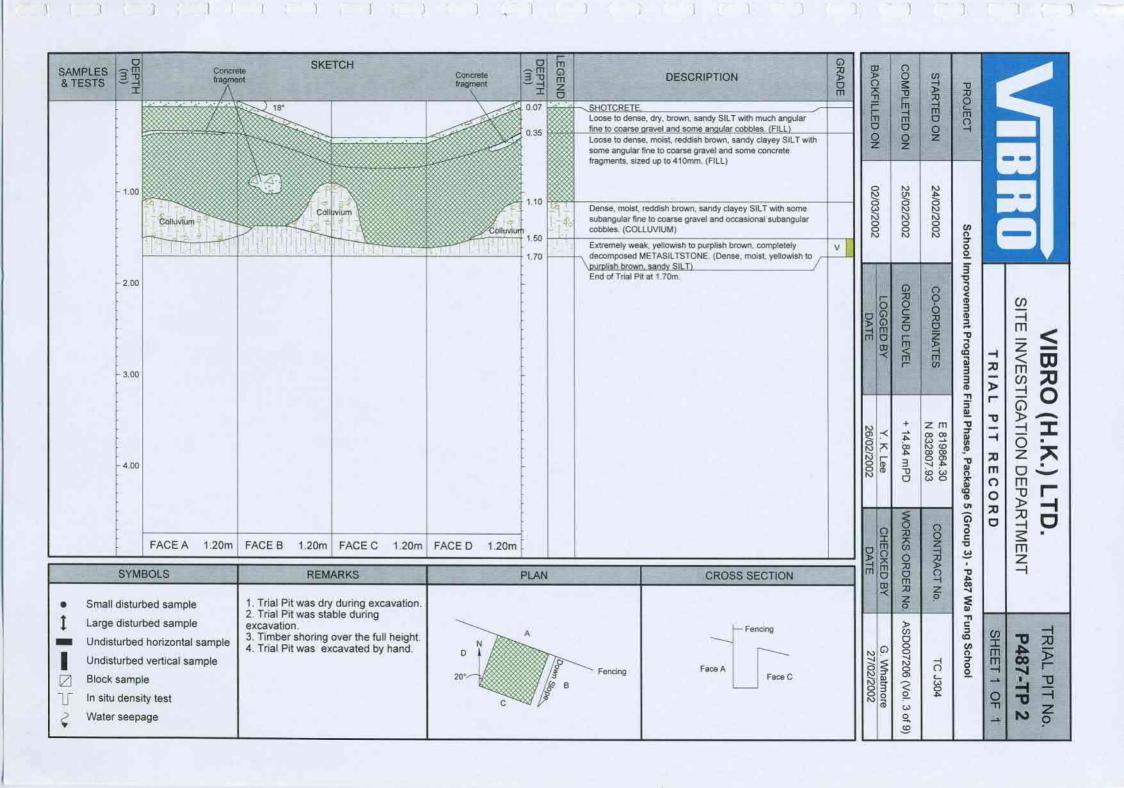
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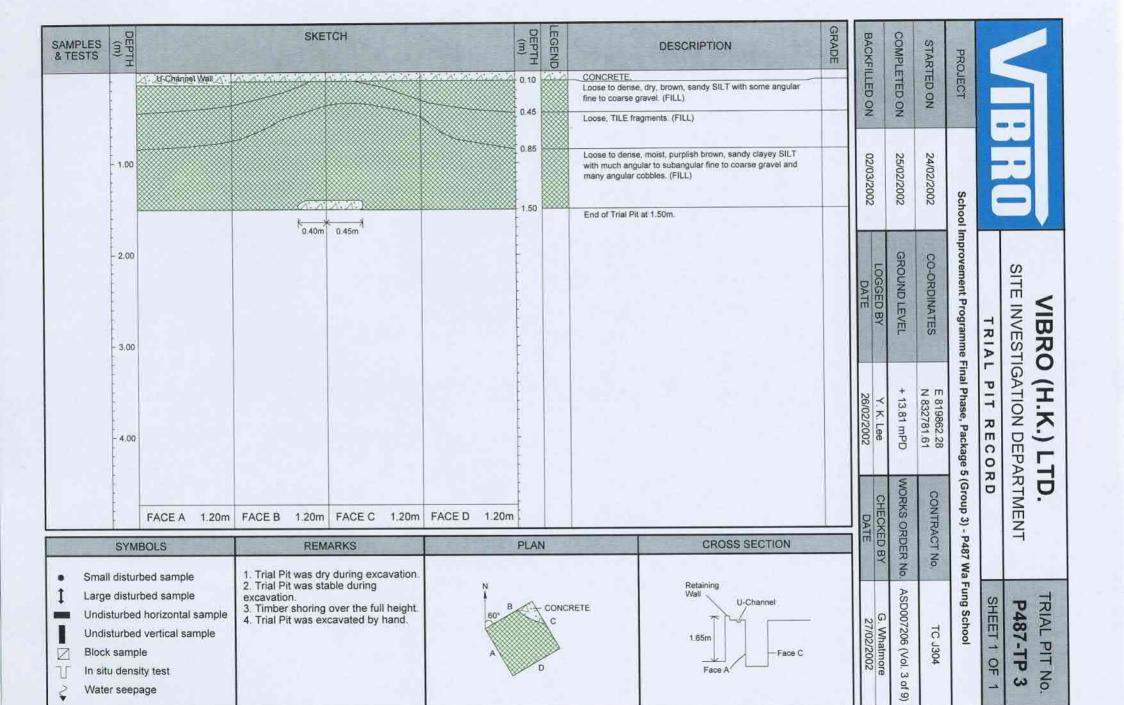
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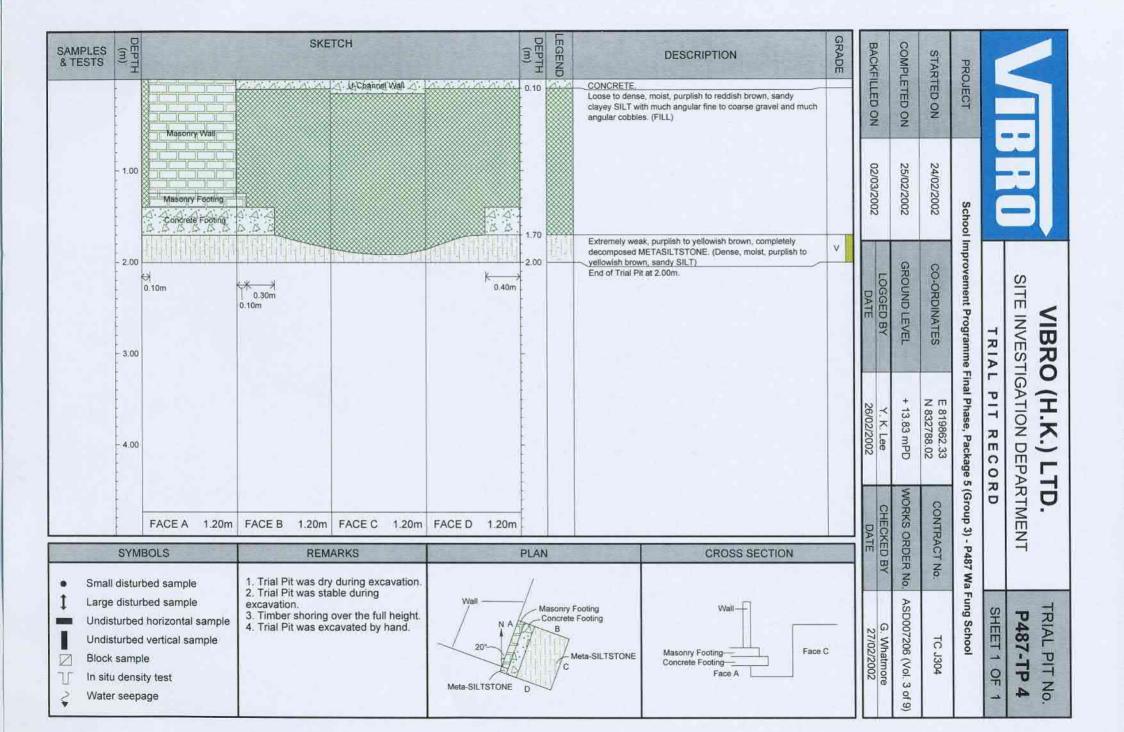
APPENDIX H

TRIAL PIT RECORDS









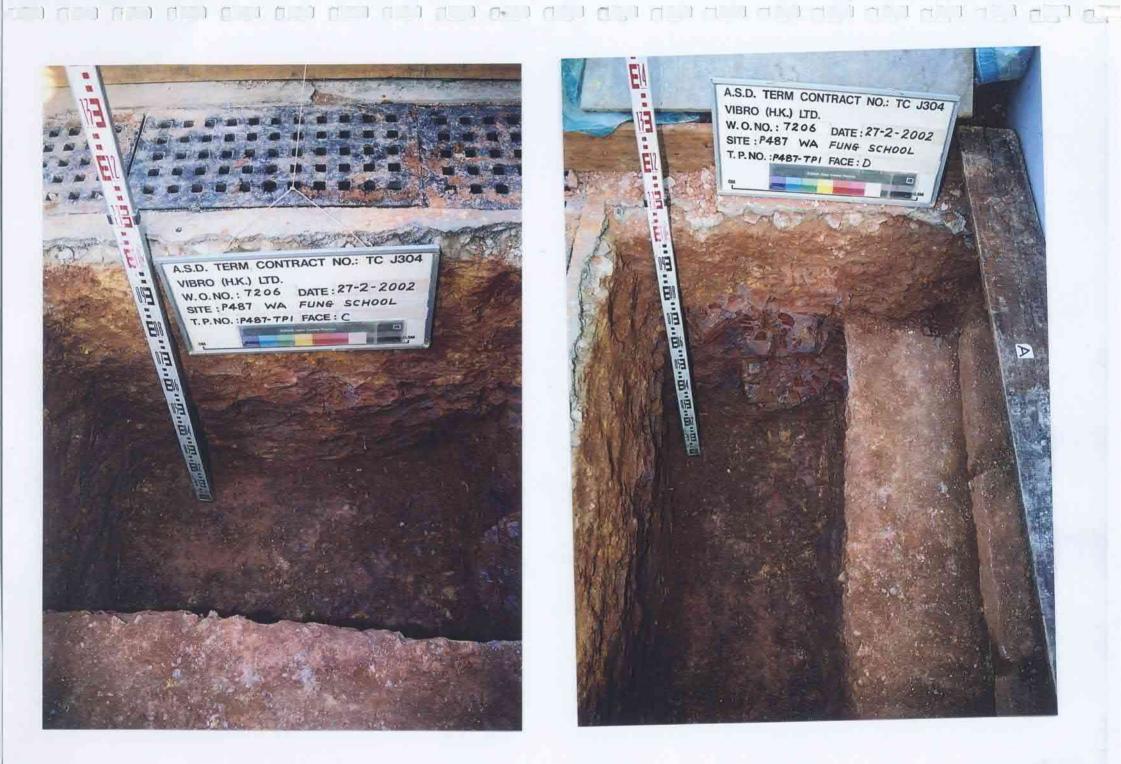
APPENDIX I

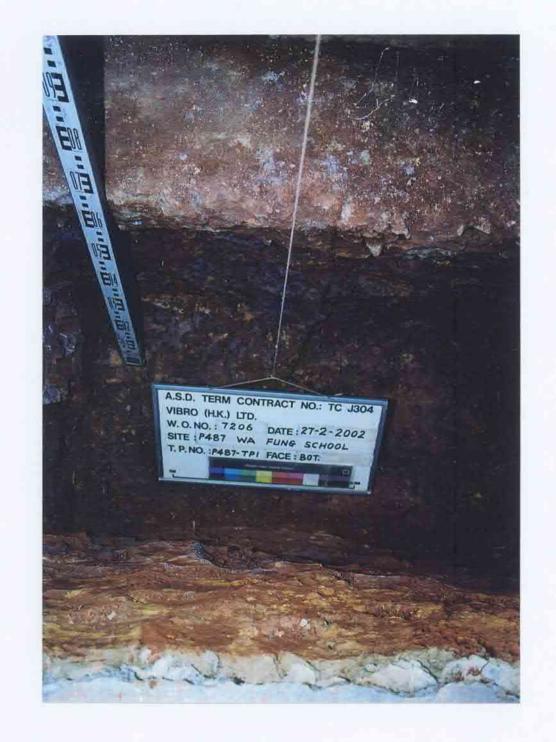
TRIAL PIT PHOTOGRAPHS

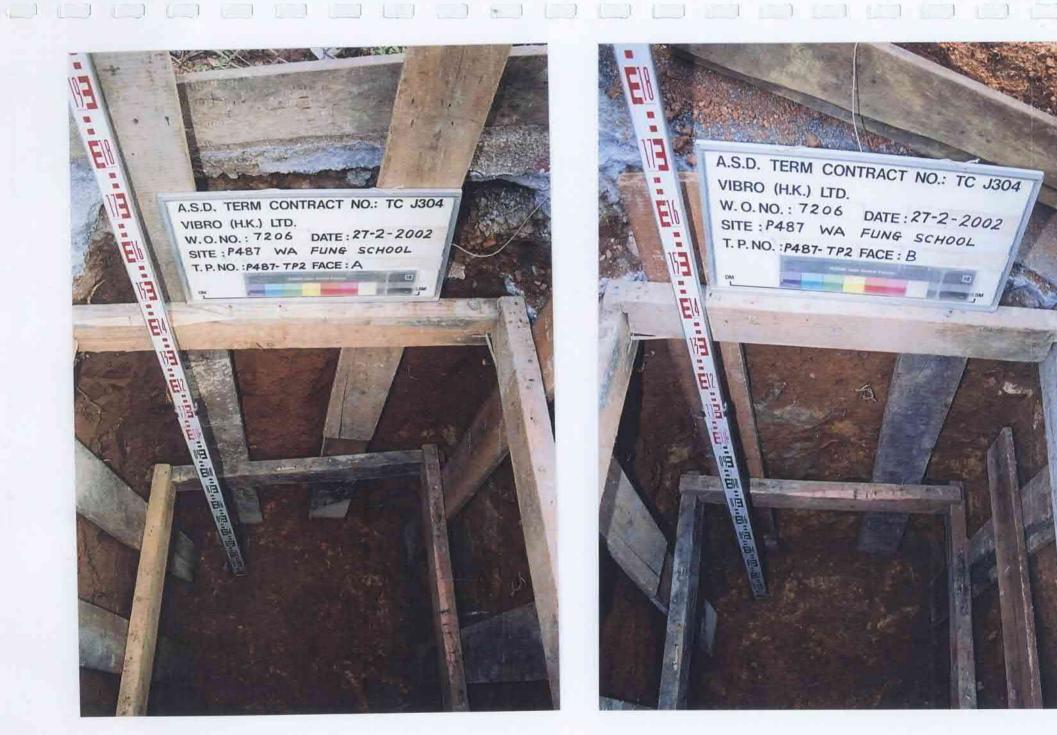
A.S.D. TERM CONTRACT NO.: TC J304 VIBRO (H.K.) LTD. W. O. NO.: 7206 DATE: 27-2-2002 SITE : P487 WA FUNG SCHOOL T. P. NO. : P487-TP1 FACE : A



A.S.D. TERM CONTRACT NO.: TC J304 VIBRO (H.K.) LTD. W.O.NO.: 7206 DATE: 27-2-2002 SITE : P487 WA FUNG SCHOOL T.P.NO. : P487-TP1 FACE : C

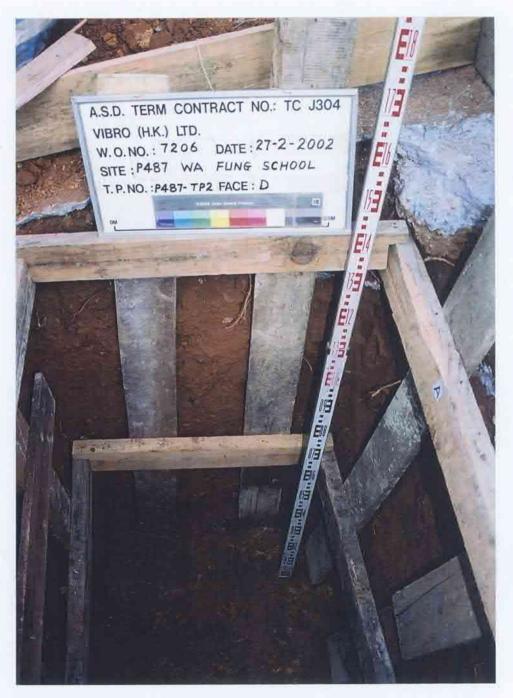


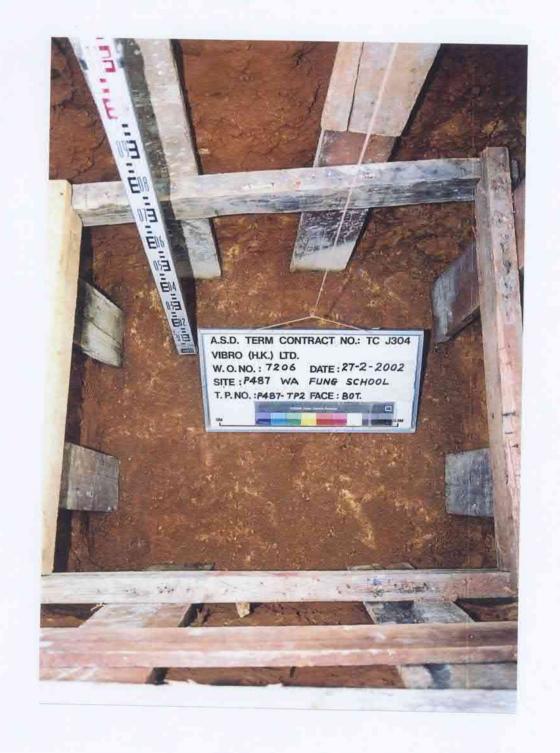








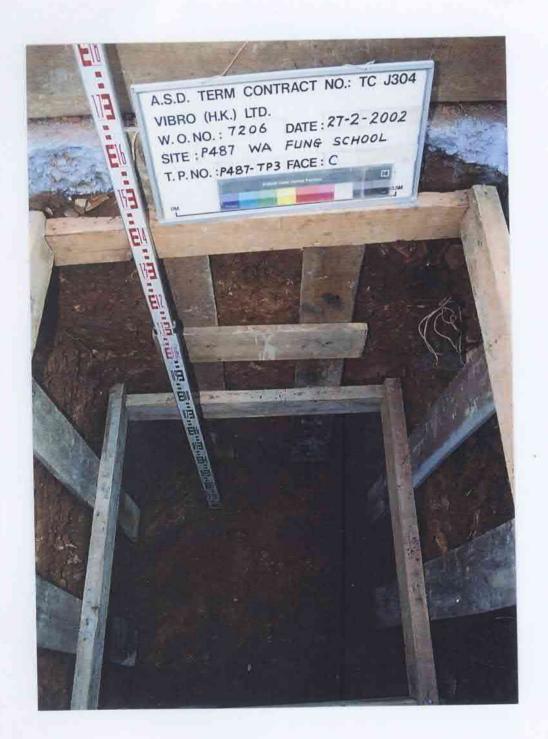


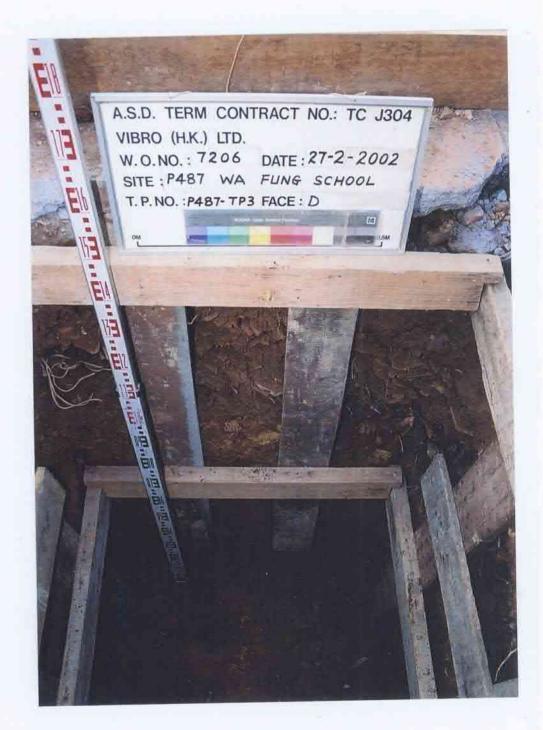


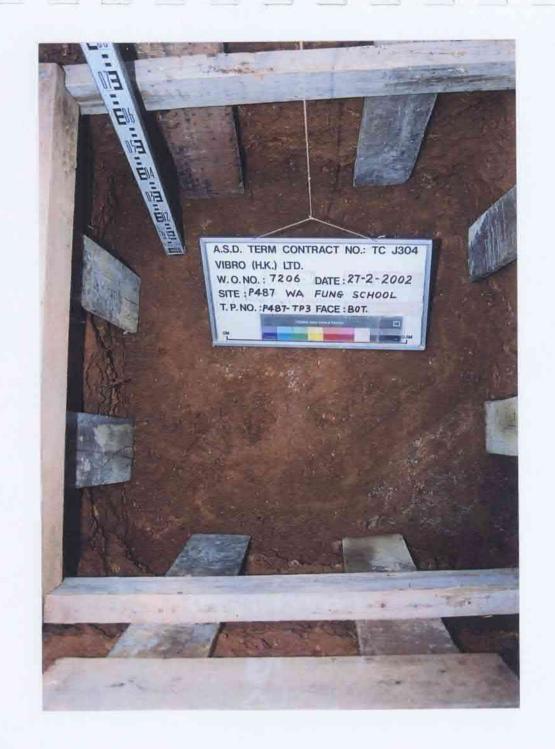
والمراج الأم الروائي الروائي المراج الروائي المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع

A.S.D. TERM CONTRACT NO.: TC J304 VIBRO (H.K.) LTD. W.O.NO.: 7206 DATE: 27-2-2002 SITE : P487 WA FUNG SCHOOL T. P. NO. : P487- TP3 FACE : A





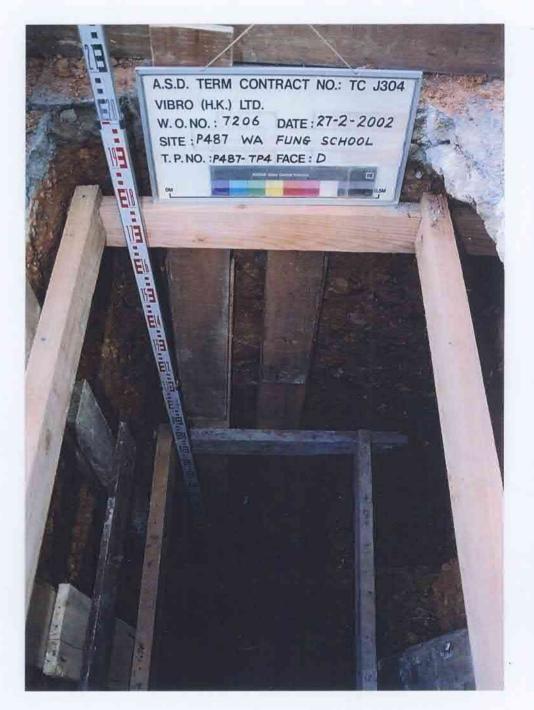


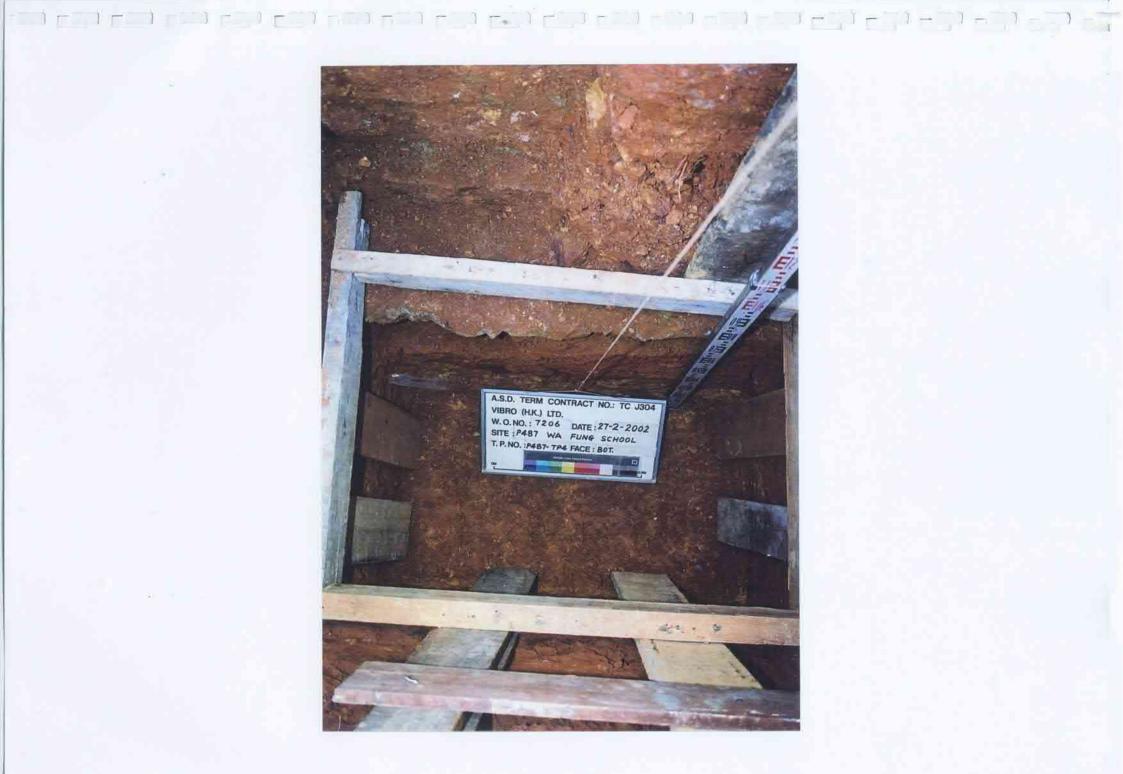


A.S.D. TERM CONTRACT NO .: TC J304 VIBRO (H.K.) LTD. W.O.NO.: 7206 DATE: 27-2-2002 SITE : P487 WA FUNG SCHOOL T. P. NO. : P487- TP4 FACE : A









APPENDIX J

PNAP 132 DOCUMENTION



惠保(香港)有限公司 VIBRO (H.K.) LIMITED

SITE INVESTIGATION DEPARTMENT (探土部)

Authorized Signatory RSC (GIFW) Certificate

This is to certify that the Ground Investigation presented herewith, Contract No. TC J304, Works Order No. ASD007206, School Improvement Programme Final Phase, Package 5 (Group 3) - P487 Wa Fung School, has been undertaken in accordance with PNAP 132.

In accordance with Item 7, Appendix B of PNAP 132 the following measures have been taken;

- 1). Vibro (H. K.) Limited Site Investigation Department were responsible for all Site Investigation works which were undertaken generally in accordance with the guidelines presented in Geoguides 2 and 3.
- 2). A Quality Supervision Plan, in accordance with the guidelines presented in PNAP 132 has been submitted to the relevant authorities and the Ground Investigation works have been supervised in accordance with that Quality Supervision Plan.
- 3). Logging and preparation of the borehole logs has been undertaken in accordance with the guidelines presented in Geoguide 3, and have been undertaken by a Competent Person as stipulated in Paragraph 13, PNAP 132.
- 4). Any/all in situ and laboratory testing, where appropriate, have been carried out in the pursuance of this Ground Investigation have been undertaken by a HOKLAS accredited laboratory.

1 2 APR 2002

Date

Authorised Signatory - RSC (GIFW)



TABLE 1

SUMMARY TABLE OF SURVEY DATA



VIBRO (H.K.) LTD.

SITE INVESTIGATION DEPARTMENT

TABLE 1- SURVEY RECORD

CONTRACT No. TC J304

WORKS ORDER No. ASD007206 (Vol. 3 of 9)

SHEET 1 OF 1

PROJECT

School Improvement Programme Final Phase, Package 5 (Group 3) - P487 Wa Fung School

EXPLORATORY HOLE	EASTING	NORTHING	LEVEL (mPD)
→ P487-DH 1	819879.58	832779.61	+13.78
P487-DH 2	819863.37	832801.41	+13.94
≥ P487-TP 1 /	819883.40	832782.59	+13.89
P487-TP 2	819864.30	832807.93	+14.84
P487-TP 3 /	819862.28	832781.61	+13.81
P487-TP 4	819862.33	832788.02	+13.83
	<u></u>		
			<u> </u>
	<u> </u>		

TABLE 2

SUMMARY TABLE OF DRILLHOLE RESULTS

TABLE 2 - SUMMARY TABLE OF DRILLHOLE RESULTS

Contract No.

TC J304

Works Order No.:

ASD007206 (Vol. 3 of 9)

Site Location

School Improvement Programme Final Phase Package 5 (Group 3) - D487 Wa E.

D=3111 4			Strata Description										
Drillhole No	Termination Depth	FILL Depth	CD rock Depth	C/HD rock	HD rock	H/MD rock	MD rock	M/SD rock	SD rock	CAVITY	CAVITY INFILL DEPOSIT	· · · · · ·	
		Thickness	Thickness	Depth Thickness	Depth Thickness	Depth Thickness	Depth Thickness	Depth Thickness	Depth Thickness	Depth	Depth	Depth	Depth
P487-DH 1	100.41	0.00 - 2.00	2.00 - 4.60	5.65 - 5.85		4.60 - 4.85	1	88.50 - 89.44		Thickness 85.75 - 86.20	Thickness 86.20 - 88.50	Thickness	Thickne
		2.00	2.60	0.20	0.80	0.25	0.22	0.94	2.88	0.45	2.30		
	<u>. </u>		19.95 - 21.20	6.70 - 6.85	5.85 - 6.70	6.85 - 7.10	92.60 - 92.80	92.32 - 92.60					
		•	1.25	0.15	0.85	0.25	0.20	0.28	4.06	·			
			25.20 - 27.20	7.10 - 7.25	19.15 - 19.95	7.25 - 8.11	93.83 - 93.92	92.80 - 93.83		, , , , , , , , , , , , , , , , , , ,		· · ·	
			2.00	8,11	0.80	0.86	0.09	1.03					<u> </u>
			29.20 - 37.20	8.11 - 8.25		8.25 - 9.58		93.92 - 96.35		·			
			8.00	0.14		1.33		2.43					 .
			39.20 - 45.20	9.58 - 9.75		9.75 - 10.24		,					
			6.00	0.17		0.49				.~			-
			47.20 - 49.20	10.24 - 10.35		10.35 - 19.15				- 12/4			
			2.00	0.11		8.80							
			51.20 - 53.20	21.20 - 25.20		70.37 - 70.75							
	·		2.00	4.00	- 1	0.38							
Ì			55.20 - 61.20	27.20 - 29.20									
			6.00	2.00									
İ			74.20 - 76.20	37.20 - 39.20		-	·		-				
			2.00	2,00									
ł				45.20 - 47.20	-						~-		
				2.00									
				49.20 - 51.20		···				—— <u> </u>			
				2.00									
				53.20 - 55.20									
				2.00									
	Ĺ			61.20 - 70.15								+	
				8.95	-								
				70.75 - 74.20									
				3.45									

TABLE 2 - SUMMARY TABLE OF DRILLHOLE RESULTS

Co	ntra	ct	Nο

TC J304

Works Order No.:

ASD007206 (Vol. 3 of 9)

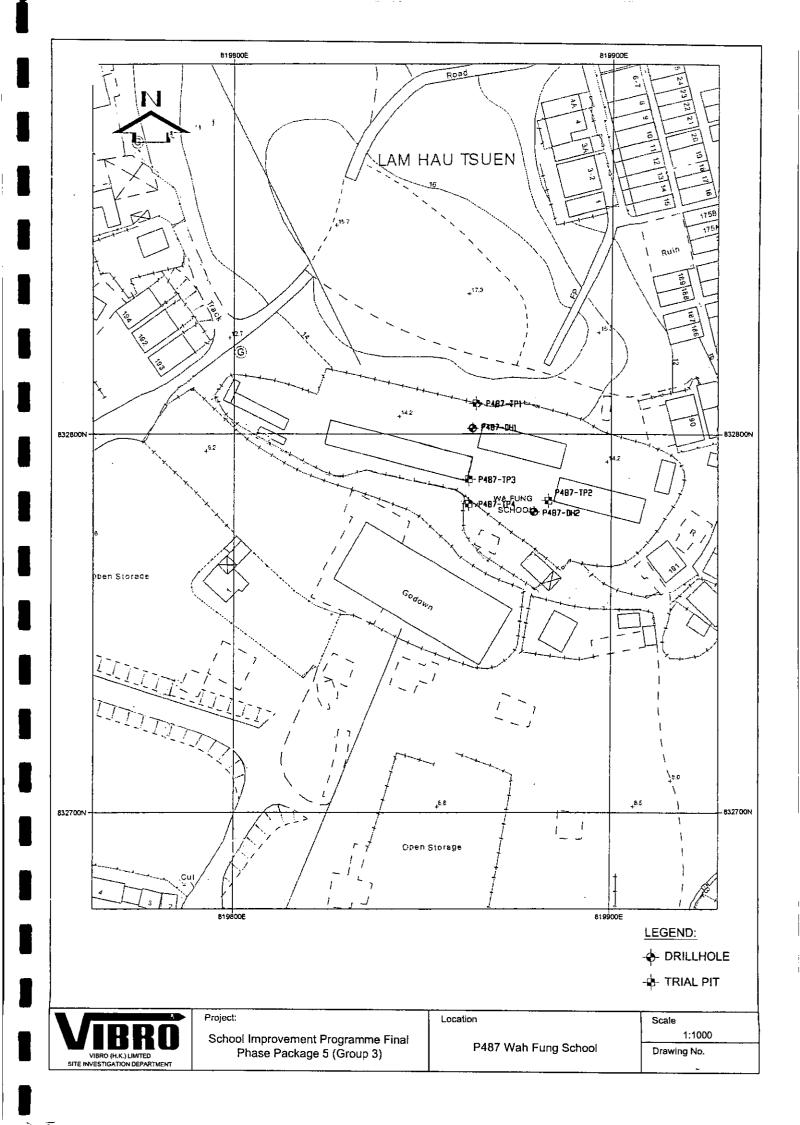
Site Location

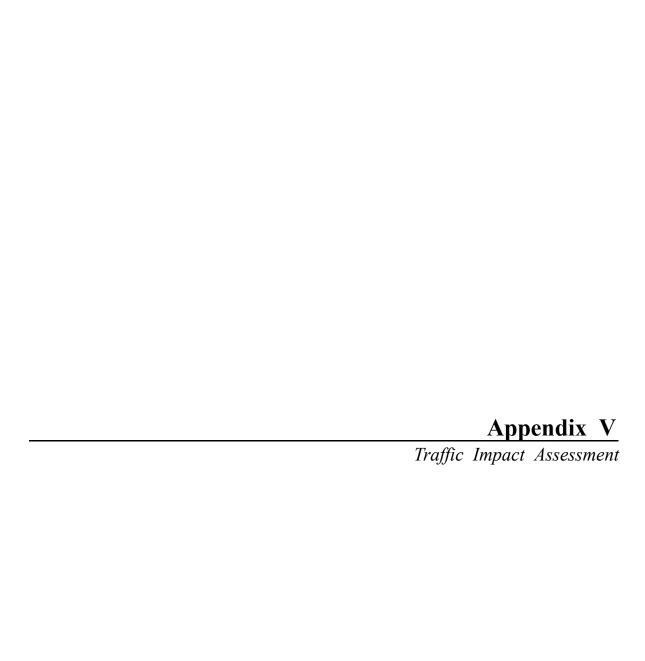
School Improvement Programme Final Phase, Package 5 (Group 3) - P487 Wa Fung School

Page 2 of 2

oite Locati	·	School linpi	ovement Proj	gramme Final	Filase, Faci	tage 5 (Group			<u> </u>			raye	2012
							Strata De	escription					
Drillhole No	Termination Depth	FILL	CD rock	C/HD rock	HD rock	H/MD rock	MD rock	M/SD rock	SD rock	CAVITY	CAVITY INFILL DEPOSIT		
1		Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
P487-DH		Thickness	Thickness	Thickness	Thickness	Thickness	Thickness	Thickness	Thickness	Thickness	Thickness	Thickness	Thickne
(cond)	100.41	-		76.20 - 78.20	-		80.30 - 80.62	 	-	-	-		· · · · · · · · · · · · · · · · · · ·
		-	1.68	2.00	-	0.42	0.32	-	-	-	-		
			1.32	82.20 - 85.20 3.00		0.26	85.20 - 85.75 0.55						
			1.02	0.00		0.20	0.55						
P487-DH 2	100.14	0.00 - 1.50	1.50 - 25.20	25.20 - 33.20	-		98.75 - 99.20	86.65 - 87.20	87.20 - 89.85	•	85.20 - 86.65		
		1.50	23.70	8.00	•	-	0.45	0.55	2.65	-	1.45		
			33.20 - 35.20	35.20 - 37.20				89.85 - 91,32	91.32 - 96.92				
			2.00	2.00				1.47	5.60				· *FE.U.
			37.20 - 39.20	39.20 - 41.20				96.92 - 97.65	97.65 - 98.75				-
			2.00	2.00				0.73	1.10				
			41.20 - 47.20	47.20 - 55.20					99.20 - 100.14				
			6.00	8.00			- 		0.94				
				63.20 - 75.20			. ,					n.i	
			8.00	12.00									
				79.20 - 81.10									
			4.00	1.90	·			:					
				83.20 - 85.20									
			2.10	2.00									
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GROUND INVESTIGATION PLAN







Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly)
("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and
Proposed Excavation of Land in Association with the Proposed RCHE,

Lam Hau Tsuen, Yuen Long, New Territories

Traffic Impact Assessment Report

November 2021

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- Appendix C CEDD's Improvement Proposal of Tong Yan San Tsuen Interchange

1. INTRODUCTION

1.1 Background

- 1.1.1 The Applicant intends to convert the Former Wa Fung School (part) into a temporary Residential Care Home for the Elderly (RCHE) with around 100 beds for a period of 10 years. The Former Wa Fung School is located at Lam Hau Tsuen, Yuen Long.
- 1.1.2 The location of the subject site is shown in **Figure 1.1**.
- 1.1.3 Ho Wang SPB Ltd. (hereinafter as "HWSPB") is commissioned as the traffic consultant on behalf of the Applicant to conduct a traffic impact assessment (TIA) study to support this planning application.

1.2 Study Objectives

- 1.2.1 The objectives of this TIA study are listed below with a view to reviewing the traffic and transport engineering feasibility for the proposed temporary RCHE development:
 - (a) Review and recommend on the car park and loading/unloading provisions for the development site;
 - (b) Review the internal traffic arrangements and the development access for the development site;
 - (c) Conduct vehicle traffic survey to record existing traffic conditions during AM and PM peak periods within the study area;
 - (d) Review the existing traffic condition and transport facilities in the vicinity of the development site;
 - (e) Estimate the development traffic generation and attraction; and traffic forecast based on the latest available 2016-Based TPEDM from the Planning Department's website and Annual Traffic Census (ATC) from the Transport Department; and
 - (f) Assess the likely traffic impacts generated by the proposed redevelopment site upon completion within the study area; and develop traffic improvement schemes to mitigate any adverse impact; if necessary.

1.3 Structure of the Report

- 1.3.1 Following this introductory chapter describes the background and study objective, this TIA report focuses on the presentation and elaboration of the following key areas:
 - Chapter 2 describes the proposed development schedule, vehicular access arrangements and the proposed internal transport facilities provisions;
 - Chapter 3 describes the baseline traffic surveys and the existing 2021 traffic conditions and junction performance in the vicinity;
 - Chapter 4 describes the traffic forecast methodology and future traffic conditions;
 - Chapter 5 presents the traffic assessment results for the reference and design scenarios, and to propose improvement measures to mitigate adverse traffic impact, if necessary; and
 - Chapter 6 summarizes and concludes the TIA study findings.

2. PROPOSED REDEVELOPMENT

2.1 Proposed Development Parameters

2.1.1 The proposed RCHE will provide about 100 beds and is tentatively in operation by 2024.

2.2 Proposed Internal Parking Provisions

- 2.2.1 There are no specific guidelines on internal parking provision in accordance with HKPSG for the proposed RCHE.
- 2.2.2 The proposed car parking and loading/unloading provisions for this proposed development are summarised in **Table 2.1**.

Table 2.1 Proposed Parking and Loading/Unloading Facilities Provisions for Development

Parking Spaces and Loading/Unloading Bays	Proposed
Car Parking Space (5m x 2.5m)	3
Loading/Unloading Bay for LGV (7m x 3.5m)	2

2.2.3 The above car parking and loading / unloading provisions are considered adequate to meet the end-user's requirements and operation needs.

2.3 Site Access Arrangement

- 2.3.1 The proposed vehicular access to the proposed RCHE is located at the west of the site which connects to the local access road that directly branch off from Shan Ha Road.
- 2.3.2 Detailed swept path analysis shown in **Figure 2.1** demonstrated that there are no manoeuvre problems for the design vehicle (i.e. 7m LGV).

3. EXISTING TRAFFIC CONDITIONS

3.1 Existing Road Networks

- 3.1.1 The local access road connecting the subject site and Shan Ha Road is an unnamed access road with width varied from 3m to 6m.
- 3.1.2 Shan Ha Road is a 2-way carriageway connecting Tong Yan San Tsuen Interchange which joining many district and local roads, includes Yuen Long Highway, Long Tin Road, Castle Peak Road, Shan Ha Road, Lam Yu Road, Town Park Road North, Yuen Long Tai Yuk Road and Ma Tong Road.
- 3.1.3 The Area of Influence (AOI) covers the 4 key junctions in the vicinity of the site as shown in **Figure 3.1**.

3.2 Public Transport Facilities

- 3.2.1 There is a GMB (route no. 604) servicing within the 500m radius catchment area of this site.
- 3.2.2 Visitors and staff can commute to/from the site via this GMB service between Yuen Long Town Centre and Shan Ha Tsuen.

3.3 Baseline Traffic Surveys

Vehicular Survey

- 3.3.1 In order to assess the existing traffic conditions, vehicular count survey was carried out on a typical weekday (with normal school traffic) in September 2021 during the AM (07:30-09:30) and PM (17:00-19:00) peak periods.
- 3.3.2 The AM and PM peak hours of the existing local road network are identified as 08:00-09:00 and 17:30-18:30 hours respectively.
- 3.3.3 The observed traffic flows for the 4 concerned junctions in 2021during the AM and PM peak periods are presented in **Figure 3.2**.

3.4 Existing Junction Performance

3.4.1 Based on the 2021 surveyed traffic flows, the junction capacity analysis for the 4 concerned junctions during the critical AM and PM peak periods have been assessed. The results of the junction capacity analysis are summarized in **Table 3.1**.

	Junction Location	Junction Type	AM Peak	PM Peak
J1	Unnamed Access Road / Shan Ha Road	Priority (DFC)	0.04	0.02
J2	Shan Ha Road / Tong Yan San Tsuen Interchange	Priority (DFC)	1.00	1.09
Ј3	Slip Road from Long Tin Road Southbound / Slip Road from Shan Ha Road	Priority (DFC)	0.68	0.41
J4	Slip Road Leading to Long Tin Road Northbound / Slip Road from Shan Ha Road	Priority (DFC)	1.57	1.41

Table 3.1 2021 Existing Junction Performance During AM and PM Peak

- 3.4.2 The results of the junction performance enclosed in **Appendix A** have indicated that the J2 and J4 are having inadequate junction capacity during the AM and PM peak periods.
- 3.4.3 In consideration of the proposed site as a temporary RCHE development, the majority of the development traffic induced by the development are visiting trips which are normally generated/attracted during the visiting hours [i.e. off-peak hours (10:00-15:00)].
- 3.4.4 The off-peak period traffic flows is reviewed based on the daily traffic pattern in Annual Traffic Census (ATC) Station No. 5025 [Yuen Long Highway (from Tin Shui Wai West Int to Lam Tei Int)]. The daily pattern in **Appendix B** shows that the off-peak period during 1400-1500 is 20% lower than the PM peak hour (1730-1830). The estimated traffic flows during the worst off-peak hour for the 4 concerned junctions in 2021 are presented in **Figure 3.3**.
- 3.4.5 Based on the 2021 surveyed traffic flows, the junction capacity analysis for the 4 concerned junctions during the off-peak periods have been assessed. The results of the junction capacity analysis are summarized in **Table 3.2**.

Table 3.2 2021 Existing Junction Performance During the Worst Off-Peak

	Junction Location	Junction Type	Off-Peak
J1	Unnamed Access Road / Shan Ha Road	Shan Ha Road Priority (DFC)	
J2	Shan Ha Road / Tong Yan San Tsuen Interchange	Priority (DFC)	0.78
Ј3	Slip Road from Long Tin Road Southbound / Slip Road from Shan Ha Road	Priority (DFC)	0.54
J4	Slip Road Leading to Long Tin Road Northbound / Slip Road from Shan Ha Road	Priority (DFC)	0.95

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3.4.6 The results of the junction performance enclosed in **Appendix A** have concluded that all the 3 concerned junctions are having adequate junction capacity during off-peak periods except J4 which will operate with marginal junction capacity.

4. FUTURE TRAFFIC CONDITIONS

4.1 Traffic Forecast Approach

- 4.1.1 This temporary RCHE is anticipated to be commenced in 2024. A design year is adopted 3 years after the commencement (i.e. 2027) to assess the impact of the development related traffic on the local road network.
- 4.1.2 The traffic forecast has been conducted based on the following data:
 - Historical trend data from the Annual Traffic Census (ATC) by Transport Department
 - 2016-based Territorial Population and Employment Data Matrix (TPEDM) planning data by Planning Department's Website
- 4.1.3 The historical traffic data of the surrounding road links are based on the Annual Average Daily Traffic (AADT) extracted from the "Annual Traffic Census" report issued by Transport Department. The relevant AADT data from 2016 to 2020 are summarized in **Table 4.1**.

Table 4.1 AADT at Counting Stations Extracted from Annual Traffic Census – 2016 to 2020

Stn No.	Road	From	То	2016	20	017	20	18	2019	•	2020
5236	Castle Peak Rd - Ping Shan	Yuen Long Tai Yuk Rd	Ma Wang Rd	19,560	19.	,250	19,	070	20,51	0	19,660
6049	Castle Peak Rd - Ping Shan	Ping Ha Rd	Ma Wang Rd	27,500	24.	,910	21,	090	21,93	0	20,880
	All S	Stations Total		47,060	44,	,160	40,	160	42,44	0	40,540
	Average Growth Rate (% p. a.)			-6.16%		-9.06	5%	5.0	58%	-	4.48%
	Overall Growth Rate (% p. a.) from 2016 to 2020						-3.5	50%	-		-

4.1.4 The population and employment data of the Planning Data District are extracted from the 2016-based TPEDM issued by Planning Department's website. The relevant growth rates from 2016 to 2026 are summarized in **Table 4.2**.

 Table 4.2
 Population and Employment Forecast (TPEDM)

Planning Data District Data : Yuen Long							
Average Annual Growth	2016-2021	2021-2026					
Rate of Total Population and Employment (%)	+1.13%	+0.48%					

4.1.5 The annual growth rates obtained from ATC and TPEDM from 2016 to 2026 are summarized in **Table 4.3**.

Table 4.3 Summary of Annual Growth Rates obtained from ATC and TPEDM from 2016 to 2026

	Annual Growth Rate					
	2016-2020	2016-2021	2021-2026			
ATC	-3.50%					
TPEDM		+1.13%	+0.48%			

4.1.6 After reviewing the above AADT traffic data and future planning data forecast, it is considered to adopt an annual growth rate of +0.48% p.a. from 2021 to 2027 for the projection of the 2027 reference traffic flows for the traffic assessment.

4.2 Future Planned Developments

- 4.2.1 The traffic flows generated by adjacent potential developments in the vicinity have also been taken into account in the reference case scenario.
- 4.2.2 The planned developments in the vicinity are summarised in **Table 4.4.**

Table 4.4 Summary of Future Planned Developments in the Vicinity

Planned Development	GFA (m ²) / Flats	Year	
Proposed Public Rental Housing			
Development at Ex-Long Bin Interim	2800 flats	2025	
Housing			
Hung Shui Kiu/Ha Tsuen New	61 000 housing units	2038	
Development Area (HSK/HT NDA)	61,000 housing units		
Yuen Long South (YLS) Development	32,850 housing units	2038	

- 4.2.3 The traffic generations of the above planned / committed developments will be taken into account in the reference case scenario traffic forecast for the TIA purpose.
- 4.2.4 The 2027 reference traffic flows are shown in **Figure 4.1**.

5. TRAFFIC IMPACT ASSESSMENT

5.1 Proposed Development Traffic

Proposed Development Traffic Generation

5.1.1 The trip generations of this temporary RCHE development are estimated based on the trip rate of a reference similar project and are summarized in **Table 5.1**.

Table 5.1 Estimated Vehicular Trips upon Development

Proposed Development (100 beds)	AM Peak		PM Peak	
	Attraction	Generation	Attraction	Generation
Adopted Trip Rate ⁽¹⁾ (pcu/hr/beds)	0.0435	0.0435	0.0362	0.0362
Estimated Vehicular Trips (pcu/hr)	4	4	4	4

Note: (1) Adopted from in-house trip rate of reference project with similar facilities.

- 5.1.2 The proposed development will attract and generate 8 (i.e. 4+4) pcus in the AM peak hour and 8 (i.e. 4+4) pcus in the PM peak hour.
- 5.1.3 In view of the traffic condition in the vicinity of the site, management of the RCHE will control the development traffic within the off peak hours (1000-1500) only to minimize the traffic impact onto the local road network.
- 5.1.4 As conservative assessment, the proposed development will be assumed to attract and generate 8 (4+4) pcus in the off-peak hours also as conservative assessment.
- 5.1.5 The 2027 design flows are shown in **Figures 5.1**.

5.2 Traffic Impact Assessments

<u>Junction Capacity Performance</u>

5.2.1 The assessments of the junction performance based on the 2027 reference and design scenarios are summarized in **Table 5.2**.

 Table 5.2
 Junction Capacity Assessment for Year 2027

Junction No	Junction	Junction Type	2027 Reference Off-Peak	2027 Design Off-Peak
J1	Unnamed Access Road / Shan Ha Road	Priority (DFC)	0.03	0.04
J2	Shan Ha Road / Tong Yan San Tsuen Interchange	Priority (DFC)	0.80	0.81
Ј3	Slip Road from Long Tin Road Southbound / Slip Road from Shan Ha Road	Priority (DFC)	0.56	0.56
J4	Slip Road Leading to Long Tin Road Northbound / Slip Road from Shan Ha Road	Priority (DFC)	0.99	0.99

- 5.2.2 The results of the junction capacity analysis enclosed in **Appendix A** have indicated that all the 3 junctions will operate satisfactorily with adequate junction capacity in both 2027 reference and 2027 design scenarios except J4 with marginal capacity during the off-peak period.
- 5.2.3 By 2027, J4 will operate with marginal junction capacity of 0.99 (Off-Peak) under reference scenario (without development traffic). The results of the traffic assessment demonstrate that there will be minimal reduction in junction capacity for J4 compared with 2027 reference and design scenarios. This is mainly due to the background traffic growth but not the development traffic.
- 5.2.4 It is noted that CEDD has proposed junction improvement at the Tong Yan San Tsuen Interchange for the Yuen Long South (YLS) development. This junction improvement will be implemented before 2033 and will relieve the current traffic condition. The CEDD's improvement proposal is enclosed in **Appendix C**.

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6. PROPOSED TRAFFIC MANAGEMENT IMPROVEMENT MEASURES

- 6.1.1 It is noted that the proposed RCHE will be a community-based operation by engaging local manpower in the area as its priority. It is therefore expected that most of the visitors and staff will commute to the RCHE by walking or public transport instead of private vehicle and taxi.
- 6.1.2 Traffic management measures are proposed to minimize the traffic impact at the nearby Tong Yan San Tsuen Interchange by regulating the visiting time for the visitors outside the AM/PM peak periods [i.e. 10:00-15:00 except emergency case]. This arrangement can eliminate traffic congestion during the peak hour period.
- 6.1.3 No cross-district visiting is expected since the proposed RCHE is community-based, visitors will therefore travel via Shan Ha Road, Town Park Road instead of Tong Yan San Tsuen Interchange.

7. SUMMARY AND CONCLUSIONS

7.1 Summary

Proposed Development and Parking Provisions

- 7.1.1 The Applicant is proposed to develop a Residential Care Home for the Elderly (RCHE) with 100 beds (approx.).
- 7.1.2 There are no specific guidelines for parking provision in accordance with HKPSG for this kind of development. A total of 3 car parking spaces and 2 loading/unloading bays for LGV are proposed to satisfy the operation needs and requirement.

Existing Traffic Conditions

- 7.1.3 The results of the junction performance show that the J2 and J4 are having inadequate junction capacity during the AM and PM peak periods in 2021.
- 7.1.4 In consideration of the proposed site as a RCHE development, majority of the development traffic induced by the development are visiting trips which are generated and attracted during off-peak hours (i.e. 10:00-15:00).
- 7.1.5 The results of the junction capacities show that all the 3 concerned junctions are having adequate junction capacity during the off-peak periods except J4 with marginal junction capacity.

Future Traffic Conditions

- 7.1.6 It is anticipated that the site will be fully developed by 2024. A design year 2027 is adopted for the traffic assessment.
- 7.1.7 The 2027 traffic forecasts flows have been referred to the historical trend data from the ATC, the latest 2016-based TPEDM planning assumptions from PlanD's website and all planned and committed developments in the vicinity.

Traffic Impact Assessment

- 7.1.8 The proposed development will attract and generate 8 pcus in the off-peak hours as conservative assessment.
- 7.1.9 The results show that all the 3 junctions will operate satisfactorily with ample junction capacity in both 2027 reference and 2027 design scenarios during off-peak except J4 with marginal capacity. This is mainly due to the background traffic growth but not the development traffic.

- 7.1.10 It is noted that CEDD has proposed junction improvement at the Tong Yan San Tsuen Interchange for the Yuen Long South (YLS) development. This junction improvement will be implemented before 2033 and will relieve the current traffic condition.
- 7.1.11 Traffic management measures are proposed to minimize the traffic impact at the nearby Tong Yan San Tsuen Interchange by regulating the visiting time for the visitors (1000-1500). This arrangement can avoid traffic congestion during the AM/PM peak hour period.

7.2 Conclusion

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

2021 OBSERVED AM AND PM PEAK TRAFFIC FLOWS

Project No.

J1645

CAD Ref.

J1645/TIA1/F32/2021-10-20

Ho Wang SPB Limited

2021 OFF-PEAK TRAFFIC FLOWS

J1645

J1645/TIA1/F33/2021-10-20

Ho Wang SPB Limited

2027 REFERENCE OFF-PEAK TRAFFIC FLOWS

J1645

J1645/TIA1/F41/2021-10-20

Ho Wang SPB Limited

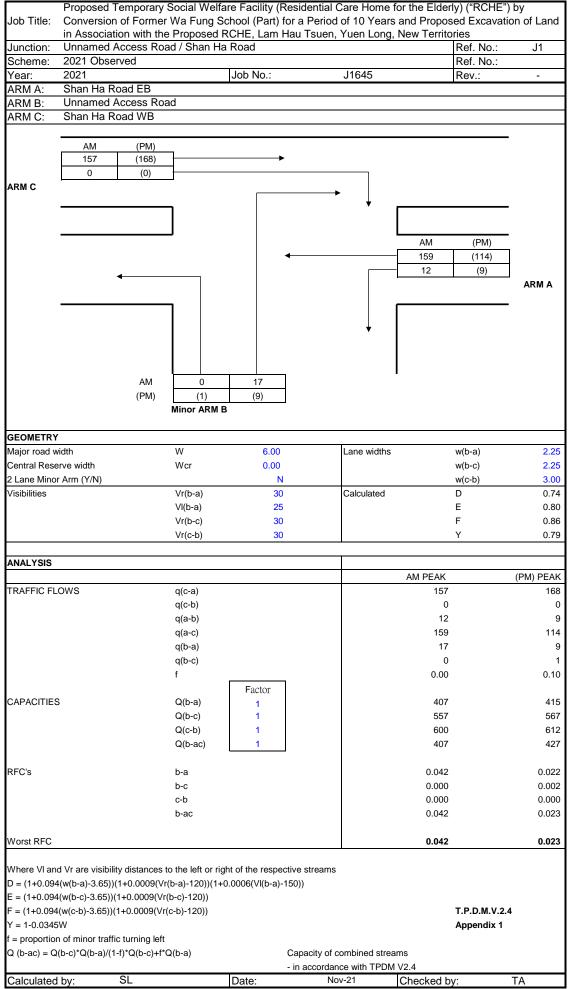
2027 DESIGN OFF-PEAK TRAFFIC FLOWS

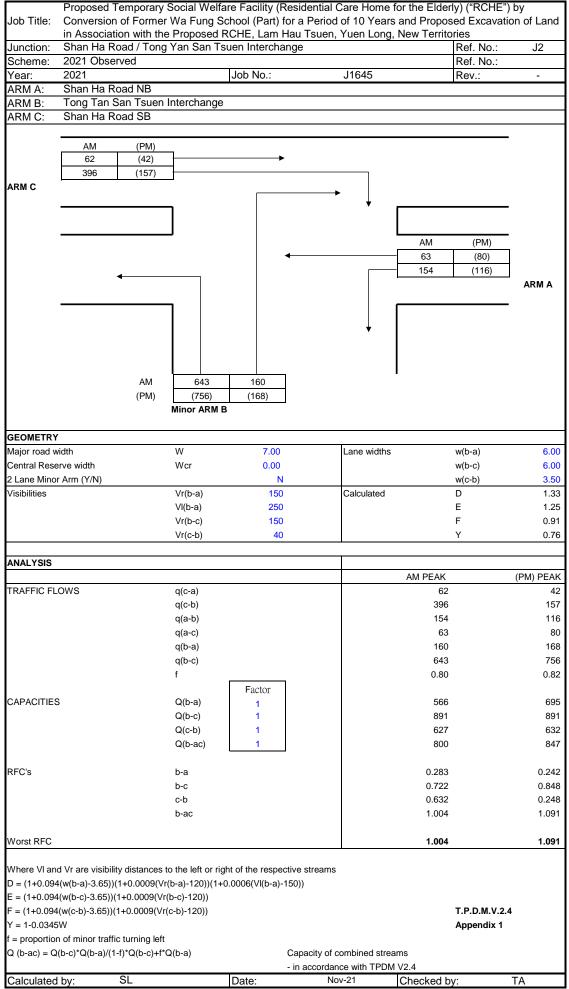
J1645

J1645/TIA1/F51/2021-10-20

Ho Wang SPB Limited

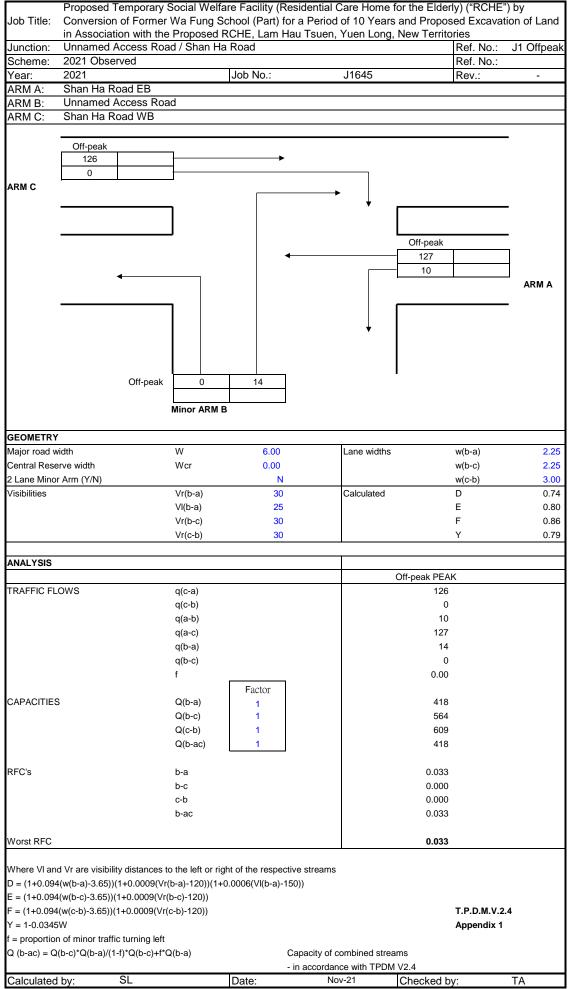
APPENDIX A Junction Calculation Sheets

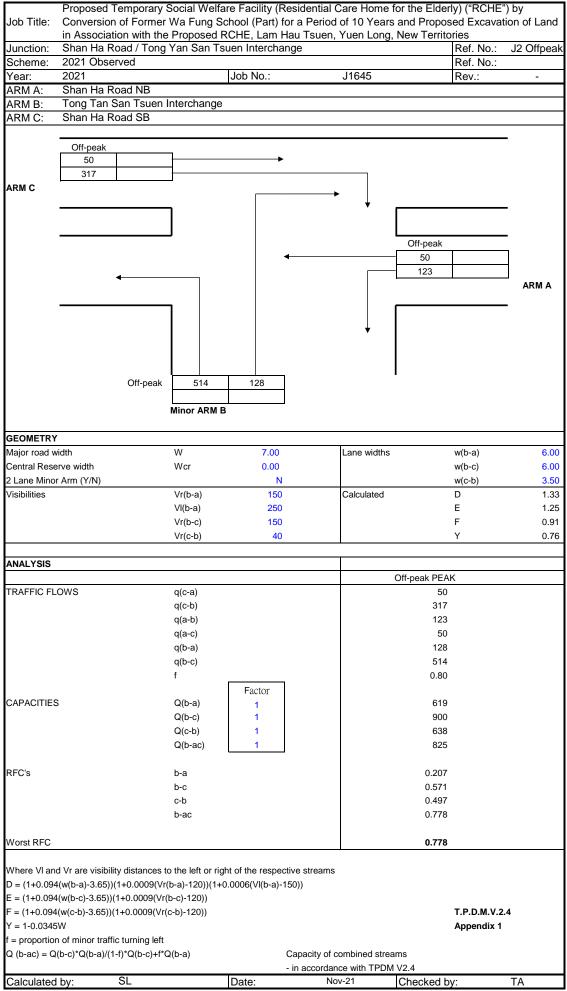




Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Slip Road from Long Tin Road Southbound / Slip Road from Shan Ha Road Ref. No. 2021 Observed Scheme: Ref. No.: Year: 2021 Job No.: J1645 Rev.: Slip Road from Long Tin Road Southbound ARM A: ARM B: Slip Road from Shan Ha Road AM (PM) 94 (119)ARM A AM 576 (PM) (348)Minor ARM B GEOMETRY Major road width W 9.00 Lane widths w(b-a) 5.50 Central Reserve width Wcr 0.00 w(b-c) 5.50 2 Lane Minor Arm (Y/N) 0.00 w(c-b) Visibilities Vr(b-a) 120 Calculated D 1.07 VI(b-a) 0 Ε 1.17 F 120 Vr(b-c) 0.59 0 0.69 Vr(c-b) ANALYSIS AM PEAK (PM) PEAK TRAFFIC FLOWS 0 q(c-a) q(c-b) 0 0 q(a-b) 0 0 119 94 q(a-c) 0 q(b-a) 0 q(b-c) 576 348 f 1.00 1.00 Factor CAPACITIES Q(b-a) 645 638 Q(b-c) 847 839 423 419 Q(c-b) Q(b-ac) 847 839 RFC's 0.000 b-a 0.000 0.680 0.415 b-c 0.000 0.000 c-b b-ac 0.680 0.415 Worst RFC 0.680 0.415 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))T.P.D.M.V.2.4 F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 SL Date: Nov-21 Checked by: Calculated by:

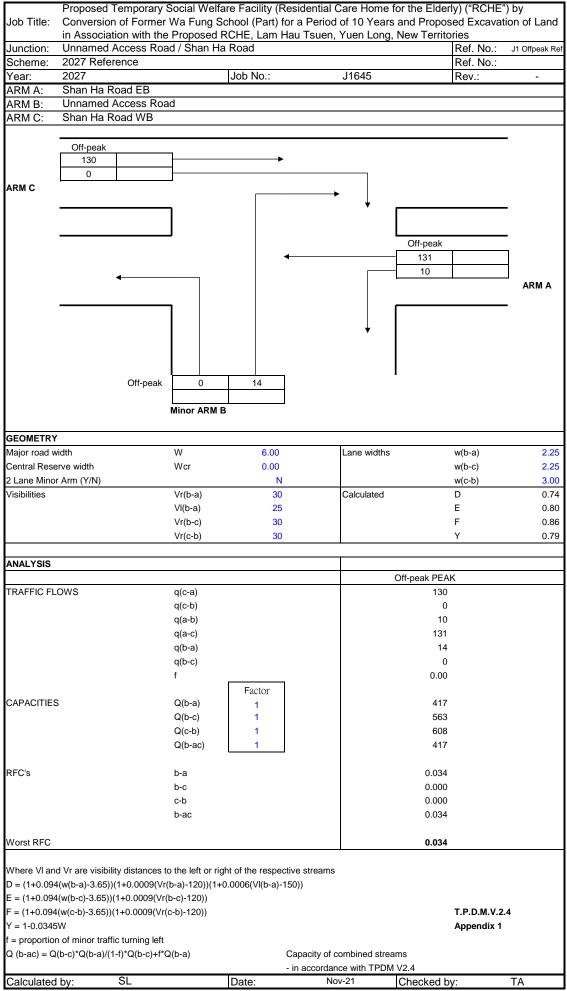
Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Slip Road Leading to Long Tin Road Northbound / Slip Road from Shan Ha Road Ref. No. 2021 Observed Scheme: Ref. No.: Year: 2021 Job No.: J1645 Rev.: Slip Road Leading to Long Tin Road Northbound ARM A: ARM B: Slip Road from Shan Ha Road AM (PM) 1320 (1728)ARM A 670 AM (PM) (467)Minor ARM B GEOMETRY Major road width W 10.00 Lane widths 4.00 w(b-a) Central Reserve width Wcr 0.00 w(b-c) 4.00 2 Lane Minor Arm (Y/N) 0.00 w(c-b) Visibilities Vr(b-a) 80 Calculated D 0.91 VI(b-a) 0 Е 1.00 F 80 Vr(b-c) 0.59 0 0.66 Vr(c-b) ANALYSIS (PM) PEAK AM PEAK TRAFFIC FLOWS 0 q(c-a) q(c-b) 0 0 q(a-b) 0 Λ 1728 1320 q(a-c) q(b-a) 0 0 q(b-c) 670 467 f 1.00 1.00 Factor CAPACITIES Q(b-a) 283 195 Q(b-c) 428 332 252 195 Q(c-b) 332 Q(b-ac) 428 RFC's 0.000 b-a 0.000 1.565 1.407 b-c 0.000 0.000 c-b b-ac 1.565 1.407 Worst RFC 1.565 1.407 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))T.P.D.M.V.2.4 F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 SL Date: Nov-21 Checked by: Calculated by:

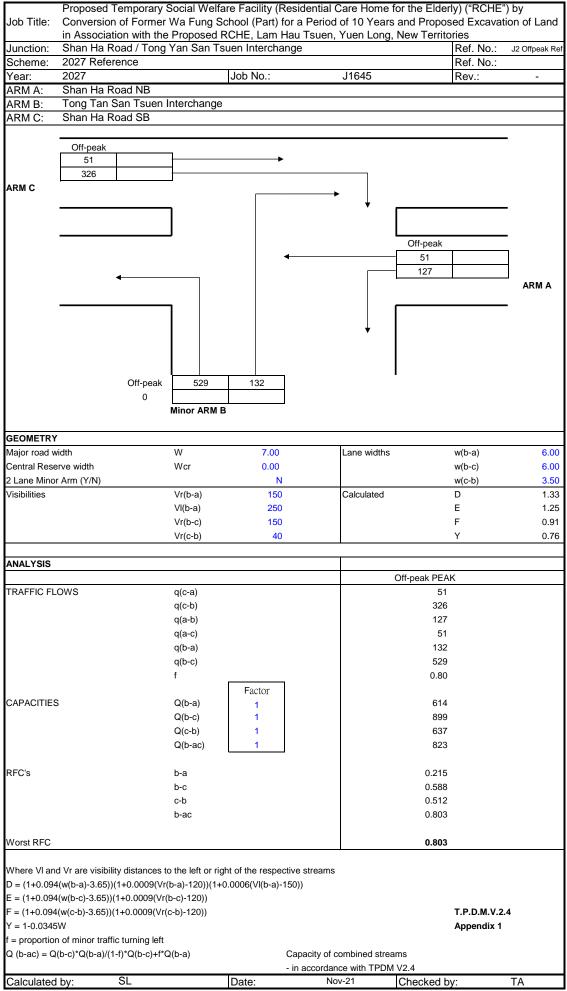




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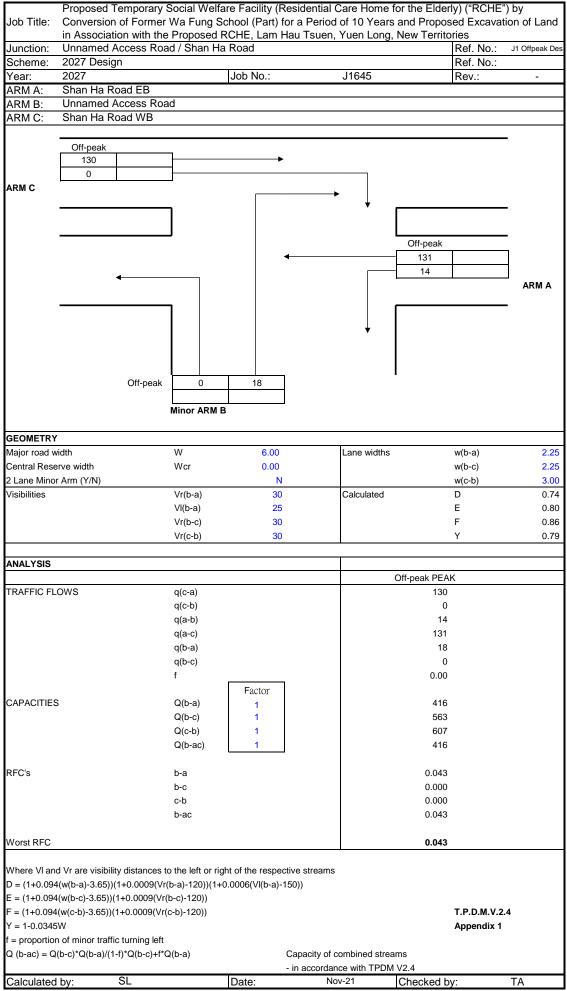
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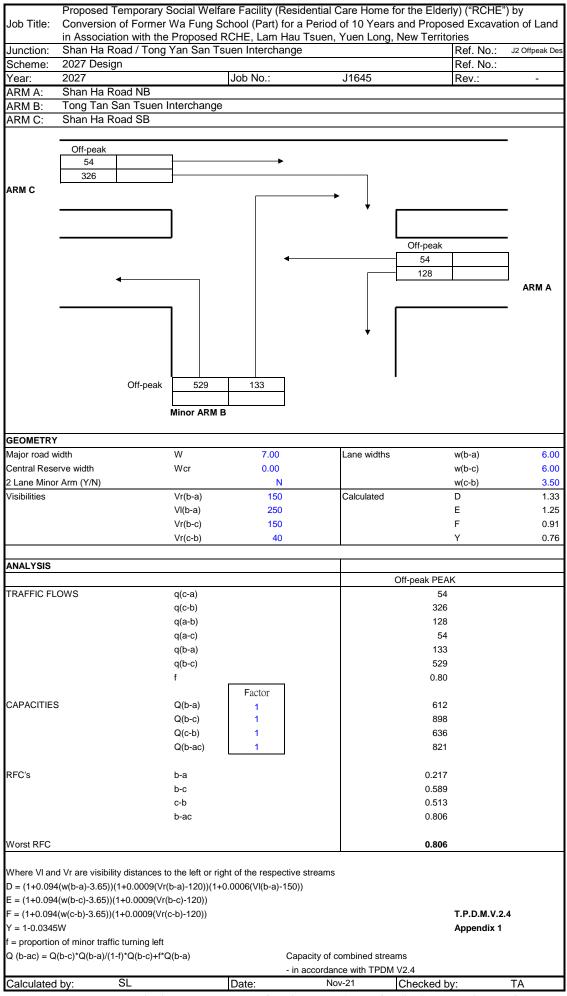




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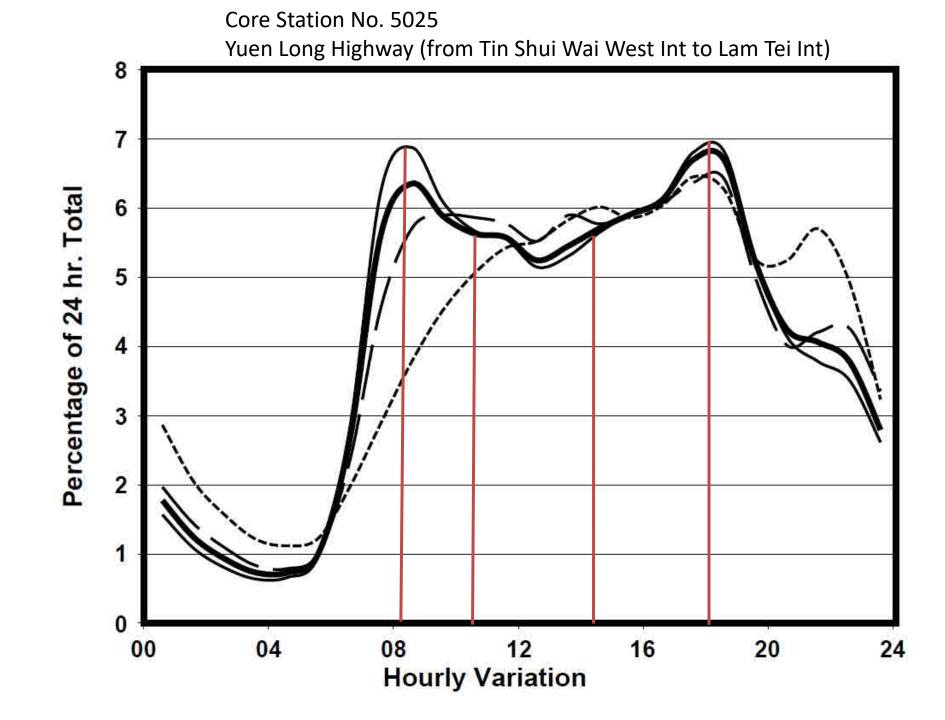
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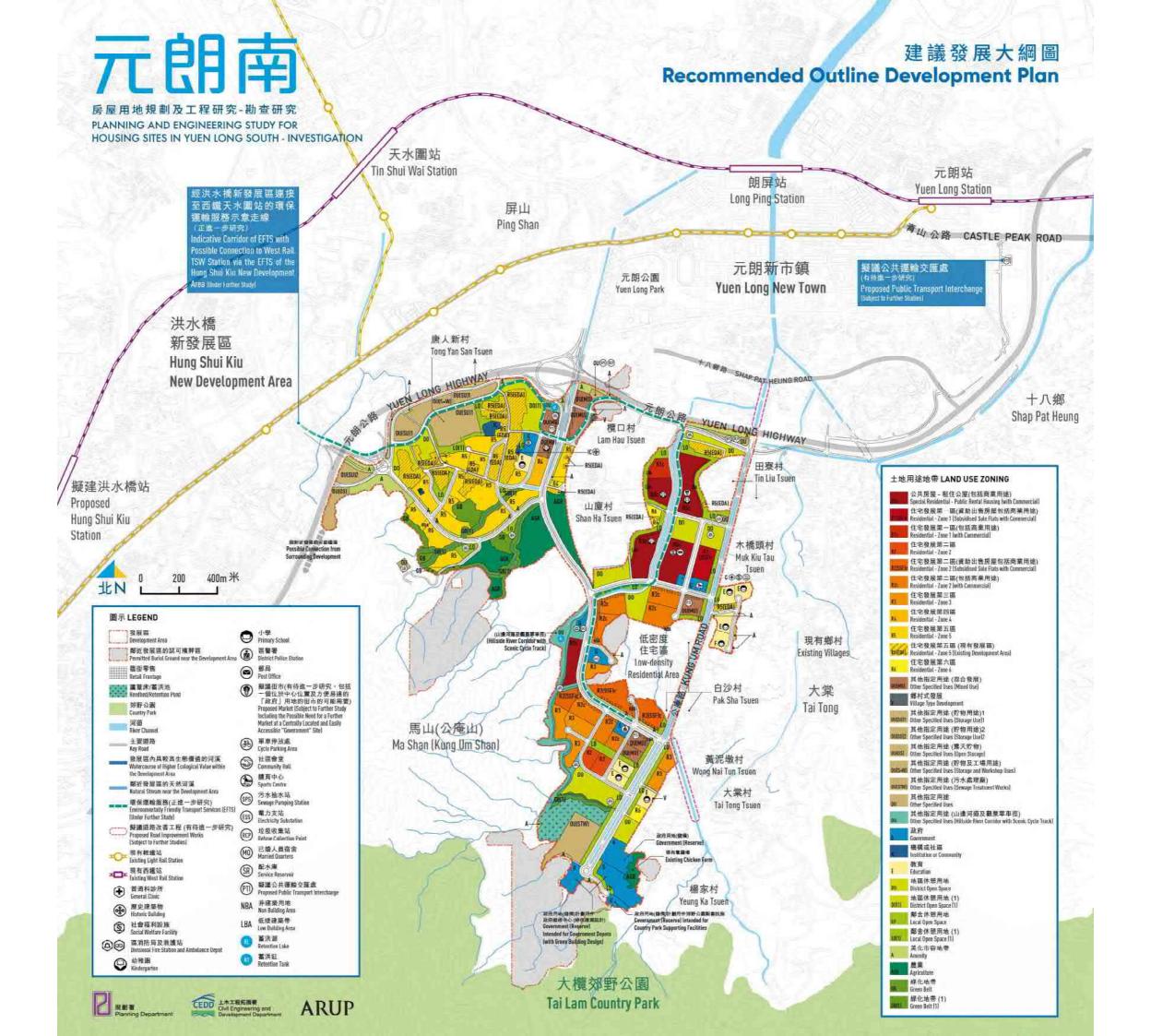
APPENDIX B

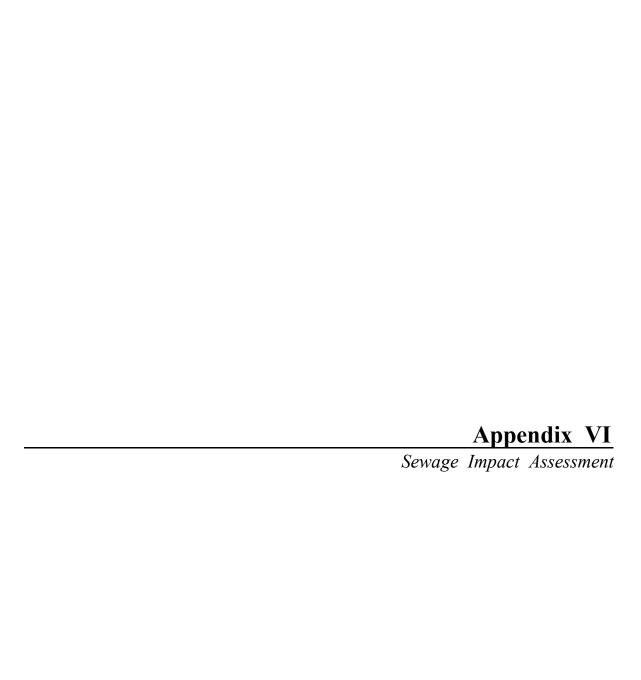
ATC Station no. 5025 Daily Traffic Pattern



APPENDIX C

CEDD's Improvement Proposal of Tong Yan San Tsuen Interchange







Section 16 Planning Application for Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories

Sewerage Impact Assessment (Revision A)

November 2021

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> Section 16 Planning Application for Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories

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1 Introduction

1.1 Background

1.1.1 The Applicant intends to convert the former Wa Fung School (part) in Lam Hau Tsuen (the Site) into a temporary residential care home for the elderly ("RCHE") for a period of 10 years under Section 16 of the Town Planning Ordinance. The Application Site covers a total land area of about 2,950 m², is located in Lam Hau Tsuen surrounded by some existing village houses, open storage and vehicle repair workshops in its vicinity. It is bounded by Yuen Long Highway to its north and Shan Ha Road to its south and the Site is currently with an area zoned "Village Type Development" on the Approved Tong Yan San Tsuen Outline Zoning Plan (OZP) No. S/YL-TYST/14. The location of the Site is shown in **Appendix A**. This report is prepared to support the present planning application.

1.2 Key Development Parameters

1.2.1 The layout plans of the proposed temporary RCHE are provided in **Appendix B** and the key development data of the proposed development are given in **Table 1.2.1** below:-

Table 1.2.1 Data of the proposed elderly home development

Items	Details
Application Site Area	About 2,950m ²
Development	Single Storey Elderly Home (about 100 beds)

1.3 Objectives of Report

1.3.1 This Report of the Sewerage Impact Assessment (SIA) focuses on the potential sewerage impacts caused by the implementation of the proposed temporary RCHE in comparison with the development capacity of the former school at the same site. The objectives of this SIA aims to identify, assess and mitigate potential adverse sewerage impacts which may arise from the proposed temporary RCHE development in the area.

1.4 Structure of the Report

1.4.1 This SIA Report also contains the following sections:-

Section 2 - Methodology and Design Parameters for Sewerage Impact Assessment

Discuss the methodology adopted and the design parameters used in the sewerage impact assessment.

Section 3 – Estimation of Sewage Flow under Former Wa Fung School

Estimate the sewage flow generated from the Site under the former Wa Fung School.

Section 4 - Estimation of Sewage Flow for the Proposed Elderly Home Development

Estimate the sewage flow generated from the proposed elderly home development.

Section 5 - Proposed Sewage Disposal Options

Discuss the potential sewage disposal options for the proposed development.

Section 6 - Conclusion

Summarise the findings and conclusions of the Sewerage Impact Assessment.

2 Methodology and Design Parameters for Sewerage Impact Assessment

2.1 General Approach

2.1.1 This SIA aims to identify, assess, and propose mitigation measures to any potential sewerage impacts due to the proposed temporary RCHE at the site.

2.2 Methodology

Assessment Approach

- **2.2.1** The following approach and methodology have been adopted in this sewerage impact assessment:-
 - Carry out a desktop study to collect the relevant information regarding the existing sewerage system in the vicinity of the Site for assessment;
 - Determine the potential sewage generated from the proposed temporary RCHE development; and
 - Propose option(s) to mitigate the potential sewerage impacts.

Design Standards, Guidelines and Reference

- 2.2.2 The sewage flow generated from the proposed temporary RCHE development is estimated based on the following standards, guidelines, and reference for the sewerage and sewage treatment design:-
 - Sewerage Manual published by Drainage Services Department (DSD);
 - Guidelines for Estimating Sewage Flows (GESF) for Sewerage Infrastructure (EPD);
 - Guidelines for the Design of Small Sewage Treatment Plants; and
 - Technical Memorandum on Effluent Standards, Water Pollution Control Ordinance Cap358 Section 21 (EPD)

2.3 Design Parameters and Assumptions

Design Population and Employee Data

<u>Planned Population and Employee Data for the Proposed temporary RCHE</u> Development

2.3.1 The design population of the proposed temporary RCHE development is shown in **Table 2.3.1**.

Table 2.3.1 Design population for the proposed temporary RCHE development

Туре	No. of Unit Population	
Resident	100 bed	100
Staff	50 persons	50

Unit Flow Factors

2.3.2 The Unit Flow Factors (UFFs) for Domestic Flow and Commercial Flow are adopted in accordance with Table T-1 and Table T-2 of the GESF. The category of the components and the UFFs adopted in the assessment are indicated in **Table 2.3.2**.

Table 2.3.2 Unit flow factors

Component	Category Use	Unit Flow Factors (m³/d/p)
Domestic Flow	Institutional and special class	0.19 ⁽ⁱ⁾
Student Flow	School Student	0.04 ⁽ⁱⁱ⁾
Commercial Flow	J11 – Community, Social and Personal Services	0.28 ⁽ⁱⁱ⁾

Remarks:-

- Reference to EPD Technical Paper Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (GESF) – Table T-1.
- Reference to EPD Technical Paper Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (GESF) – Table T-2.

3 Estimation of Sewage Flow under Former Wa Fung School

3.1 Existing Sewerage System

3.1.1 Based on Drainage Service Department (DSD) drainage record, there is no existing public sewerage network serving Lam Hau Tsuen area. To the north of Lam Hau Tsuen, there is an existing twin 700mm diameter rising mains laid next to Yuen Long Highway that convey sewage discharge from Lung Tin Sewage Pumping Station abutting Kung Um Road. The layout of existing sewerage network is provided in **Appendix C.**

3.2 Estimation of Sewage Flow under Former Wa Fung School

3.2.1 According to information gathered in site visit, the current vacant site area was formerly used as a primary school for more than 45 years up to 2006. The previous school was known as Wa Fung School with 5 classrooms and 3 special rooms. It is assumed that each classroom had 30 pupils. As the purpose of special rooms is for conducting regular teaching activities such as music room, visual arts room and multi-purpose rooms, so no pupil is assumed in these rooms. The population of former Wa Fung School and the estimated sewage flow from the school are shown in **Table 3.2.1**. As there is no record information on the existing sewerage serving the formerly Wa Fung School, it is expected that the sewage flow from the former Wa Fung School was likely handled by a primary treatment such as soakaway pit septic tank system.

Table 3.2.1 Estimated sewage flow under Former Wa Fung School

•			
age Flow	Population	UFF m³/d/p	ADWF m³/d
Student	150	0.04	6.0
J11 (Staff for School)	15	0.28	4.2
	E	Estimated ADWF in m³/day	10.2
		Estimated ADWF in I/s	0.12
	Student J11 (Staff for	Student 150 J11 (Staff for 15 School)	Student 150 0.04 J11 (Staff for School) 15 0.28 Estimated ADWF in m³/day

4 Estimation of Sewage Flow for the Proposed Elderly Home Development

4.1 Estimated Sewage Flow from the Proposed temporary RCHE Development

4.1.1 Based on the design population for the proposed temporary RCHE development and sewage unit flow factors as mentioned in **Section 2**, the estimated ADWF for the proposed temporary RCHE development is approximately 33 m³/d (0.38 l/s). There will be an increase of about 22.8 m³/d sewage flow generated compared to the former Wa Fung School.

Table 4.1.1 Estimated sewage flow for the proposed elderly home development

Type of Sew	age Flow	Population	UFF m³/d/p	ADWF m³/d
Domestic	Institutional and Special Class	100	0.19	19
Commercial	J11	50	0.28	14
		Estimated ADWF in m³/day		33
			Estimated ADWF in I/s	0.38

4.1.2 As there is no existing public sewerage system in place in the vicinity of the Site, a proper sewage disposal scheme will need to be provided for the proposed temporary RCHE and the potential sewage disposal options for the Site will be discussed in Section 5.

5 Proposed Sewage Disposal Options

5.1 Proposed Sewage Disposal Options

- 5.1.1 As mentioned in **Section 4**, there is no existing public sewerage system in the vicinity of the proposed temporary RCHE and a proper sewage disposal scheme will need to be provided for the proposed temporary RCHE development. To dispose the sewage flow (about 33 m³/d) from the development, the following two options have been considered:-
 - Option 1 Regularly disposed to nearby public Sewage Treatment Works via Tanker Away; and
 - Option 2 Provision of on-site Tertiary Sewage Treatment Plant (STP)
- 5.1.2 Have considered of the relatively small amount of sewage from the proposed temporary RCHE development and the more importantly, the temporary nature of the proposed temporary RCHE development, Option 1 is most preferrable.
 - Option 1 Regularly Disposed to nearby Public Sewage Treatment Works via Tanker Away
- 5.1.3 Under the tanker away method, it is assumed that the generated sewage flow from the proposed temporary RCHE development will be removed daily. A sewage storage tank with storage volume of about 105 m³ (35m³ for storage of sewage for daily removal plus about 70m³ for emergency storage of 2 days) will be provided. The tentative location of the sewage storage tank is shown in Appendix D.
- **5.1.4** For maintenance and operation of the tanker away method, tanker service by licensed operating companies will be arranged to deliver the stored sewage to government sewage treatment works. Further liaison with the relevant government parties for such arrangement will be carried out in later stage.
- 5.1.5 Having considered the following factual factors, the Applicant strongly prefers to adopt this sewage disposal method for the present proposed temporary RCHE which only makes the best of existing buildings within the former single-storey Wa Fung School involving largely internal building conversion works:-
 - the whole development under application is solely in temporary nature (10 years only);
 - ii. after the approval of this planning application of everything goes smooth, the Applicant will take at least 2 years to proceed with the required processes to deal with the subsequent buildings, planning and land administration matters, as well as the time required to obtain a RCHE licence from the Social Welfare Department before the commencement of the operation;
 - iii. the scale of the proposed temporary RCHE development is small;
 - iv. the financial resources of the operator are very limited;

- the prime objective of the project aims to provide a transitional function as early as possible to relieve the pressing demand of this social welfare facility in the community;
- vi. the availability of usable land area within the existing school compound is very limited, taking account of the need to provide a proper on-site EVA, stringent site level differences, retention of existing trees, provision of new open space for future users of the proposed temporary RCHE, and the need to provide adequate set back from the nearby existing graves; and
- vii. the shorter time to commence the operation.

Option 2 - Provision of On-site Tertiary Sewage Treatment Plant (STP)

- 5.1.6 As discussed before, as no existing public sewerage system in the vicinity of the development site is available at the present moment, and under normal circumstances, a STP will be provided to treat sewage generated from the proposed temporary RCHE development and the treated effluent will be subsequently discharged to existing nullah west of Lam Hau Tsuen via the proposed drainage system for the proposed temporary RCHE development. The tentative location of the proposed sewage treatment plant for the proposed development is given in **Appendix E**.
- **5.1.7** The proposed STP should provide to meet the discharge requirement of Group C inland waters as shown in **Table 5.1.1**.

Table 5.1.1 Standard for Effluent Discharged into Group C Inland Waters

Determinant	Standard of Effluent
SS (mg/l)	20
BOD (mg/l)	20
Total Nitrogen (TN) (mg/l)	30
Ammonia nitrogen (NH₃N) (mg/l)	2
E. coli (count/100ml)	1000
Total Phosphorous (TP) (mg/l)	10
Remark:- i. This table is showing the key parameters in the Standard for Effluent Inland Waters only	Discharged into Group C

5.1.8 The internal facilities of the STP will also be designed to cater for a peak flow of 1.10 l/s (a peaking factor of 3). Membrane Bioreactor (MBR) technology with ultra-filtration will be used for the proposed sewage treatment plant for meeting EPD's effluent discharge standard as stated in **Table 5.1.1**. The proposed STP should provide tertiary effluent treatment standard as shown in **Table 5.1.2**. The sludge from the STP as a by-product from the MBR treatment process will be removed off-site by licensed sludge collection vehicles. A discharge license under WPCO will be obtained for the operation of the STP.

Table 5.1.2 Tertiary Effluent Standard for Proposed Sewage Treatment Plant

Parameter	Tertiary Effluent Standards (Upper Limit)
SS (mg/l)	10
BOD (mg/l)	10
Total Nitrogen (TN) (mg/l)	20
Ammonia nitrogen (NH₃N) (mg/l)	2

Parameter	Tertiary Effluent Standards (Upper Limit)
E. coli (count/100ml)	100
Total Phosphorous (TP) (mg/l)	2

5.1.9 Dual source electricity supply as an emergency measures of STP will be provided to prevent power failure. Standby pumps, in addition to the duty pumps will be provided as backup solution during operation when the duty pump is failure to be operated or for maintenance inspection. The pump may also be used to recycle the plant effluent to maintain the STP in a working condition when incoming flow is low. In view that the risk of these two emergency measures failure at the same time is extreme low. The emergency measures as mentioned in Table 5.1.3 is considered appropriate for the proposed STP for the Site.

Table 5.1.3 Proposed emergency measures for sewage treatment plant

Failure	Emergency Measures
Power Failure	Dual Source Electricity Supply
Pump Failure	Duty and Standby Pumps

5.1.10 Apart from the provision of standby pump and dual power supply, an emergency storage tank with storage capacity for storing 6 hours of ADWF will be provided to temporarily store the overflow of raw sewage during maintenance or the plant failure. In case of necessary and emergency, provision of tanker service to tank away the excessive raw sewage by licensed collector will be arranged and mobilized. The emergency response plan will be further developed in detailed design stage.

5.2 Maintenance Responsibilities

5.2.1 The operator of the proposed temporary RCHE development will maintain the internal sewerage system including the STP and associated sewers.

6 Conclusion

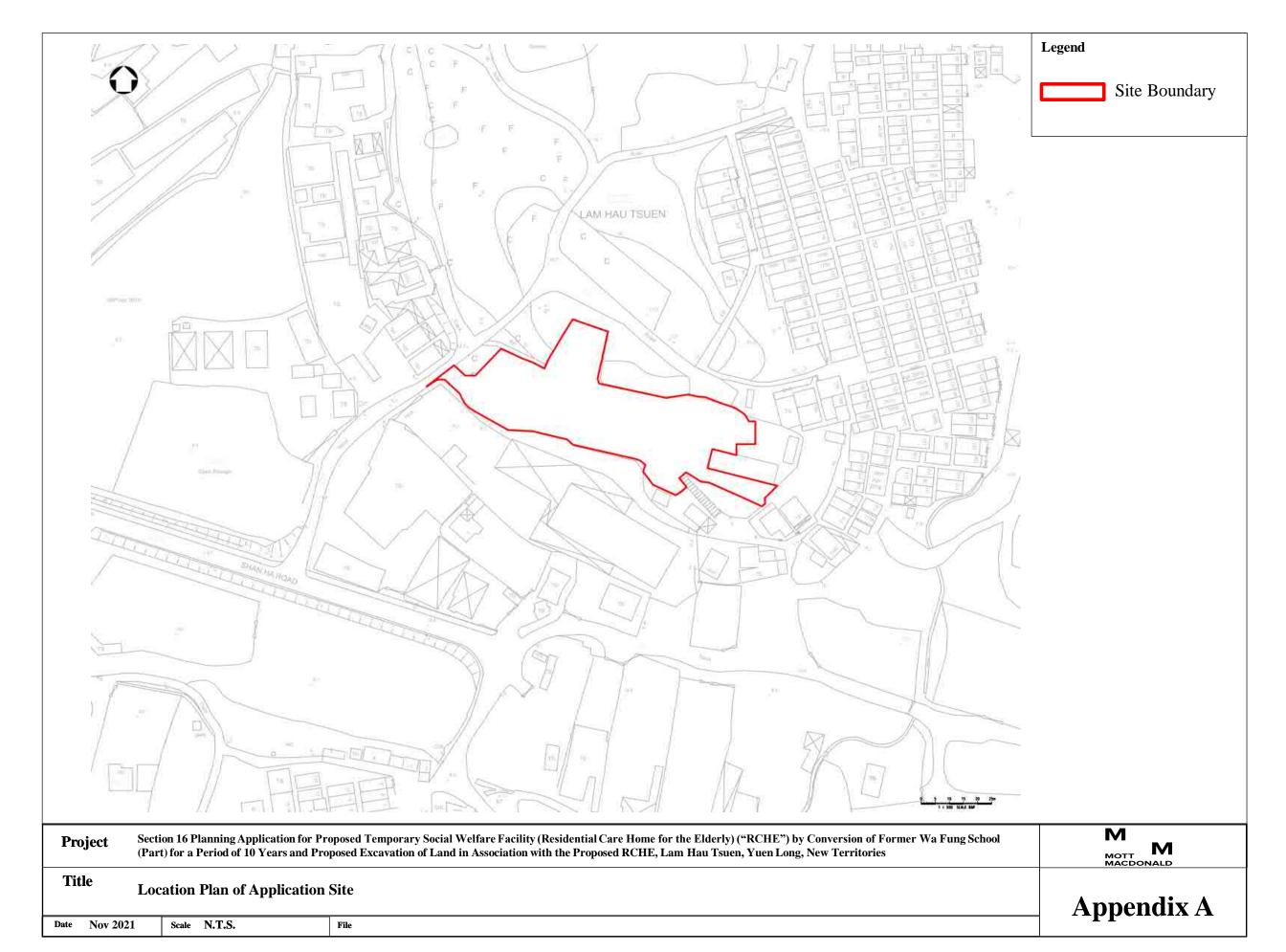
- **6.1.1** The estimated ADWF for the proposed temporary RCHE development is approximately $33 \text{ m}^3/\text{d}$ (0.38 l/s).
- As no public sewerage infrastructure in the vicinity of the development site is available at the present moment, two sewage disposal options have been proposed:
 - Option 1 Regularly Disposed to nearby Public Sewage Treatment Works via Tanker Away
- **6.1.3** The sewage generated from the proposed development could be stored and disposed to nearby public sewage treatment works daily via tanker away method.
 - Option 2 Provision of On-site Tertiary STP
- 6.1.4 An onsite sewage treatment plant (about 100m²) will be adopted for the Site to treat the sewage flow (33 m³/d) generated from the proposed development and the treated effluent will be discharged to the nearby nullah. The proposed sewage treatment plant will adopt Membrane Bioreactor (MBR) technology with ultra-filtration to meet EPD's effluent discharge standard.
- 6.1.5 The Operator of the development site will be responsible for maintaining the internal sewerage system including the STP and associated sewers. In view of the considerations outlined in paragraph 5.15, the Applicant eagerly intends to adopt option 1 for this transitional RCHE at the subject site.

Appendices

Appendix A	Location Plan of Application Site
Appendix B	Layout Plan for the Proposed Elderly Home Development
Appendix C	Existing Sewerage System
Appendix D	Proposed Sewage Disposal Arrangement (Option 1 – Regularly disposed to nearby public Sewage Treatment Works via Tanker Away)
Appendix E	Proposed Sewage Disposal Arrangement (Option 2 - Provision of On-site Tertiary Sewage Treatment Plant)

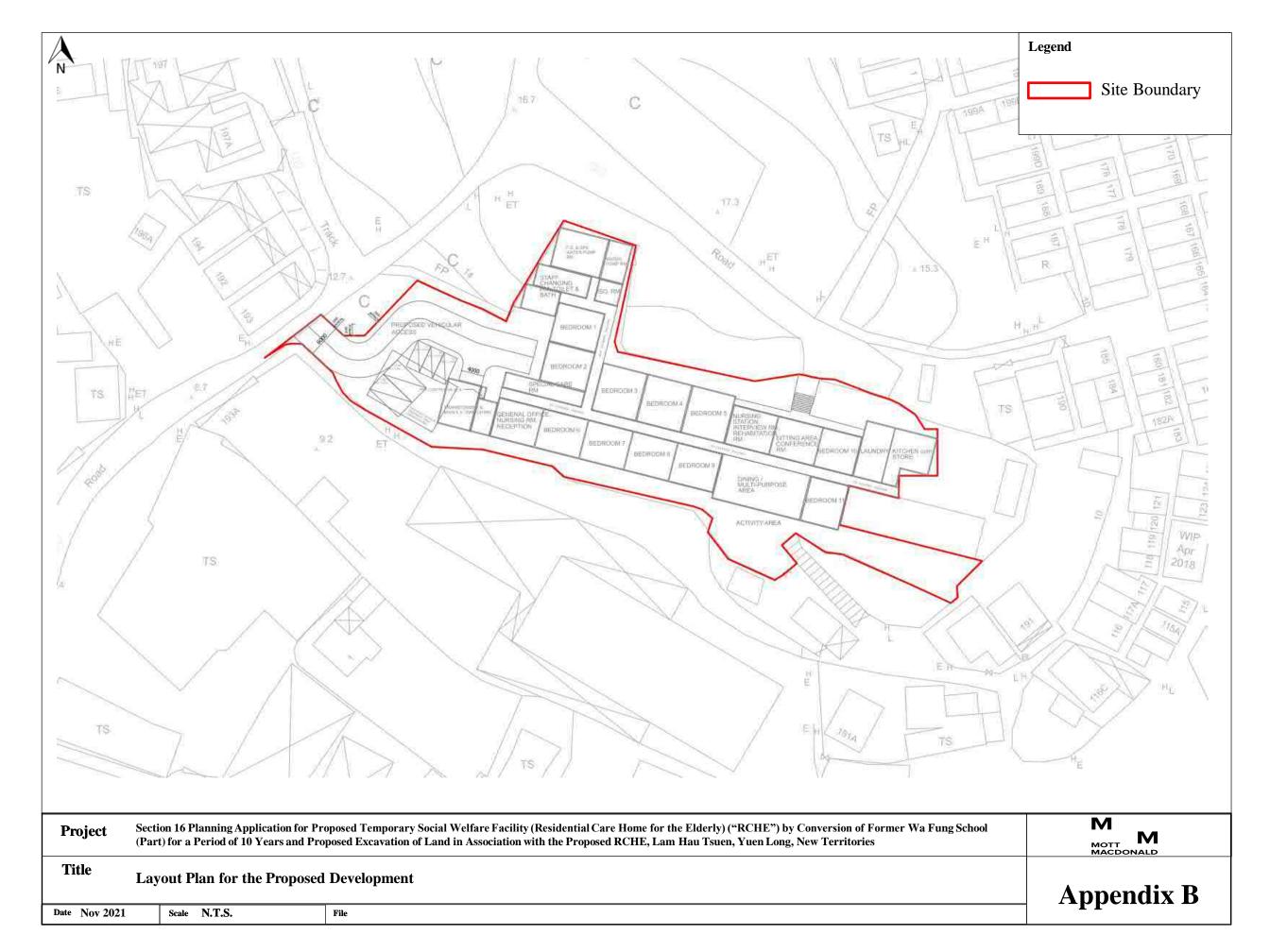
Appendix A

Location Plan of Application Site

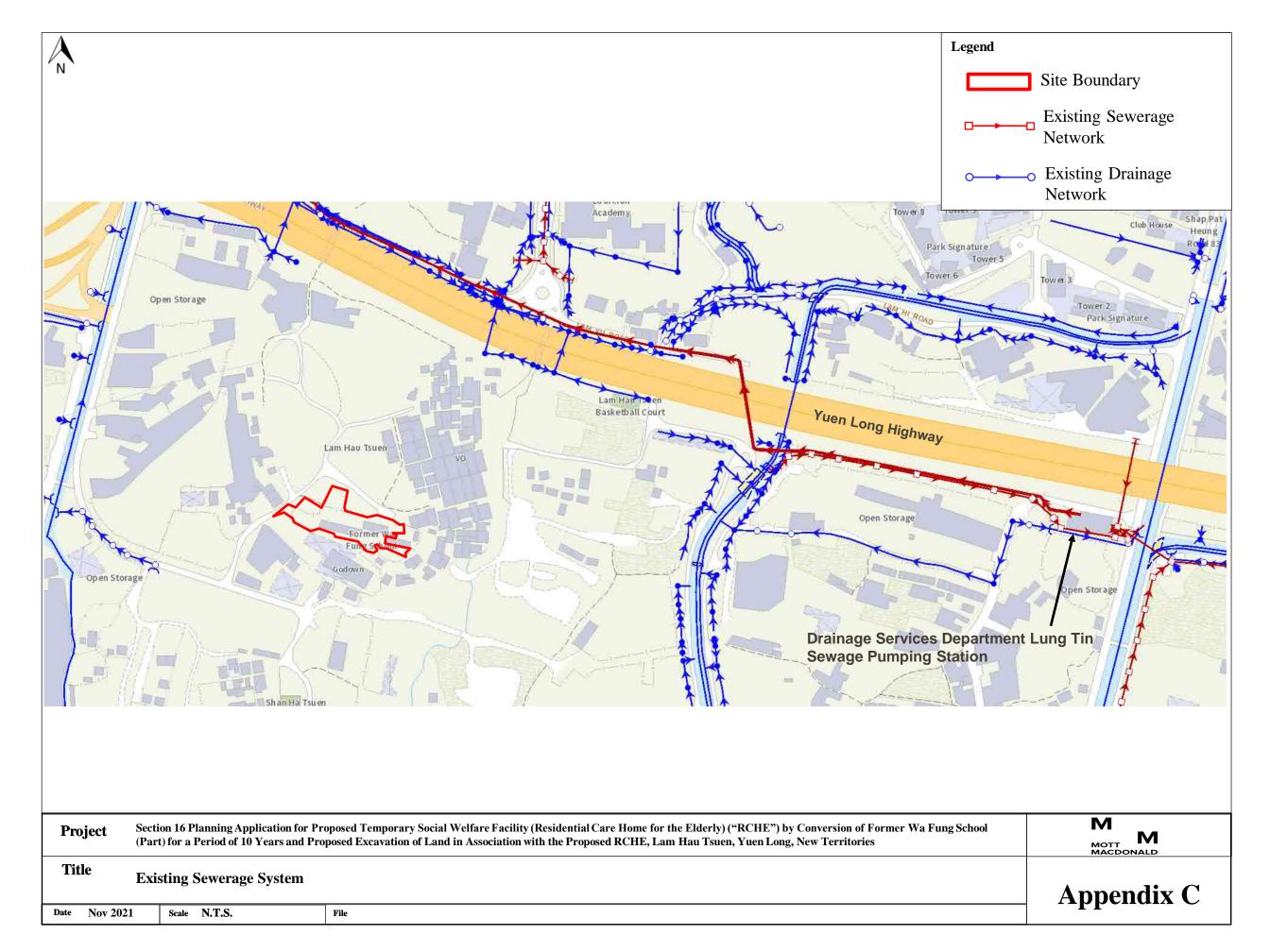


Appendix B

Layout Plan for the Proposed Elderly Home Development

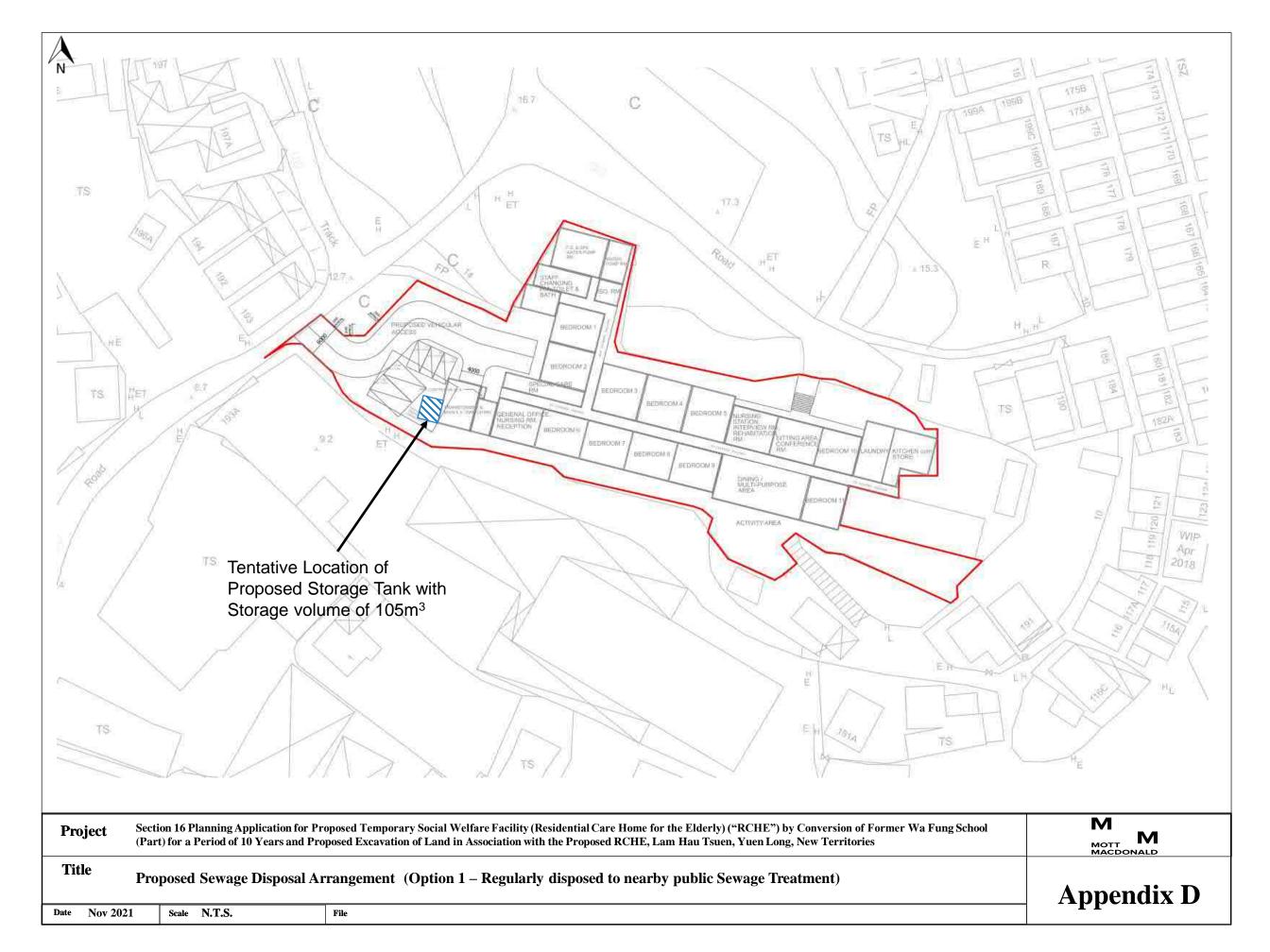


Appendix C Existing Sewerage System



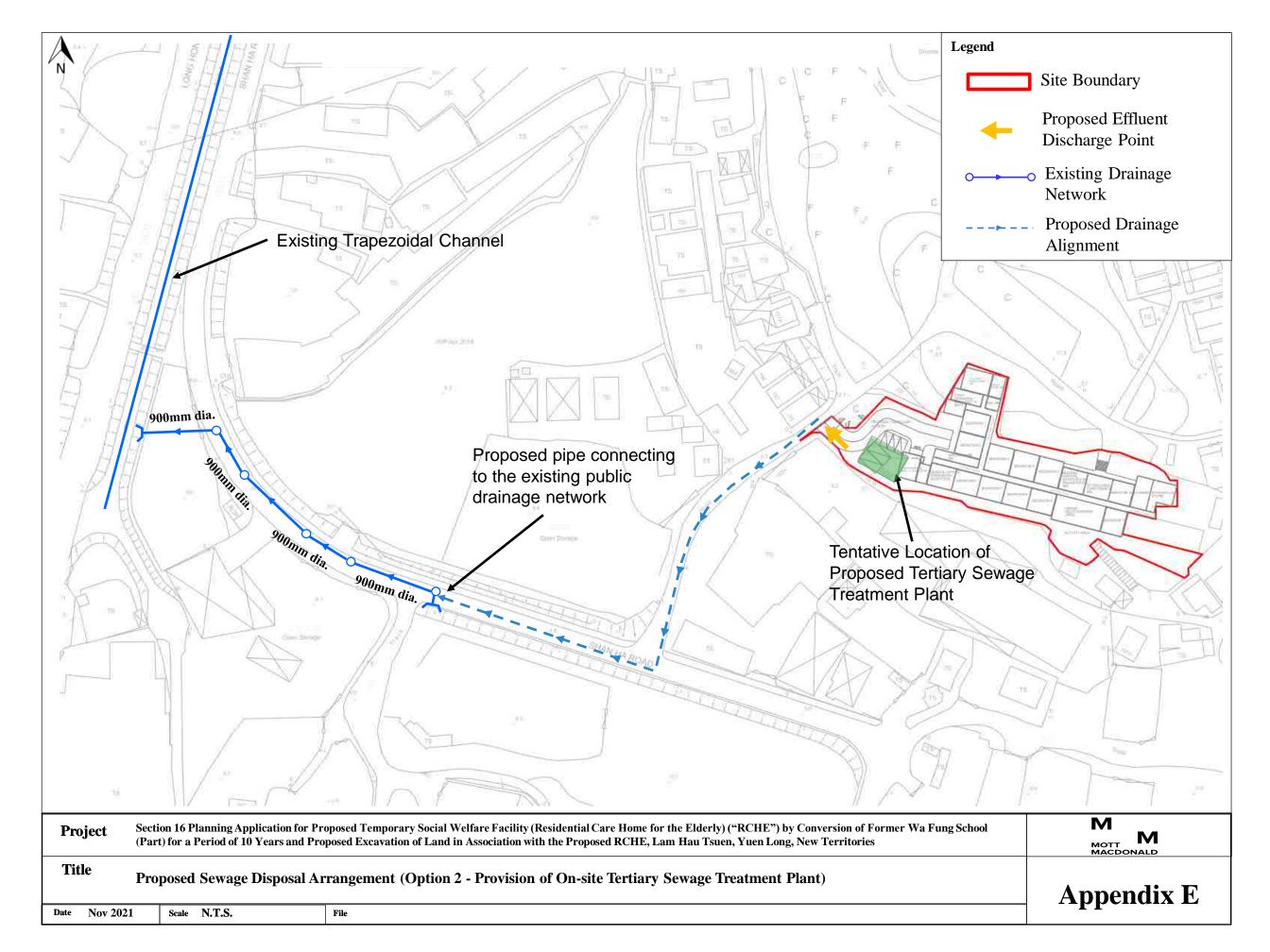
Appendix D

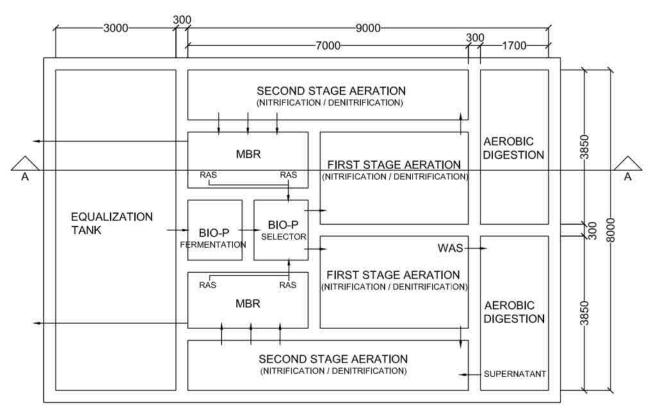
Proposed Sewage Disposal Arrangement (Option 1 – Regularly disposed to nearby public Sewage Treatment Works via Tanker Away)



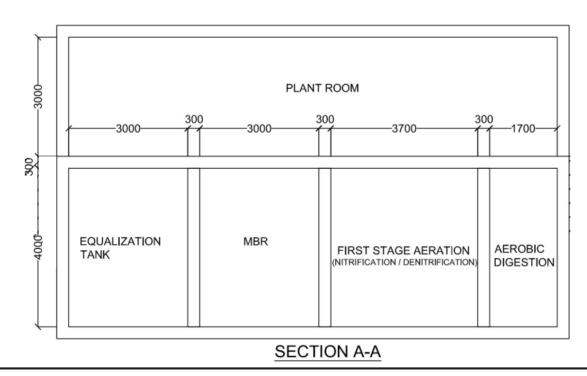
Appendix E

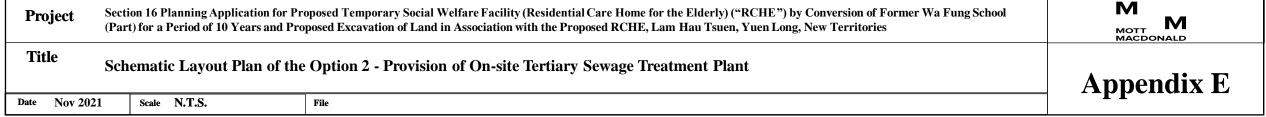
Proposed Sewage Disposal Arrangement (Option 2 - Provision of On-site Tertiary Sewage Treatment Plant)

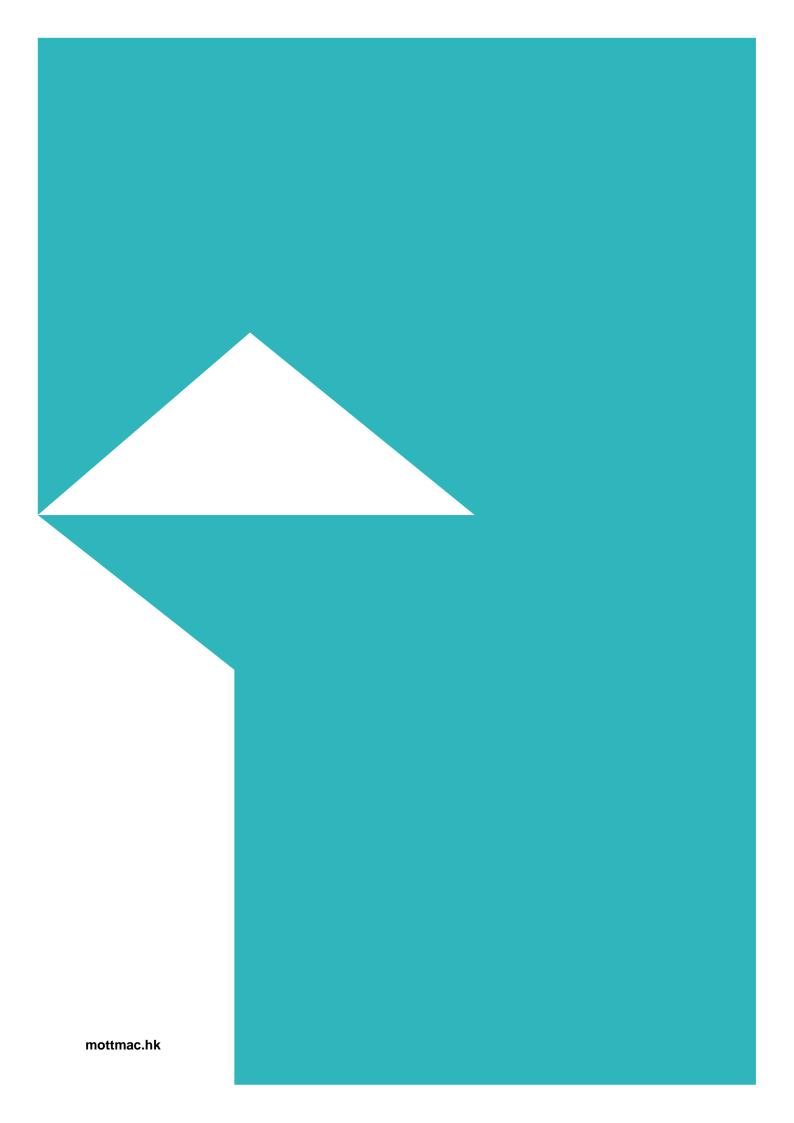


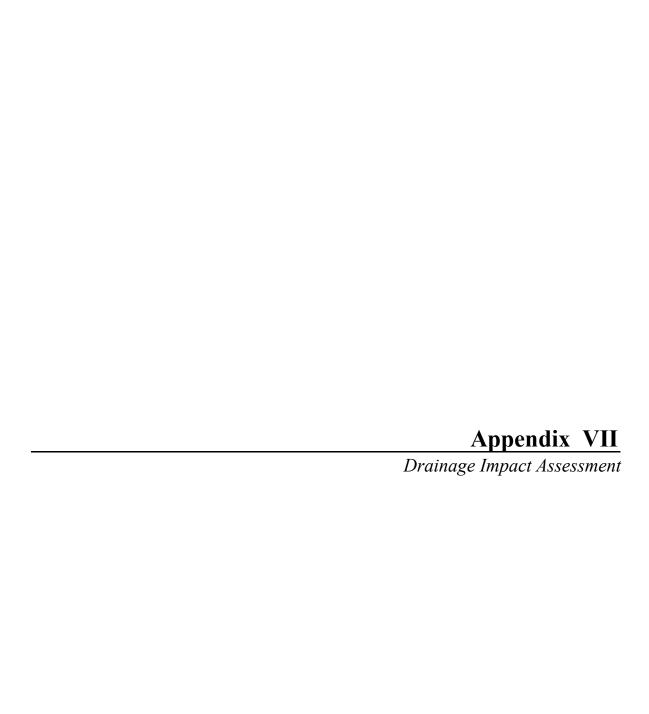


SEWAGE TREATMENT PLANT UNDERGROUND TANK LAYOUT











Section 16 Planning Application for Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories

Drainage Impact Assessment (Revision A)

November 2021

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> Section 16 Planning Application for Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories

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1 Introduction

1.1 General

- 1.1.1 The Applicant intends to convert the former Wa Fung School (part) in Lam Hau Tsuen (the Site) into a temporary residential care home for the elderly ("RCHE") for a period of 10 years under Section 16 of the Town Planning Ordinance. The Application Site covers a total land area of about 2,950m², is located in Lam Hau Tsuen surrounded by some existing village houses, open storage and vehicle repair workshops in its vicinity. It is bounded by Yuen Long Highway to its north and Shan Ha Road to its south and the Site is currently with an area zoned "Village Type Development" on the Approved Tong Yan San Tsuen Outline Zoning Plan (OZP) No. S/YL-TYST/14. The location of the Site is shown in **Appendix A**.
- 1.1.2 This Drainage Impact Assessment (DIA) is prepared to support the aforesaid planning application under Section 16 of the Town Planning Ordinance. This report forms part of the application document and will demonstrate that the implementation of the proposed temporary residential care home for the elderly development is feasible in terms of its impact on the drainage system.

1.2 Objectives of the Assignment

1.2.1 The DIA focuses on the potential drainage impacts due to the implementation of the proposed temporary residential care home for the elderly development. The objective of the DIA is to identify, assess and mitigate potential adverse drainage impacts which may arise from the Site.

1.3 Key Development Parameters

1.3.1 The location plan and layout of the proposed temporary residential care home for the elderly development at former Wa Fung School is provided in **Appendix A** and **Appendix B** respectively, and the development data is given in **Table 1.3.1** below.

Table 1.3.1 Key proposed development parameters

Items	Details	
Site Area	About 2,950m ²	
Development	Single Storey Elderly Home	

1.4 Structure of the Report

1.4.1 This DIA Report contains the following sections in addition to the Introduction Section:-

Section 2 - Methodology and Design Parameters for Drainage Impact Assessment

Discuss the methodology adopted and the design parameters used in the drainage impact assessment.

Section 3 - Existing Drainage System

Describe the drainage condition and catchment characteristics of the existing drainage system.

Section 4 – Drainage Impact Assessment and Proposed Drainage System

Briefly discuss the catchment characteristics of the Development, assess the potential drainage impacts arising from the Development, and propose the necessary drainage mitigation works if required.

Section 5 - Conclusion

Summarise the findings and conclude the drainage impact arising from the proposed development.

2 Methodology and Design Parameters for Drainage Impact Assessment

2.1 General Approach

2.1.1 The DIA compared the existing drainage condition against the drainage condition after the implementation of the Development; and proposed appropriate mitigation measures, if necessary, to reduce the potential adverse impacts identified.

2.2 Assessment Methodology

Assessment Method

- **2.2.1** In this assessment, the flow, catchment area and paving condition are compared to identify the potential drainage impact.
- 2.2.2 The proposed development is located in Lam Hau Tsuen surrounded by some existing village houses, open storage and vehicle repair workshops in its vicinity (location of the Development refers to **Appendix A**).
- 2.2.3 A new drainage system will be provided within the future development area for collecting the runoff from the Development site, in which the drainage proposal will be submitted in the detailed design stage.

2.3 Design Parameters and Assumptions

Assessment Criteria

2.3.1 The assessment criteria is based on the recommendations set out in the Stormwater Drainage Manual (SDM) – 5th Edition issued by the Drainage Services Department (DSD). According to "Approved Tong Yan San Tsuen Outline Zoning Plan No. S/YL-TYST/14", the site area is located within "Village Type Development" and proposed drainage system serving the proposed site is categorised as "Urban Drainage Branch System", the drainage system in the vicinity of the Study Area shall be assessed for 10-year and 50-year storm event as recommended in SDM.

Design for Climate Change

2.3.2 As the Site is used temporarily for 10 years, design for climate change is considered not necessary for this design submission.

Design Rainfall

2.3.3 The rainfall intensity is estimate in according to Section 4 of the SDM:-

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

Where i = extreme mean intensity in mm/hr

t_d = rainstorm duration (in minutes) (td <= 240), and

a, b, c = storm constants given in Table 3a of SDM (see **Table 2.3.1**).

Table 2.3.1 Storm constants for different return periods

Return Period T (years)	10	50
а	471.9	451.3
b	3.02	2.46
С	0.397	0.337

- 2.3.4 The design rainfall intensities would be determined with consideration for the maximum time of concentration. The time of concentration is defined as the flow travel time from the most remote point on the catchment to the outlet. In the deterministic rational method, the critical rainfall duration is considered to be equal to the time of concentration.
- **2.3.5** The time of concentration (tc) for an urban drainage system would be estimated by the following equations:

$$t_{\text{c}} = t_{\text{o}} + t_{\text{f}}$$

Where, t_c = Time of concentration (minutes)

t_o = Inlet time (time taken for flow from the remotest point to

reach the most upstream point of the urban drainage

system) = flow time

2.3.6 The inlet time (to) would be estimated by the Brandsby William's Equation that applies to rural undeveloped catchments and is given as:

$$t_o = \underbrace{0.14465L}_{A^{0.1} \ H^{0.2}}$$

Where, t_o = Inlet time (minutes)

tf

L = Distance (on plan) measured on the line of natural flow

between the submit and the point under consideration

(m)

A = Catchment area (m^2)

5

H = Average slope (m/100m), measured along the line of natural flow, from the summit of the catchment to the point under consideration.

Runoff Estimation

- **2.3.7** A rainstorm event of 1 in 10 years and 1 in 50 years return period is adopted in calculating the runoff generated from the proposed site.
- **2.3.8** Peak instantaneous runoffs have been calculated using the Rational Method as described in SDM, DSD. The peak runoff is given by the following expression:-

$$Q_p = 0.278 \ C \ i \ A$$

where $Q_p = peak runoff in m^3/s$

C = runoff coefficient (dimensionless)

i = rainfall intensity in mm/hr A = catchment area in km²

2.3.9 The runoff coefficient (C) of 0.95 and 0.35 is adopted for the paved area and unpaved area in the Site and existing catchment area respectively in accordance with SDM.

Roughness

2.3.10 For the existing and proposed drainage system which mainly contains concrete pipelines, a roughness value of ks = 3mm in respect to poor condition of concrete pipe from SDM.

3 Existing Drainage System

3.1 Site Location

3.1.1 The proposed Development covers an area of about 2,950 m² and is located in Lam Hau Tsuen. In accordance with "Approved Tong Yan San Tsuen Outline Zoning Plan No. S/YL-TYST/14", the current land use of existing site is "Village Type Development". The layout plan of the Development is shown in **Appendix B**.

3.2 Existing Drainage System and Catchment

- 3.2.1 According to the drainage record, there is a series of 900mm diameter pipes laid along Shan Ha Road that connect to existing trapezoidal channel between Shan Ha Road and Long Hon Road. In addition, there is an existing channel in the vicinity of Lam Hau Tsuen that connects to existing channel between Lam Tai East Road and Lam Tai West Road.
- As observed from the topographic data, the runoff from the existing Development Area in village zone mainly discharges to two directions, the west portion of site area drains to the existing trapezoidal channel between Shan Ha Road and Long Hon Road via local drains while the east portion of the site area drains to existing channel running across Yuen Long Highway via local drainage channel along the perimeter of Lam Hau Tsuen. The sub-catchment plan for the drainage system in the vicinity of the proposed site and the location of aforementioned drainage system is shown in **Appendix C**.

3.3 Existing Land Use Surface Characteristics of other catchments

3.3.1 The existing surface characteristic of the catchments serviced by the existing 900mm diameter pipes laid along Shan Ha Road and its discharge points have been determined and summarised in **Table 3.3.1**.

Table 3.3.1 Catchment properties for the existing 900mm pipeline

Catchment ID	Total Area (m²)	Paved Area (m²)	Discharge Point
Cat_001	7230	7230	SMH1012284
Cat_002	445	445	SMH1012285
Cat_003	235	235	SMH1012286
Cat_004	235	235	SMH1012288

3.3.2 The runoff volume of the catchments has calculated and is shown in **Appendix E**.

4 Drainage Impact Assessment and Proposed Drainage System

4.1 The Development

- **4.1.1** The layout of the proposed temporary residential care home for the elderly ("RCHE") development at former Wa Fung School is showed in **Appendix B**. The proposed Development is about 2,950 m² which is mainly under paving condition with landscaping area.
- **4.1.2** Proposed drainage system within the Development Site will be designed in detailed design stage.

4.2 Proposed Catchment and Drainage System

4.2.1 The proposed site will be developed for temporary residential care home for the elderly ("RCHE") with landscaping area. The weighted average C value of the Site after the implementation of the temporary residential care home for the elderly ("RCHE") development is shown and summarised in the following table: -

Table 4.2.1 Proposed catchment properties

Sub- Catchment ID	Landuse	Weighted C	Area (m²)
The Site	Paved Area (70%), Unpaved Area (30%)	77***	2,950
*** A	()	-) 000('. 11.	

^{***} Assuming 70% of development area is Paved Area (i.e. C=95), 30% is Unpaved Area (i.e. C=35, the weighted CN will be 77.

4.2.2 For the proposed condition, all runoff from the proposed site will be collected by internal drainage system and discharged to proposed 525mm diameter pipes which will convey the runoff to existing 900mm pipes that are laid along Shan Ha Road and ultimately discharged to existing trapezoidal channel between Shan Ha Road and Long Hon Road. The proposed drainage system and proposed catchment plan is shown in Appendix D.

4.3 Drainage Impact Assessment

4.3.1 As discussed in above sections, the drainage impact to the existing drainage system due to the proposed development at the site has been assessed. The assessed pipelines including existing 900mm diameter pipeline along Shan Ha Road. The result

of the hydraulic assessment under 1 in 10 year rainstorm and 1 in 50 year rainstorm are summarised in below tables, the detailed calculation is shown in **Appendix E**:-

Table 4.3.1 Comparison of Existing and Proposed Condition under 1 in 10 year rainstorm for existing 900mm dia. pipeline

Existing Pipeline ID (Size)	Runoff under Existing Condition (m ³ /s)	Runoff under Proposed Condition (m³/s)	Additional Runoff (m ³ /s)	Utilization under Existing Condition	Utilization under Proposed Condition
SWD1019855 (900mm)	0.319	0.449	0.130	43%	60%
SWD1019856 (900mm)	0.351	0.481	0.130	39%	54%
SWD1019857 (900mm)	0.368	0.498	0.130	44%	60%
SWD1019858 (900mm)	0.368	0.498	0.130	27%	36%
SWD1019859 (900mm)	0.385	0.515	0.130	17%	23%

Table 4.3.2 Comparison of Existing and Proposed Condition under 1 in 50 year rainstorm for existing 900mm dia. pipeline

Existing Pipeline (ID (Size)	Runoff under Existing Condition (m³/s)	Runoff under Proposed Condition (m³/s)	Additional Runoff (m³/s)	Utilization under Existing Condition	Utilization under Proposed Condition
SWD1019855 (900mm)	0.362	0.507	0.145	49%	68%
SWD1019856 (900mm)	0.397	0.542	0.145	44%	60%
SWD1019857 (900mm)	0.415	0.560	0.145	50%	68%
SWD1019858 (900mm)	0.415	0.560	0.145	30%	41%
SWD1019859 (900mm)	0.434	0.578	0.145	19%	26%

- 4.3.2 Due to catchment redistribution of the proposed site, there will be an additional runoff of approximately 0.130 m³/s and 0.145 m³/s for 10 years and 50 years storm respectively under the proposed condition. The additional runoff will increase the utilisation of existing 900mm pipeline ranging from 17% to 44% under existing condition to 23% to 60% under proposed condition for 1 in 10 year rainstorm. Under 1 in 50 year rainstorm, the utilisation of existing 900mm diameter pipeline will increase from the range of 19% to 50% under existing condition to the range of 26% to 68% under proposed condition. As the existing pipeline is found to be capable to serve the catchments under proposed condition, there is no adverse impact under the proposed development.
- 4.3.3 To convey the runoff from the proposed site, a series of 525mm pipeline has been proposed which will be connected to existing 900mm pipeline at Shan Ha Tsuen as shown in Appendix D. The utilisation of the proposed 525mm pipeline has been assessed and the results are summarised in below tables. Based on the results, the

proposed 525mm pipeline will have a utilization of less than 60% under the 50 years storm. Detailed calculation can be referred to **Appendix E**.

Table 4.3.3 Hydraulic Calculation under 1 in 10 year rainstorm for proposed 525mm pipeline

Proposed Pipe ID (size)	Runoff under Proposed Condition (m³/s)	Utilization under Proposed Condition
NSWD1000000 (525mm)	0.130	53%
NSWD1000001 (525mm)	0.130	53%
NSWD1000002 (525mm)	0.130	53%
NSWD1000003 (525mm)	0.130	53%

Table 4.3.3: Hydraulic Calculation under 1 in 50 year rainstorm for proposed pipeline

Proposed Pipe ID (size)	Runoff under Proposed Condition (m³/s)	Utilization under Proposed Condition
NSWD1000000 (525mm)	0.145	58%
NSWD1000001 (525mm)	0.145	58%
NSWD1000002 (525mm)	0.145	58%
NSWD1000003 (525mm)	0.145	58%

5 Conclusion

5.1 Conclusion

(Revision A)

- 5.1.1 As discussed in previous sections, the runoff from the proposed temporary residential care home for the elderly ("RCHE") will be redistributed to the existing 900mm diameter pipeline along Shan Ha Road via a proposed 525mm diameter pipeline. The proposed site is zoned as "Village Type Development" according to the OZP. The Development will have 70% of paved area with 30% unpaved area.
- 5.1.2 Hydraulic calculation has been carried out for the existing 900mm pipeline. It is found that the pipeline is capable to convey the additional runoff from the proposed site. In conclusion, there will be no adverse drainage impact to the existing drainage system under the proposed development.

Appendices

Appendix A Location Plan of Application Site

Appendix B Layout Plan for the Proposed Development

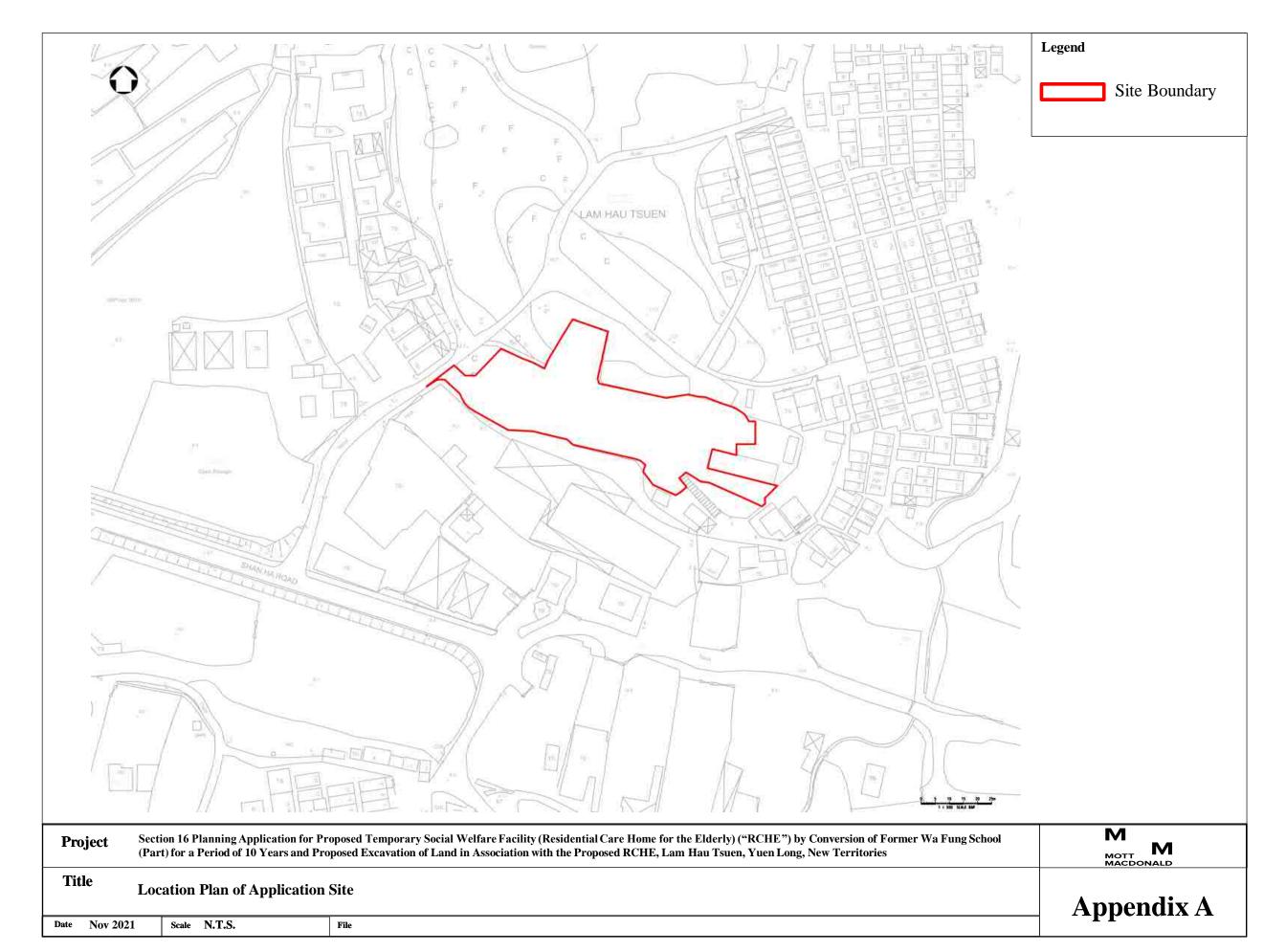
Appendix C Existing Drainage System and Existing Catchment Plan

Appendix D Proposed Drainage System and Proposed Catchment Plan

Appendix E Hydraulic Calculation

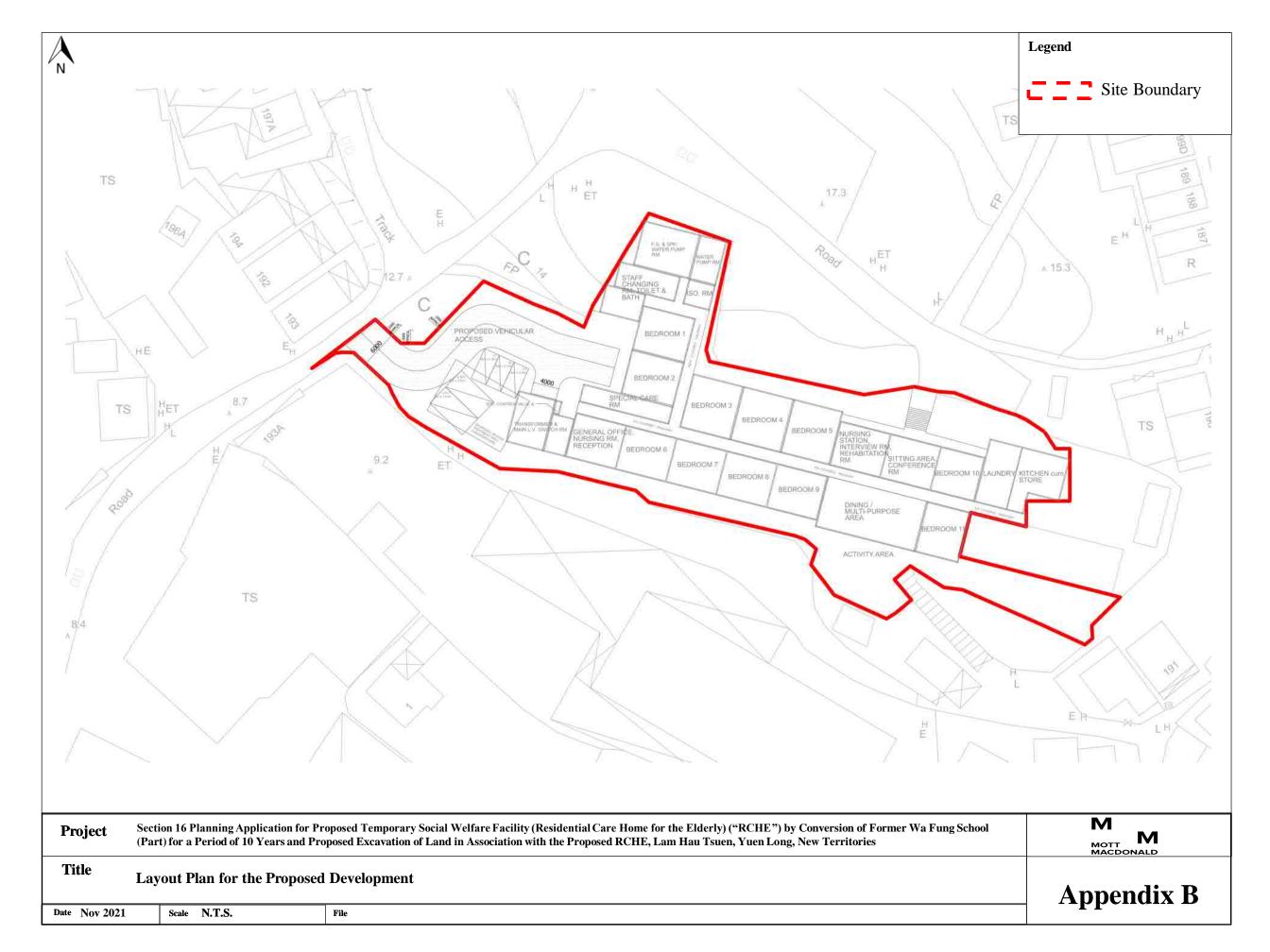
Appendix A

Location Plan of Application Site



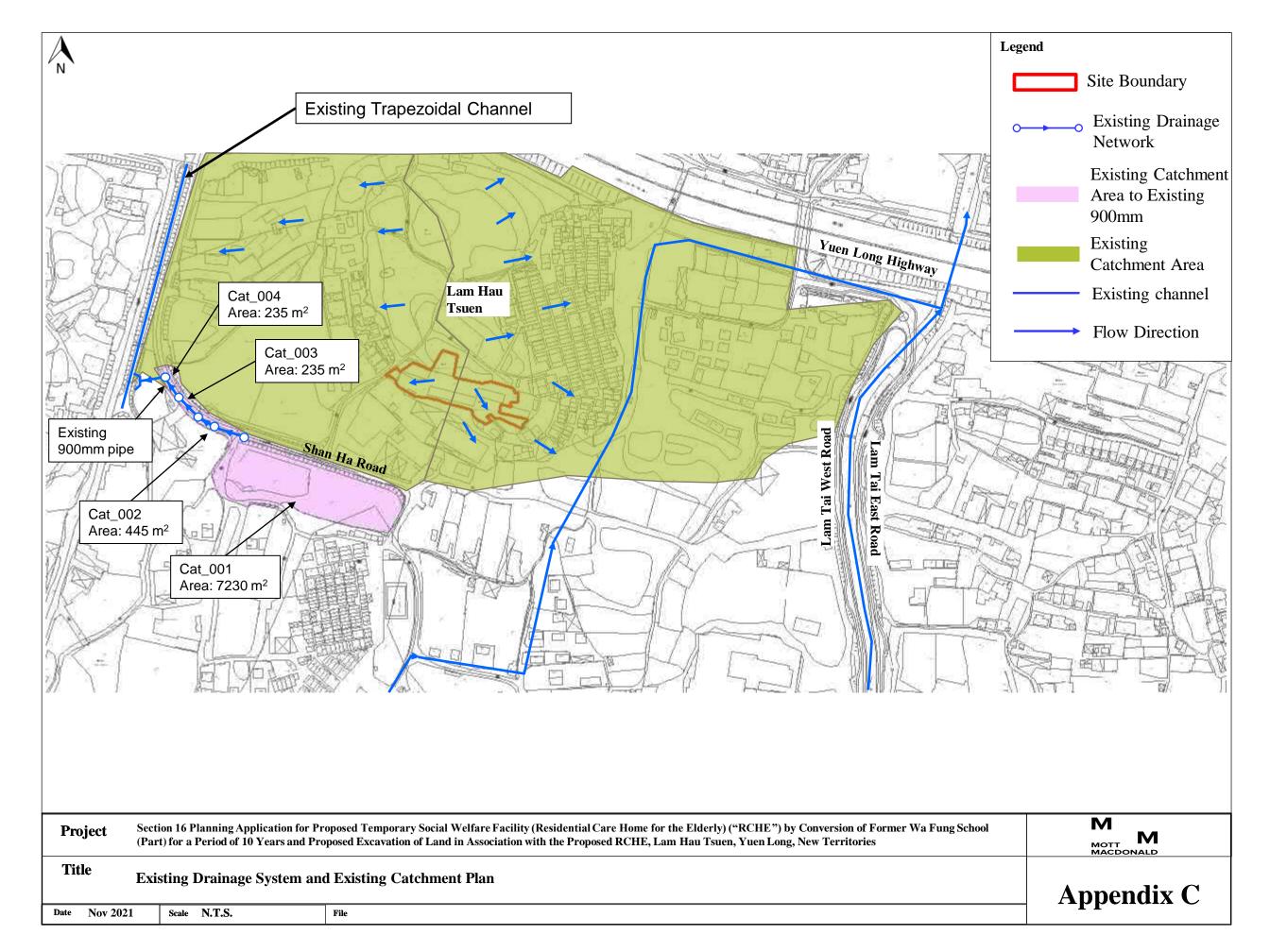
Appendix B

Layout Plan for the Proposed Development



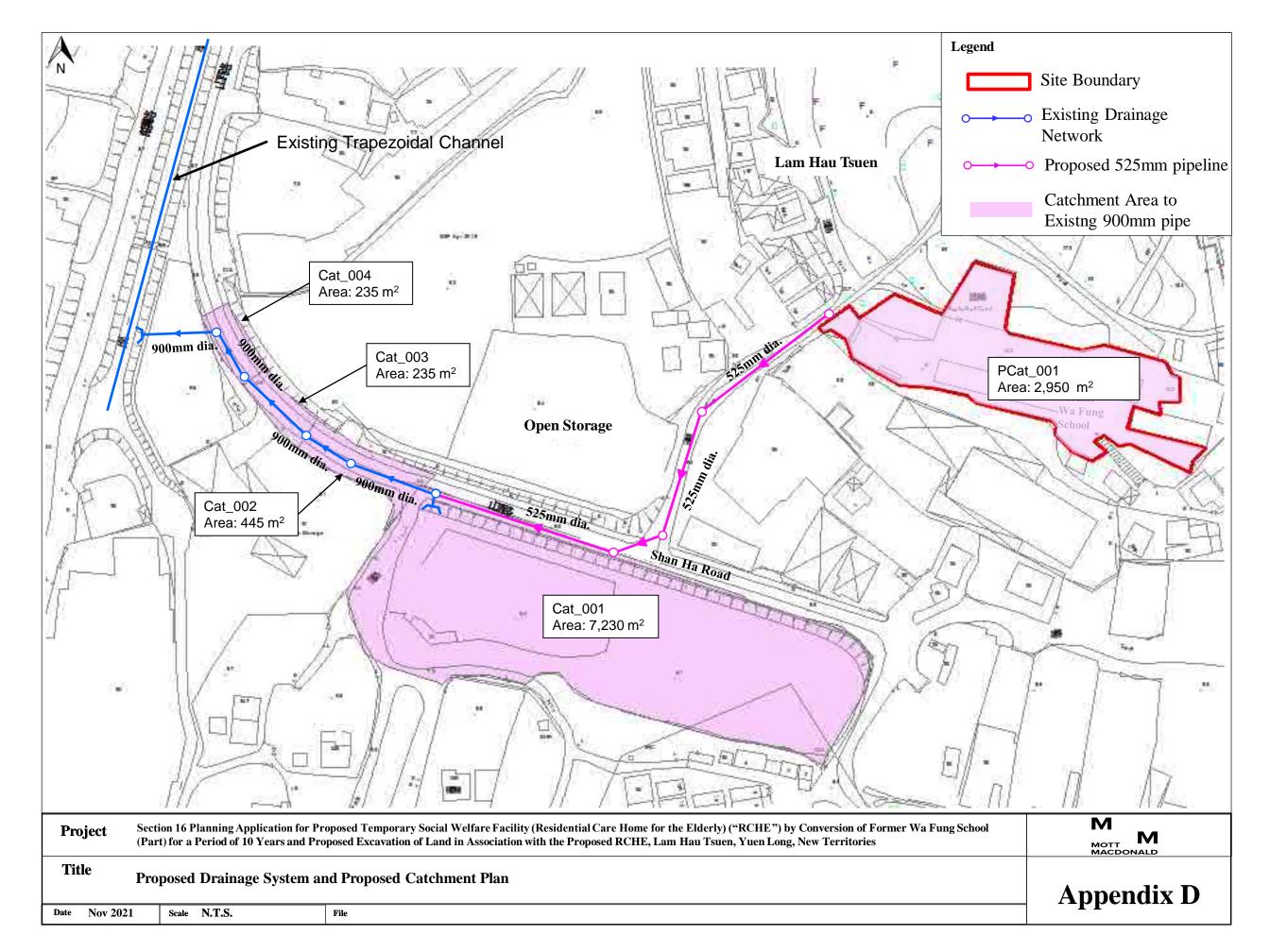
Appendix C

Existing Drainage System and Existing Catchment Plan



Appendix D

Proposed Drainage System and Proposed Catchment Plan



Appendix E Hydraulic Calculation

Calculation

Determine the existing drainage condition and verify the adequacy of the downstream drainage to cater for the additional runoff in the proposed condition <u>Objective</u>

Methodogy

1. Determine the catchment areas and boundaries of the downstream existing 900dia. pipes

- 2. Determine the runoff directions and land uses to assign suitable runoff coefficients to the catchments
- 3. Determine the rainfall intensity for the catchments and use Rational Method as advised in the Stormwater Drainage Manual (SDM) to find runoff contributing to the downstream drainage system
- 4. Use Colebrook-White Equation to determine the capacity of the downstream 900dia. pipes and check against the future design flow

1. Determine the Catchment for the Downstream Drainage

Refer to Appendix C and Appendix D for the existing catchment plan and proposed catchment plan

Existing catchment area of the 900mm pipeline under the existing condition:

Pipe no.	From	То	Overall Catchment Areas(m ²)	Unpaved Area (m ²)	Paved Area (m ²)	Sub-Catchment (Appendix C)
SWD101	9855 SMH1012284	SMH1012285	7230.0	-	7230.0	Cat_001
SWD101	9856 SMH1012285	SMH1012286	7675.0	-	7675.0	Cat_001, 002
SWD101	9857 SMH1012286	SMH1012287	7910.0	-	7910.0	Cat_001, 002, 003
SWD101	9858 SMH1012287	SMH1012288	7910.0	-	7910.0	Cat_001, 002, 003
SWD101	9859 SMH1012288	SNF1002275	8145.0	-	8145.0	Cat_001, 002, 003, 004

Catchment area of the Application Site:

Portions	Overall Catchment Areas(m ²)	Unpaved Area (m ²)	Paved Area (m ²)	Sub-Catchment (Appendix D)
Application Site	2950 0	885.0	2065.0	Pcat 001

Catchment area of the 900mm pipeline under the proposed condition:

Pipe no.	From	То	Overall Catchment Areas(m ²)	Unpaved Area (m ²)	Paved Area (m²)	Sub-Catchment (Appendix D)
SWD1019855	SMH1012284	SMH1012285	10180.0	885.0	9295.0	Cat_001
SWD1019856	SMH1012285	SMH1012286	10625.0	885.0	9740.0	Cat_001, 002
SWD1019857	SMH1012286	SMH1012287	10860.0	885.0	9975.0	Cat_001, 002, 003
SWD1019858	SMH1012287	SMH1012288	10860.0	885.0	9975.0	Cat_001, 002, 003
SWD1019859	SMH1012288	SNF1002275	11095.0	885.0	10210.0	Cat 001, 002, 003, 004

2. Determine the Runoff Volume for the Catchment

2.1. Determine the Runoff Volume for the Catchment of the 900mm dia. Pipes under Existing Condition

Table 3a storm constants:

turn period	10	50
a =	471.9	451.3
b =	3.02	2.46
C =	0.397	0.337

in 10 Years Sto	rm Event													
							Time of					Runoff		
			Catchment Area (A)	Average Slope	Flow Path	Inlet time (t_0) ,	Concentration	Duration (t_d) ,				Intensity (I)	Runoff	Peak Runoff
Catchment ID	Surface Type	Catchment Area (A), m ²	km ²	(H), m/100m	Length (L), m	min	(t _c), min *	min	а	b	С	mm/hr	Coefficient (C)	(Qp), m ³ /s
Cat_001	Fully paved	7230	0.00723	0.2	130	10.67	10.67	10.67	471.9	3.02	0.40	167.00	0.95	0.319
Cat_002	Fully paved	445	0.00045	-	-	-	1.00	1.00	471.9	3.02	0.40	271.63	0.95	0.032
Cat_003	Fully paved	235	0.00024	-	-	-	1.00	1.00	471.9	3.02	0.40	271.63	0.95	0.017
Cat_004	Fully paved	235	0.00024	-	-	-	1.00	1.00	471.9	3.02	0.40	271.63	0.95	0.017

* Time of Concentration (tc), min of the existing catchments (road pavement) have been assumed to be 1 mins.

							Time of					Runoff		
			Catchment Area (A)	Average Slope	Flow Path	Inlet time (t_0) ,	Concentration	Duration (t _d),				Intensity (I)	Runoff	Peak Runoff
Catchment ID	Surface Type	Catchment Area (A), m ²	km ²	(H), m/100m	Length (L), m	min	(t_c) , min *	min	а	b	С	mm/hr	Coefficient (C)	(Qp), m ³ /s
Cat_001	Fully paved	7230	0.00723	0.2	130	10.67	10.67	10.67	451.3	2.46	0.34	189.50	0.95	0.362
Cat_002	Fully paved	445	0.00045	-	-	-	1.00	1.00	451.3	2.46	0.34	297.03	0.95	0.035
Cat_003	Fully paved	235	0.00024	-	-	-	1.00	1.00	451.3	2.46	0.34	297.03	0.95	0.018
Cat_004	Fully paved	235	0.00024	-	-	-	1.00	1.00	451.3	2.46	0.34	297.03	0.95	0.018

2.2. Determine the Runoff Volume for the Additional Catchment of the 900mm dia. Pipes under Proposed Condition

1 in 10 Years Sto	rm Event											
				Time of						Runoff		
			Catchment Area (A)	Concentration	Duration (t_d) ,				Runoff Intensity	Coefficient (C)	Peak Runoff	
Catchment ID	Surface Type	Catchment Area (A), m ²	km ²	(t _c), min ⁽¹⁾	min	а	b	С	(I) mm/hr	(2)	(Qp), m ³ /s	
Application Site	Fully paved	2950	0.00295	5.00	5.00	471.9	3.02	0.40	206.49	0.77	0.130	
(1) Time of Conce	ntration (tc), min o	of the proposed catchment	has been assumed to b	e 5 minutes.			·					
(2) Runoff coefficie	2) Runoff coefficient (C) of the proposed site has been calculated based on 70% paved area (C = 95) and 30% unpaved area (C = 35)											

1 in 50 Years Storm Event

				Time of						Runoff	
			Catchment Area (A)	Concentration	Duration (t_d) ,				Runoff Intensity	Coefficient (C)	Peak Runoff
Catchment ID	Surface Type	Catchment Area (A), m ²	km ²	(t_c) , min $^{(1)}$	min	а	b	С	(l) mm/hr	(2)	(Qp), m ³ /s
Application Site	Fully paved	2950	0.00295	5.00	5.00	451.3	2.46	0.34	229.27	0.77	0.145
(1) Time of Conce	ntration (tc), min o	of the proposed catchment	has been assumed to b	e 5 minutes.							
(2) Runoff coefficie	ent (C) of the pro	posed site has been calcul	ated based on 70% pay	ed area $(C = 95)$	and 30% unpaye	ed area (C = 35				

4. Use Colebrook-White Equation to determine the capacity of the downstream 900dia. pipes and check under Existing and Proposed Condition

<u>Drains Capacity Design Check (By Colebrook White Equation)</u>

where V = velocity (m/s)

 $g = 9.81 (ms^{-2})$ R = hydraulic radius (m) s = Slope of pipe / hydraulic gradient v = kinematic viscosity (m²/s)

Ks = pipe roughness (mm)

$$V = -\sqrt{(8gDs)}\log(\frac{Ks}{3.7D} + \frac{2.51v}{D\sqrt{(2gDs)}})$$

Assumptions:

(refer to Stormwater Manual Concrete Sewer in Poor Condition) 1. Pipe roughness = 3 mm

2. Transitional flow and water at 15 degree celcius, i.e. kinematic viscosity is 1.14 x 10 $^{-6}$ m²/s

4.1 Determine the utilisation of the downstream 900mm dia. pipes under existing condition

1 in 10 Years Storm Event

I III IU Tears Sid	Jilli Evelit											
			Calculation Result									
Pipe no.	From	То	Pipe Diameter mm	Pipe Length m	Invert Level (US) mPD	Invert Level (DS) mPD	Gradient 1in	Designed Flow (m3/s)	Pipe Full-bore Capacity (m3/s)	Pipe Full Flow Velocity m/s	Utilization %	Flow Capacity Check
SWD1019855	SMH1012284	SMH1012285	900	27	7.22	7.15	386	0.319	0.74	1.17	43%	OK
SWD1019856	SMH1012285	SMH1012286	900	16	7.04	6.98	267	0.351	0.90	1.41	39%	OK
SWD1019857	SMH1012286	SMH1012287	900	25	6.94	6.86	313	0.368	0.83	1.30	44%	OK
SWD1019858	SMH1012287	SMH1012288	900	16	6.84	6.7	114	0.368	1.37	2.15	27%	OK
SWD1019859	SMH1012288	SNF1002275	900	25	6.66	6.08	43	0.385	2.23	3.51	17%	OK

1 in 50 Years St	orm Event											
					Calculation	on Result						
Pipe no.	From	То	Pipe Diameter mm	Pipe Length m	Invert Level	Invert Level	Gradient 1in	Designed Flow	Pipe Full-bore	Pipe Full Flow	Utilization %	Flow Capacity
SWD1019855	SMH1012284	SMH1012285	900	27	7.22	7.15	386	0.362	0.74	1.17	49%	OK
SWD1019856	SMH1012285	SMH1012286	900	16	7.04	6.98	267	0.397	0.90	1.41	44%	OK
SWD1019857	SMH1012286	SMH1012287	900	25	6.94	6.86	313	0.415	0.83	1.30	50%	OK
SWD1019858	SMH1012287	SMH1012288	900	16	6.84	6.7	114	0.415	1.37	2.15	30%	OK
SWD1019859	SMH1012288	SNF1002275	900	25	6.66	6.08	43	0.434	2.23	3.51	19%	OK

4.1 Determine the utilisation of the proposed pipes and downstream 900mm dia. pipes under proposed condition

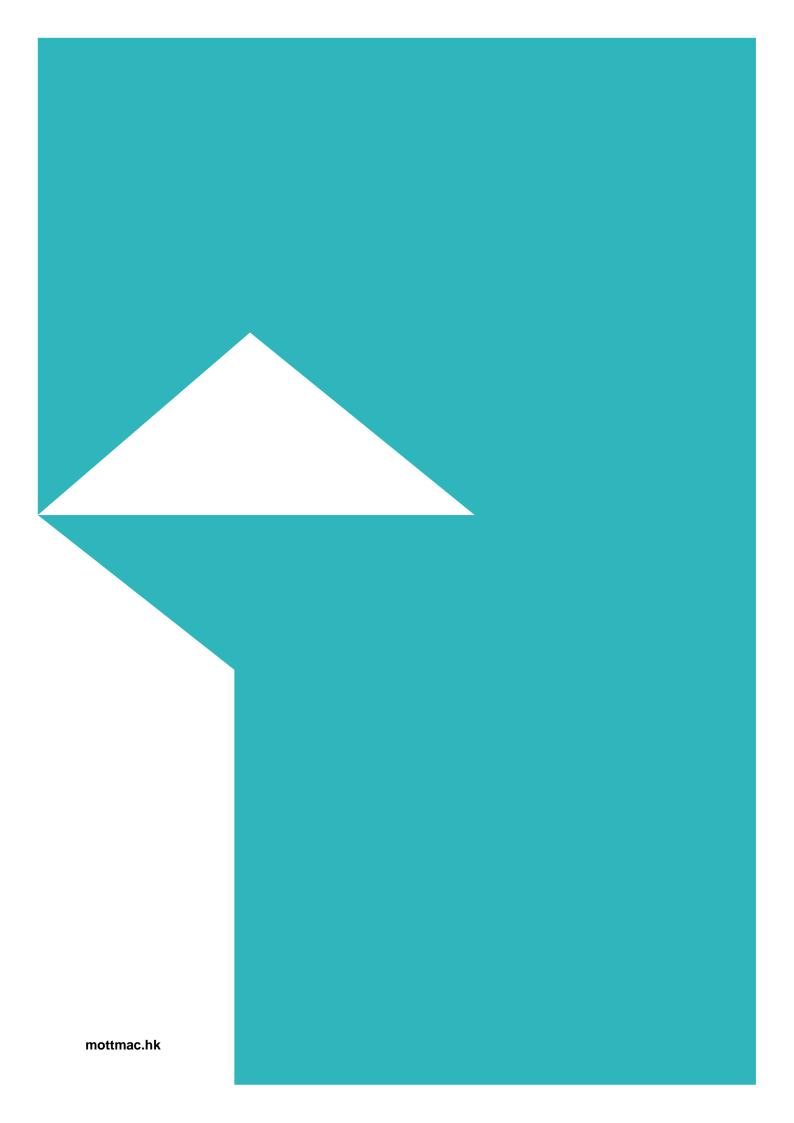
1 in 10 Years Storm Event

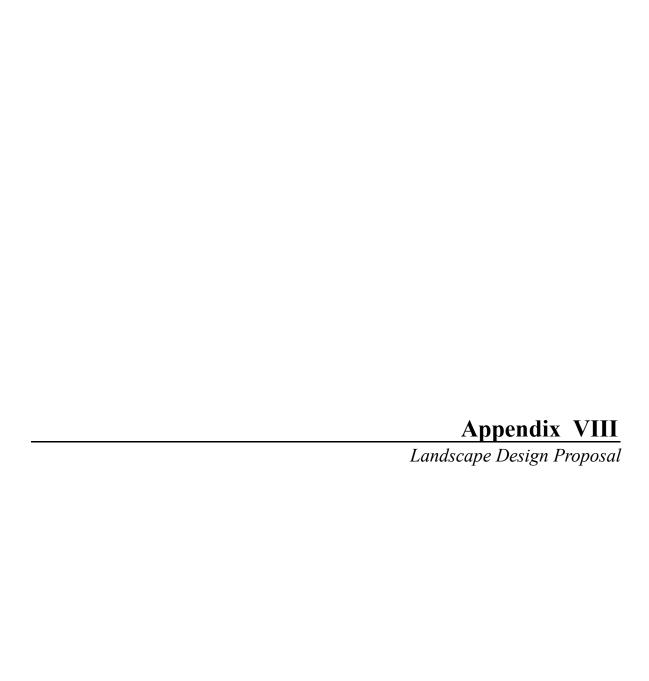
I III IU I Cars Sid	Jilli Evelit											
			Calculation Result									
Pipe no. *	From	То	Pipe Diameter mm	Pipe Length m	Invert Level	Invert Level	Gradient 1in	Designed Flow	Pipe Full-bore	Pipe Full Flow	Utilization %	Flow Capacity
NSWD1000000	NSMH1000000	NSMH1000001	525	46	7.93	7.70	200	0.130	0.25	1.15	53%	OK
NSWD1000001	NSMH1000001	NSMH1000002	525	40	7.70	7.50	200	0.130	0.25	1.15	53%	OK
NSWD1000002	NSMH1000002	NSMH1000003	525	10	7.50	7.45	200	0.130	0.25	1.15	53%	OK
NSWD1000003	NSMH1000003	SMH1012284	525	45	7.45	7.22	200	0.130	0.25	1.15	53%	OK
SWD1019855	SMH1012284	SMH1012285	900	27	7.22	7.15	386	0.449	0.74	1.17	60%	OK
SWD1019856	SMH1012285	SMH1012286	900	16	7.04	6.98	267	0.481	0.90	1.41	54%	OK
SWD1019857	SMH1012286	SMH1012287	900	25	6.94	6.86	313	0.498	0.83	1.30	60%	OK
SWD1019858	SMH1012287	SMH1012288	900	16	6.84	6.7	114	0.498	1.37	2.15	36%	OK
SWD1019859	SMH1012288	SNF1002275	900	25	6.66	6.08	43	0.515	2.23	3.51	23%	OK

* Proposed pipes are represented by purple colour.

1 in 50 Years Storm Event

				Calculation Result								
Pipe no. *	From	То	Pipe Diameter mm	Pipe Length m	Invert Level	Invert Level	Gradient 1in	Designed Flow	Pipe Full-bore	Pipe Full Flow	Utilization %	Flow Capacity
NSWD1000000	NSMH1000000	NSMH1000001	525	46	7.93	7.70	200	0.145	0.25	1.15	58%	OK
NSWD1000001	NSMH1000001	NSMH1000002	525	40	7.70	7.50	200	0.145	0.25	1.15	58%	OK
NSWD1000002	NSMH1000002	NSMH1000003	525	10	7.50	7.45	200	0.145	0.25	1.15	58%	OK
NSWD1000003	NSMH1000003	SMH1012284	525	45	7.45	7.22	200	0.145	0.25	1.15	58%	OK
SWD1019855	SMH1012284	SMH1012285	900	27	7.22	7.15	386	0.507	0.74	1.17	68%	OK
SWD1019856	SMH1012285	SMH1012286	900	16	7.04	6.98	267	0.542	0.90	1.41	60%	OK
SWD1019857	SMH1012286	SMH1012287	900	25	6.94	6.86	313	0.560	0.83	1.30	68%	OK
SWD1019858	SMH1012287	SMH1012288	900	16	6.84	6.7	114	0.560	1.37	2.15	41%	OK
SWD1019859	SMH1012288	SNF1002275	900	25	6.66	6.08	43	0.578	2.23	3.51	26%	OK
* Proposed pipes	are represented b	y purple colour.										







Landscape Design Proposal

in support of

S16 APPLICATION FOR

Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories

Applicant:

Banyan Services Association

Ref: 20211118_S16_Landscape Proposal_KOLA

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Tree Assessment Schedule

C.1

1 INTRODUCTION

1.1 Background

- 1.1.1 This report contains a landscape design proposal to seek Town Planning Board's (TPB) approval under Section 16 of the Town Planning Ordinance for a Proposed temporary Elderly Home at former Wa Fung School (part), Lam Hau Tsuen, Hong Kong (hereafter referred as the "Application Site", Approved Tong Yan San Tsuen Outline Zoning Plan No. S/YL-TYST/14, "Village Type Development" ("V") Zone);
- 1.1.2 The Application Site is currently an abandoned school compound on government land. This proposal outlines the landscape design and includes a landscape layout with proposed tree planting strategy and planting for the Application Site. The proposal also demonstrates that the landscape design is intended to enhance visual interest of the Proposed Development where physically feasible. This report describes the proposed landscape design and its landscape impacts within the existing landscape context.
- 1.1.3 Tentative accommodation includes around 100 beds with ancillary facilities as required for licensed elderly home, offices, outdoor gardens and an existing access which is approximately 3.5m wide.

2 EXISTING SITE CONDITIONS

2.1 Context/ General Neighbourhood

2.1.1 The Application Site is located near the top of a hill covered with small groups of vegetation in Lam Hau Tsuen, just south of the New Territories Circular Road in Yuen Long. The surrounding land-use of the Application Site is predominantly a mix of low-rise village-type houses to the northeast, trees and natural vegetation to the north; while open storage, rural factories and temporary structures are found to the west and south to the site.

2.2 The Site

- 2.2.1 The Application Site cover a total land area of approximately 2,950m². It is vacant site and was previously occupied by the former Wa Fung School. Whilst the site is generally flat with concrete-paved hard stand. There are three existing single-storey buildings (classroom structures) within the Application Site. Refer to **Figure A.1** Existing Condition; this plan illustrates the extent of existing buildings and hard-paving across the site.
- 2.2.2 Photo records of the existing site conditions are contained in **Figures B.1 B.10** demonstrating that the site is currently underutilized.

3 PROPOSED DEVELOPMENT FORM

3.1 Building Layout

3.1.1 The project site comprises a single-storey aged Residential Care Home for the Elderly (RCHE) with peripheral planting, landscape areas and internal circulation areas.

3.2 Road Works

- 3.2.1 The run-in / out point of the Proposed Development is located to the eastern-most edge of the Application Site. Please refer to the attached **Figure A.3** Landscape Proposal.
- 3.2.2 The proposed circulation for pedestrians and vehicles is clearly defined by a raised road kerb and separated with full priority proposed for internal pedestrian circulation. A new covered walkway is proposed to combined with existing covered walkway which gives continuous access by foot along the entire length of the Application Site (refer to the blue colored corridor for the internal pedestrian circulation in Figure A3).

4 TREE PRESERVATION SCHEME

4.1 Existing Vegetation

- 4.1.1 The tree survey was carried out on 02nd October 2021. There are **80** existing trees found within the Application Site in **25** different tree species. The most frequently occurring species are *Macaranga* tanarius var. tomentosa, Celtis sinensis, Albizia lebbeck, Ficus macrocarpa and Leucaena leucocephala. The majority of these surveyed trees found are of poor to fair condition and of low to medium amenity value. See **Appendix C** for the complete tree assessment schedule.
- 4.1.2 None of these trees are protected species listed under Forestry Regulations, Forests and Countryside Ordinance (Cap.96 sub. leg.) or "Old and Valuable Tree" as defined in ETWB TV (W) No. 29/2004 "Registration of old and Valuable Trees" or "Champion Tree" as identified in the book "Champion Trees in Urban Hong Kong". A Tree Assessment Schedule, Tree Survey Photographs and Tree Survey Plan are shown in Figures A.1, A.2 and A.3.
- 4.1.3 It is proposed that as many existing trees as possible (that are of fair condition and form) be retained. There are 2 no. potential OVT's found on site which are T94 and T95 (*Delonix regia*). These two subject trees will not be affected by the development.
- 4.1.4 Furthermore, there is another potential OVT found just outside of the site boundary. Tree T90 (*Ficus macrocarpa*) is located to the north of the northern site boundary and will not be affected by the development.
- 4.1.5 It is anticipated that the comprehensive retention of existing trees with heights ranged from 6 to 9m, will further protect the integrity of the surrounding natural environment.

4.2 General

4.2.1 The tree treatment proposal is made based on the proposed development layout, which is superimposed on the tree survey plan.

4.3 Trees to be Retained

- 4.3.1 **29 no.** trees are proposed to be retained and protected.
- 4.3.2 The preservation and protection of retained trees will be carried out according to the requirements as stipulated in
 - General Specification for Building 2017 Edition GS Section 25.69
 - Guidelines on Tree Preservation during Development from GLTMS, DevB
 - General Specification for Civil Engineering Works 2006 Edition Section 26 Clause 26.08 to 26.13
- 4.3.3 Tree Protection Zone (TPZ) by dripline method will be erected to eliminate the risk of construction damage to retained trees.
- 4.3.4 Retained trees on the site will be maintained properly.
- 4.3.5 Upon completion of construction period, retained trees on the site will be undertaken by the Elderly Care management office.

4.4 Trees to be Transplanted

4.3.1. No trees within the Tree Survey Area will be proposed for transplanting.

4.5 Trees to be Felled

4.5.1 **51 no.** trees are proposed to be felled.

4.6 Definitions

- 4.6.1 Scope of Survey: To survey all 'trees' within the Tree Survey Area in accordance with government requirement.
- 4.6.2 Tree: A woody plant with a stem diameter over 95mm measured at a point 1.3m above the root collar (DBH).
- 4.6.3 DBH: Diameter at Breast Height as defined in the Practice Note Issue No. 2/2006 issued by AFCD.

4.7 Topographic Survey and Basic Tree Data

- 4.7.1 The Topographic Survey was carried out by a qualified Land Surveyor. Measurements of tree dimensions and locations of existing trees within Tree Survey Area were recorded in this application.
- 4.7.2 Tree number is assigned for each surveyed tree and is clearly marked on site with an identity label showing the tree number. Position of each tree is plotted on the topographic plans.
- 4.7.3 All trees are identified by genus and species or in some cases by genus only if full identification is not possible. Where

necessary, identification is verified / assisted by Hong Kong Herbarium published by AFCD.

- 4.7.4 Measurements of trees include DBH, overall height and average crown spread of each tree.
- 4.7.5 The following information on each tree are included in the Tree Assessment Schedule:
 - a. Tree Number;
 - b. Tree Species (Scientific / Botanical name and Chinese name);
 - c. Top of Soil Level Above Root Collar (in mPD);
 - d. Overall Height (in metres);
 - e. DBH (in millimetres);
 - f. Average Crown Spread (in metres);
 - g. Amenity Value (Good/ Fair/ Poor);
 - h. Form (Good/Fair/Poor);
 - i. Health Condition (Good/ Fair/ Poor/ Dead);
 - j. Structural Condition (Good/ Fair/ Poor);
 - k. Suitability for Transplanting (High/ Med/ Low);
 - Conservation Status (indicates rarity and protection status under relevant ordinances of a species in Hong Kong);
 - m. Proposed Treatment (Retain/Transplant/Fell);
 - n. Justification for Felling; and
 - o. Other Remarks.

4.8 The tree survey and tree treatment plans will include the following details:

- 4.8.1 Tree locations, tree identification numbers, tree crown spread, adjacent ground levels and above-ground features;
- 4.8.2 Trees to be retained, transplanted within the site, transplant off-site or felled presented in different colours;
- 4.8.3 An overlay of site formation plan showing the proposed layout of the development, extent of excavation works, proposed utilities, vehicular access, the formation or finished levels as well as the extent of temporary works and facilities (e.g. site offices storage areas, etc.) so as to ensure that the TPZs should not be encroached upon or affected by the works;
- 4.8.4 Highlight TPZs around all trees proposed for retention. Assessment should be made on the potential impacts of building foundations and other structures on retained trees;

- 4.8.5 Where appropriate, a cross-section showing the proposed architectural and engineering features around trees proposed to be retained should be provided to show that sufficient vertical and horizontal space can be reserved for TPZs. On the other hand, for trees proposed to be felled due to changes in level, a cross-section showing the original and finished levels should be provided if the features that may affect retention of trees cannot be shown on a plan;
- 4.8.6 The proposed permanent and temporary works have been superimposed on the existing topographic survey and all affected trees are assessed with recommended treatments. Trees not affected by the temporary or permanent construction works will be retained and protected throughout the construction period. Trees conflicting with the works are assessed on their suitability for successful transplantation. Trees not suitable for transplanting are proposed to be felled (with adequate justification).

4.9 Assessment on Suitability for Transplanting

- 4.9.1 No trees within the Tree Survey Area are to be unnecessarily felled or pruned. In the event that tree removal is unavoidable, the affected trees may be treated as follows (in order of preferred treatments):
 - 1) Transplanted to permanent recipient locations within the site;
 - 2) Transplanted to permanent recipient locations off-site; and
 - 3) Felled.

This hierarchy of treatment of affected trees makes reference to the LAO PN 2/2020. Only trees considered to have a high or medium "suitability for transplanting", will be recommended to be transplanted.

- 4.9.2 A successfully transplanted tree must:
 - 1) Remain in good health throughout and after the transplantation process;
 - 2) Remain structurally stable throughout and after the transplantation process; and
 - 3) Present a low safety risk through out and after the transplantation process.
- 4.9.3 The assessment of the feasibility of successful transplantation of a tree is based on the following factors:
 - a. **The size of the tree**: Generally the larger and older a tree is, the more difficult it is to transplant successfully. A large and over mature tree is less able to recover from root and crown pruning.;
 - b. **The health of the tree**: If the tree is already in poor health it is highly unlikely to withstand the stress of transplantation. By the same token, a tree that has a balanced form and is in good health has a higher feasibility of successful transplantation.;
 - c. **The survival rate of that particular species**: Some species are much more tolerant of the stress of transplantation than others. The assessment of the survival rate of a species after transplantation is based on the observed performance of that species in previous transplantation exercises. Species with insufficient transplantation data will be assessed together with other factors such as health, size and location of the tree.
 - d. **Feasibility of root-ball preparation**: site topography, the proximity of above and below ground utilities and whether the tree is crowded by other trees are all major factors determining the feasibility of preparing a sufficiently large root-ball for successful transplantation;
 - e. **Root Extent**: A tree growing in rocky ground, surrounded by hard paving or which is crowded by other trees is likely to have a distorted root system seriously reducing the feasibility of preparing a sufficiently large root-ball for successful transplantation;
 - f. **Accessibility**: large machinery is required to lift trees so steep slopes and rocky terrains drastically reduce the feasibility of successful transplantation.

g. **Maximum width and height of transplantable trees**: Due to the limitation of vehicle size, the maximum final width and length of trees (as measured from ground level) to be transplanted off site must not exceed 3m and 8m respectively. Based on the current practice to allow canopy pruning to only 1/4 of the existing tree crown, this means any tree with an existing canopy width of over 4m cannot be proposed for transplanting off site. Such trees will be considered to be transplanted to other permanent locations within the current site boundary.

4.10 Criteria for Recommended Treatment of Existing Trees

- 4.10.1 The preferred option for all trees is to be retained in-situ unless they pose a threat to the public or they are undesirable species (e.g. Leucaena leucocephala), or they genuinely conflict with the Project. A recommendation to transplant a tree will be made under conditions such as the following:
 - a. It is impossible to retain the tree in-situ due to the unavoidable proximity of proposed retaining walls, viaducts, roads or other structures, including their foundations, which pose major conflicts with its branches, root system or the tree in its entirety.
 - b. It is impossible to retain the tree in-situ due to changes to surrounding ground levels on a macro scale which affect the ground water table thereby severely stressing the tree or where large areas of proposed cut and fill unavoidably affect the tree.
 - c. Transplantation of the tree is feasible.
 - d. The Overall Amenity Value of the tree justifies transplanting.
 - e. Replacement with a new nursery grown specimen of the same species and comparable size is deemed less cost effective than transplanting, particularly in the case of common pioneer or cultivated species.
- 4.10.2 The felling of a tree will be justified by criteria such as the following:
 - a. No irreplaceable, rare or protected species (under Forestry Regulation Cap.96) is felled.
 - b. The felling would not cause a serious loss of species diversity in the subject area.
 - c. A genuine development or traffic need exists, which cannot be reasonably overcome.
 - d. Adequate compensatory tree planting is to be implemented.
 - e. The tree is not an unusually large or fine example of its species.
 - f. The tree is in poor condition or is unsuitable for transplanting due to its low survival potential.
 - g. The tree is not in the list of Champion Trees (Ref: Jim, C.Y. 1994. Champion Trees in Urban Hong Kong. Urban Council, Hong Kong) nor Unusual Trees (Ref: AFCD's Register of Unusual Trees in Rural Areas).
 - h. The tree is neither a significant landmark tree and does not have special Fung Shui or cultural significance.
 - i. Existing site conditions are such that transplantation would be hazardous to the public.
 - j. The tree is dead, hazardous or diseased.
 - k. A tree that has been rendered unstable because of the removal of neighbouring trees may be considered for felling.
 - I. The tree possesses invasive habits.

4.11 Tree Photography

- 4.11.1 Photographs comply with the following:
 - a. Where practical and safety considerations allow, the whole form of an individual tree will be shown;
 - b. Where obstacles are present (e.g. structures, other trees / vegetations nearby, dense climber covering, etc.), the main tree trunk(s) from the base level to at least 3m in height will be shown;
 - c. Where special features at the trunk base are present (e.g. exposed roots, special rooting medium, etc.), the photograph of the tree is taken to highlight the relevant features while showing as much of the tree structure as possible.

4.12 References

Ordinances, Circulars and Practice Notes

The Law of Hong Kong Chapter 96. Forest and Countryside Ordinance

The Law of Hong Kong Chapter 586 Animals and Plants (Protection of Endangered Species) Ordinance

DEVB TCW No. 5/2020 Registration and Preservation of Old and Valuable Trees

DEVB TCW No. 4/2020 Tree Preservation

DEVB TCW No. 1/2018 Soft Landscape Provisions for Highway Structures

DEVB TCW No. 6/2015 Maintenance of Vegetation and Hard Landscape Features

LAO/LandsD Practice Note 2/2020 Tree Preservation and Removal Proposal for Building Development in Private Projects.

AFCD Conservation Practice Note No. 2 Measurement of Diameter at Breast Height (DBH)

AFCD Conservation Practice Note No. 3 The Use of Plant Names

Publications

HU, Q. et al (2003) Rare and Precious Plants of Hong Kong. AFCD, HKSAR Jim, C.Y. (1994). Champion Trees in Urban Hong Kong. Urban Council, Hong Kong. Leisure and Culture Services Department. Register of Old and Valuable Trees. Website: http://ovt.lcsd.gov.hk/ovt/

Webb, R. (1991). *Tree Planting and Maintenance in Hong Kong*. Standing Interdepartmental Landscape Technical Group, Hong Kong Government, Hong Kong.

GEO Publication No. 1/2011 Technical Guidelines on Landscape Treatment for Slopes, GEO, CEDD, HKSAR

4.13 Proposed Treatment of Existing Trees

- 4.13.1 **Affected Trees 51** nos. of existing trees within the Application Site boundary will be affected by the Proposed Development. The main species are *Macaranga tanarius var. tomentosa, Celtis sinensis, Albizia lebbeck, Ficus macrocarpa* and *Leucaena leucocephala*. These trees are mature, of poor to fair form, poor to fair health, and low to medium amenity value. Given their low amenity value, poor form and condition and low survival rate after transplanting, these trees are proposed for felling.
- 4.13.2 Self-seeded trees of undesirable species, such as *Leucaena leucocephala*, which would prevent natural succession of indigenous species, are not considered for retention or transplanting.

4.13.3 **Tree Figure** – A summary of proposed treatments to existing trees within the Application Site is as follows:

Table A.1 Summary of Existing Trees to be Affected

Existing Trees Surveyed	Sub-Total	
To be Retained	29 nos.	
To be Transplanted	0 no.	
To be Felled	51 nos.	
Total	80 nos.	

4.14 Compensatory Planting Proposal

- 4.14.1 With reference to LandsD LAO PN 2/2020, all trees felled within a private project must be compensated at a ratio of 1:1 by quantity. Due to limited space for growth of heavy standard trees, compensatory trees will consist of 32 nos. of heavy-standard sized trees with a mean girth of 0.10m and 19 nos. of whip trees located at the sloped area near main entrance. Therefore, a minimum total of **51** nos. of compensatory trees will be planted and these will form part of the amenity tree planting as part of the landscape proposals.
- 4.14.2 Heavy standard trees shall have the following characteristics:
 - a. A sturdy straight stem at least 2000mm high from the root collar to the lowest branch,
 - b. Stem diameter exceeding 75mm but not exceeding 125mm measured at a height of 1m from the root collar,
 - c. According to species, either a well-balanced branching head or a well-defined straight and upright leader with branches growing out from the stem with reasonable symmetry, and a minimum length of 800mm,
 - d. Total height above the root collar exceeding 3500mm but not exceeding 5000mm,
 - e. A rootball at least 750mm in diameter and 400mm deep,
 - f. When container grown trees are required, grown in a container at least 750mm in diameter and 600mm deep, and
 - g. Free of any pest, non-symbiotic fungi, disease and parasitic plants.
 - 4.14.3 Whip trees shall have the following characteristics:
 - a. Aged between 2 3 years old;
 - b. A single central stem and elementary branch system;
 - c. A well-developed vigorous root system;
 - d. Total height above soil level exceeding 900 mm but not exceeding 2000 mm;
 - e. Grown and supplied in a container not less than 125 mm in diameter and 200 mm deep, and
 - f. Free from any kind of pest, fungi, disease and parasitic plants.

5 LANDSCAPE DESIGN

5.1 The Landscape Design has been developed to:

- (i) Create a landscape character commensurate with the specific site conditions of the Proposed Development;
- (ii) Ensure the landscape character is consistent with the overall design language and aesthetic of the architectural elements:
- (iii) Ensure the Proposed Development is sensitively integrated into the surrounding areas via naturalistic interface treatments such as additional double-row tree planting along the northern site boundary;
- (iv) Enhance visual amenity of the Proposed Development through landscape treatment such as an additional continuous street tree planting (located north of the natural hill covered with dense woodland located adjacent to the southern boundary of the Application Site);
- (v) Create suitable outdoor spaces for passive recreational activities; and
- (vi) Promote the use of indigenous plant species throughout the landscape and to minimize the use of ornamental species to feature areas unless the species is found naturally in Hong Kong.
- 5.1.1 Since there is justifiable hardship in creating a pedestrian footpath alongside the vehicular access and EVA, it is proposed that the pedestrian route shall be shared within this limited and controlled roadway. Drop-kerbs shall be implemented in order to ensure that Barrier-Free Access is achieved in this area as well across the entire length of the continuous pedestrian route.
 - Because the occurrence of emergency events is extremely limited, the use of the EVA as a pedestrian zone is deemed as feasible. In the unlikely event that such an emergency requires the use of the EVA, it is proposed that the property management can alert resident and users by way of sirens or signal lights to clear the EVA route.
- 5.1.2 Furthermore, bamboo is proposed to be planted within narrower planting areas where privacy is required.

5.2 External Functions

- 5.2.1 **Activity Area** A communal courtyard space located to the south of proposed Dining/Multi-purpose room. This protected external area in which residents can gather for discussion, exercise and fresh air.
- 5.2.2 **Internal Driveway** Extensive soft landscaping is intended to generally enhance and provide identity to the interior streetscape. The arrival road will contain ornamental flowering shrubs and trees along the pedestrian footpaths to provide an attractive setting. The planting will provide color and texture to the streetscape and help soften the appearance of the built forms.
- 5.2.3 Peripheral Planting An enhanced natural green buffer is proposed to be extended to address the entire length of the northern and southern site boundary. This green buffer shall be comprised of dense vegetation with high screening characteristics in the form of a row of trees with a bamboo planting layer wherever possible; without jeopardizing the continuity of the proposed and existing pedestrian footpaths. Planting will consist of native trees and shrubs to create a dense green buffer as listed in Table A.2 & Refer to Figure A.3 Landscape Proposal

5.3 Landscape Hardworks Schedule – General landscape hardworks elements and materials are as follows:

Table A.2 General Landscape Hardworks Elements and Materials

Area/ Location	Landscape Hardworks		
Main Entrance and Driveway	Vehicular road surface – AGT/ or similar; Entrance paving – natural granite/ or similar; Pedestrian footpath – natural granite/ or similar; Kerb/ Planter – precast concrete kerb;		
Activity Courtyard	Pavement – Homogenous Tile/ or similar; Kerb/ Planter – natural granite/ stone/ or		

5.4 Landscape Softworks Design

- 5.4.1 **Planting Strategy** Planting within the proposed development will comprise of a mix of native species selected to replicate the existing flora of the surrounding planting. Planting will consist of native trees and shrubs to create a dense green buffer as listed in **Table A.3**
- 5.4.2 **Plant Stock Sizes** Generally, "Heavy-standard" and "Whip" sized trees will be selected for new tree planting. The planting size of low shrubs will vary from 300mm to 600mm high whilst tall shrubs will be above 800 mm high. For groundcovers, 200 mm to 300 mm height will be provided.
- 5.4.3 Plant Spacing Plant spacing will vary according to the species and stock size selected and shall be subjected to design development. Trees will be located generally as indicated on the Figure A.3 Landscape Proposal and will be spaced at a minimum of 3-4m for heavy-standard trees while 1.5-2m for whip trees. Shrubs and groundcover plants will be spaced subject to the plant stock size but spacing shall ensure that an immediate overall foliage effect is achieved. Typically, the spacing for shrubs will be between 250 to 500 mm and for the ground covers, 150 to 250 mm.
- 5.4.4 **Planting Schedule** A palette of plant materials which are completely comprised of local native species is indicated in Table A.3:

Table A.3 Proposed Planting Palette

SPECIES	SIZE	SPACING
A) Planting within Proposed Development		
Trees		
Bauhinia x Blakeana *)	"Heavy Standard"	3-4m
Bischofia javanica *)	"Heavy Standard"	3-4m
Bridelia tomentosa*)	"Whip"	1.5-2m
Celtis sinensis *)	"Heavy Standard"	3-4m
Cinnamomum burmannii *)	"Heavy Standard"	3-4m
Cinnamomum camphora *)	"Heavy Standard"	3-4m
Elaeocarpus chinensis*)	"Whip"	1.5-2m
Ficus benjamina *)	"Heavy Standard"	3-4m
Lagerstroemia speciosa	"Heavy Standard"	3-4m
Liquidamber formosana *)	"Heavy Standard"	3-4m
Polyspora axillaris*)	"Whip"	1.5-2m
Sterculia lanceolata *)	"Heavy Standard"	3-4m
Hibiscus tiliaceus*)	"Heavy Standard"	3-4m
Sapium sebiferum*)	"Heavy Standard"	3-4m

Michelia chapensis*)	"Heavy Standard"	3-4m	
Adenanthera microsperma*)	"Heavy Standard"	3-4m	
Sapium sebiferum *)	"Heavy Standard"	3-4m	
Shrubs/ Groundcover			
Gordonia axillaris*)	Varies	Varies	
Ixora stricta*)	Varies	Varies	
Melastoma candidum*)	Varies	Varies	
Rhaphiolepis indica*)	Varies	Varies	
Rhodomyrtus tomentosa*)	Varies	Varies	
Rhapis excelsa*)	Varies	Varies	
Nephrolepis auriculata*)	Varies	Varies	
Rhaphiolepis indica*)	Varies	Varies	
Schefflera heptaphylla*)	Varies	Varies	

^{*)} Native species

Soil Depth – Sufficient soil depth and associated structural loading will be provided for all planting areas at grade or on structure. Depending on the types of planting, the minimum soil depths excluding drainage layers are:

 Tree
 1200 mm

 Shrub
 600 mm

 Groundcover
 300 – 600 mm

 Turf
 300 mm

- **5.6 Soil Drainage** Planters over structural areas shall be drained by proprietary PVC drainage cells, filter fabrics and outlet planter drains. On-grade planting shall be free-draining, and additional subsoil drains will be provided where necessary.
- **5.7 Irrigation Water Points** Sufficient irrigation water points at a maximum spacing of 40 m will be provided for all planting areas.
- **5.8** Barrier Free Access All landscape areas will be designed and detailed according to the current version of BD's Design Manual Barrier Free Access.
- **5.9 Boundary Fence** The entire property is dedicated exclusively for residents and hence will be surrounded by a 2.5m high proposed development fence wall. Grill fence wall design is proposed in most areas to reduce visual impact.
- **5.10 Landscape Maintenance** Landscape maintenance will be undertaken by an approved landscape maintenance company. A landscape maintenance manual shall be prepared to specify maintenance procedures required. A minimum of 12 months establishment period will be incorporated for all planting elements.

5.11 Landscape Area Provision

A comparison of the Ratio of hard-paved to Softscaped areas for both cases of the current site condition and the proposed development demonstrates that there is a small decrease in the greenery area for the site. Refer to the comparison listed in the below two tables.

5.11.1 **Greenery Provision (Existing Site Condition)** – The greenery area provision for the existing site condition is summarised as follows:

Table A.4 Greenery Area Provision (Existing Condition)

Description	Area (approx. m²)	
Application Site Area	2,950	
Existing Site Greenery Coverage	1,371.90 (Approx. 46%)	
Existing Hard-Paved Coverage	1,615.60 (Approx. 54%)	

5.11.2 **Greenery Provision (Proposed Development)** – The greenery area provision for the proposed development is summarised as follows:

Table A.5 Greenery Area Provision (Proposed Development)

Description	Area (approx. m²)
Application Site Area	2,950
Proposed Site Greenery Coverage	887.00
Proposed Hard-Paved Coverage (Includes New Buildings)	2,063 (Approx. 70%)

APPENDIX A – LANDSCAPE PLANS

- A.1 Existing Conditions Tree Survey
- A.2 Tree Strategy Overlay of Proposed Development
- A.3 Landscape Proposal -Tree Compensation and New Green Ratio

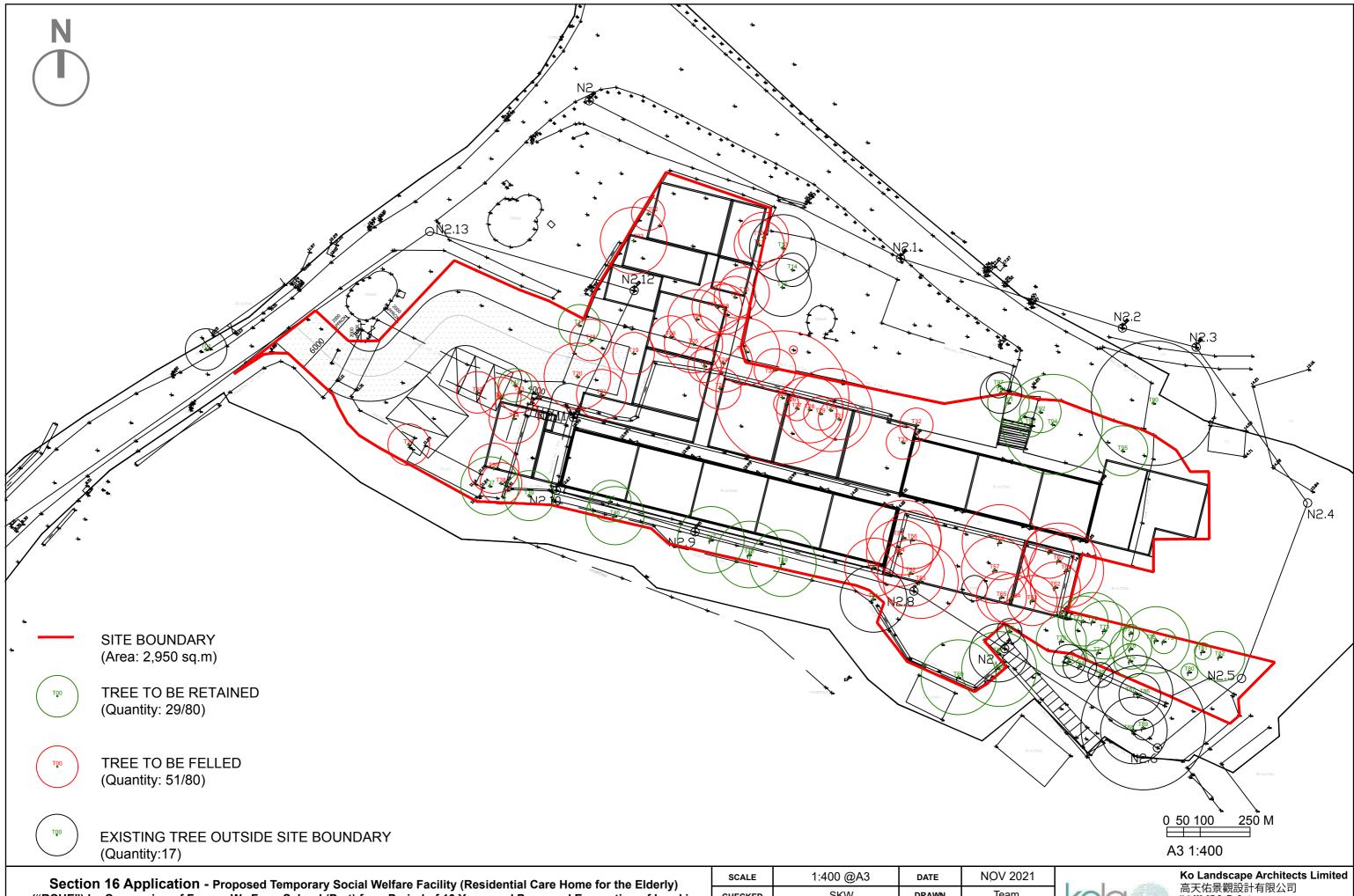


Existing Condition – Tree Survey and Green Ratio

SCALE	1:400 @A3	DATE	NOV 2021	
CHECKED	SKW	DRAWN	Tea	am
FIGURE NO.	FIGURE	A.1	REV.	



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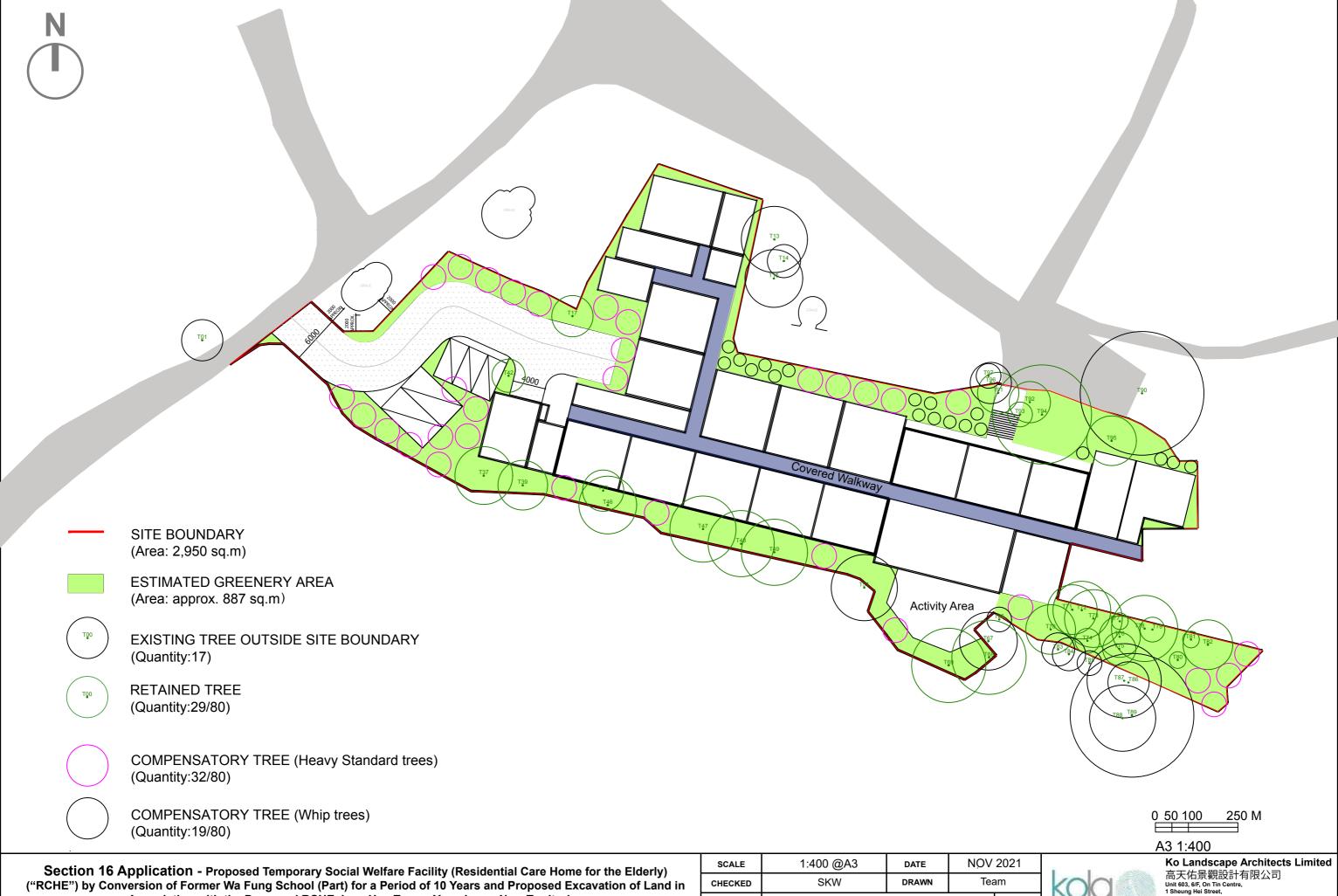


Tree Strategy – Overlay of Proposed Development

SCALE	1:400 @A3	DATE	NOV	2021
CHECKED	SKW	DRAWN	Tea	am
FIGURE NO.	FIGURE	REV.		
FIGURE NO.				_



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Landscape Proposal – Tree Compensation and New Green Ratio

SCALE	1:400 @A3	DATE	NOV	2021
CHECKED	SKW	DRAWN	Tea	am
FIGURE NO.	FIGURE	A.3	REV.	



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APPENDIX B - SITE PHOTO RECORDS

B.1 – **B10** Existing Site Condition

B.11 Tree Survey Photos

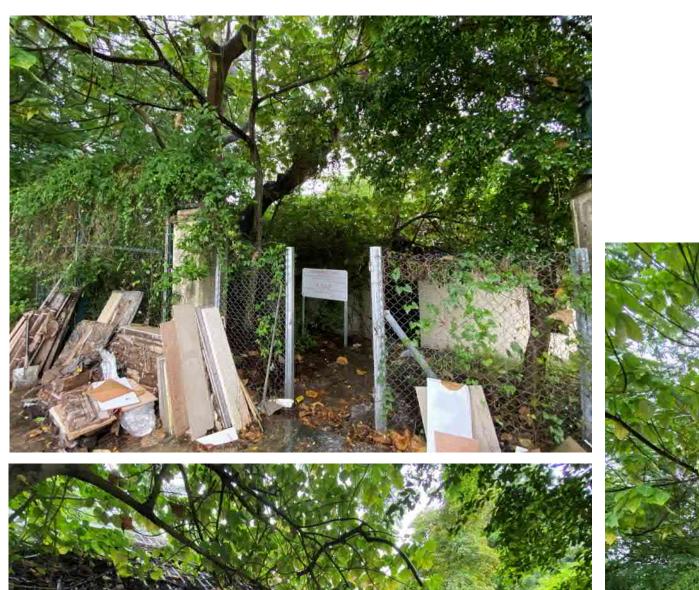








Figure B.1: Existing Site Condition (27th August 2021)



Figure B.2: Existing Site Condition (27th August 2021)



Figure B.3: Existing Site Condition (27th August 2021)



Figure B.4: Existing Site Condition (27th August 2021)

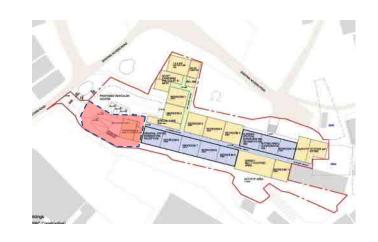




Figure B.5: Existing Site Condition (27th August 2021)



Figure B.6: Existing Site Condition (27th August 2021)



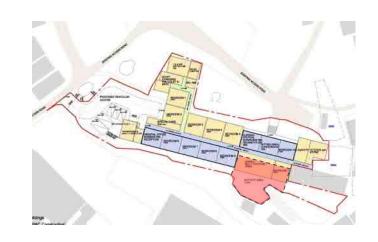






Figure B.7: Existing Site Condition (27th August 2021)

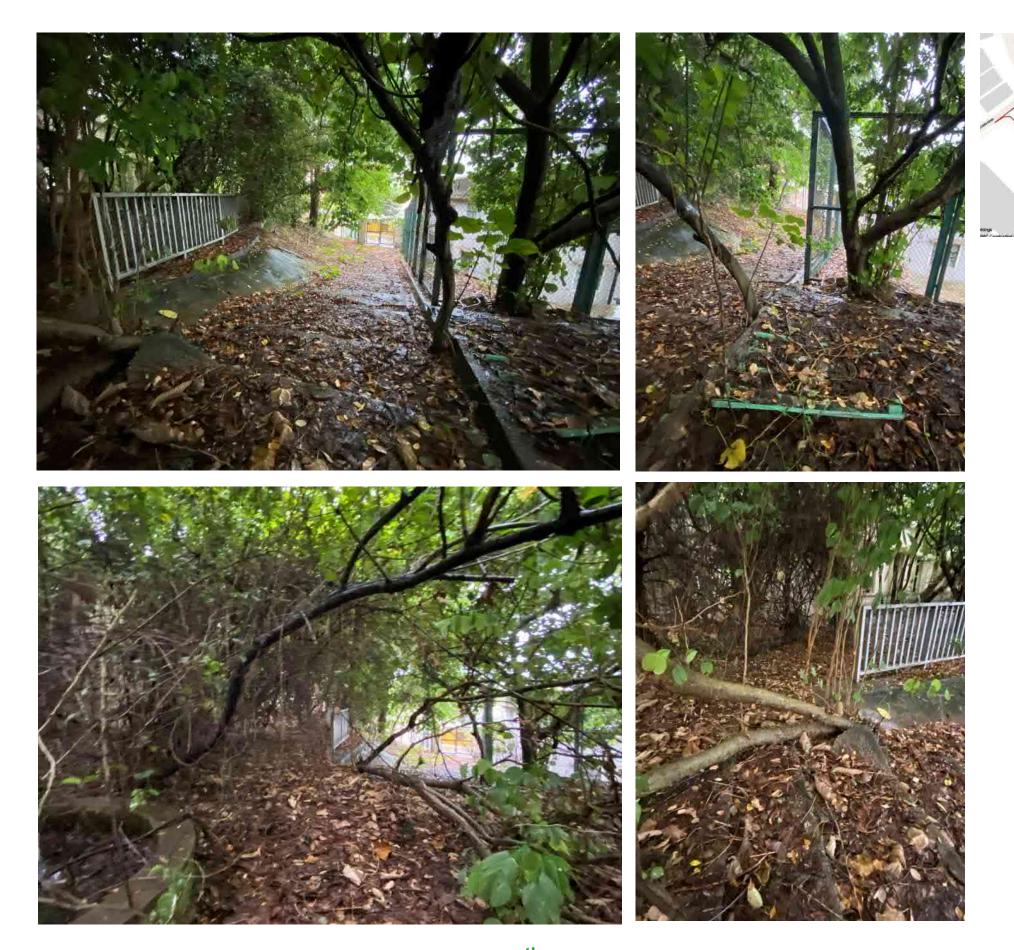


Figure B.8 : Existing Site Condition (27th August 2021)



Figure B.9: Existing Site Condition (27th August 2021)



T1 - Lower Trunk and Ground Condition



T1 - Overview



T1A - Lower Trunk and Ground Condition



T1A - Overview



T2 - Lower Trunk and Ground Condition



T2 - Overview



T3 - Lower Trunk and Ground Condition



T3 - Overview





T4 - Lower Trunk and Ground Condition

T4 - Overview





T5 - Lower Trunk and Ground Condition

T5 - Overview



T6 - Lower Trunk and Ground Condition



T6 - Overview



T7 - Lower Trunk and Ground Condition



T7 - Overview





T8 - Lower Trunk and Ground Condition

T8 - Overview





T9 - Lower Trunk and Ground Condition

T9 - Overview



T10 - Defect - Exposed Dead Wood



T10 - Lower Trunk and Ground Condition



T10 - Overview



T11 - Lower Trunk and Ground Condition

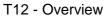




T11 - Overview

T12 - Lower Trunk and Ground Condition







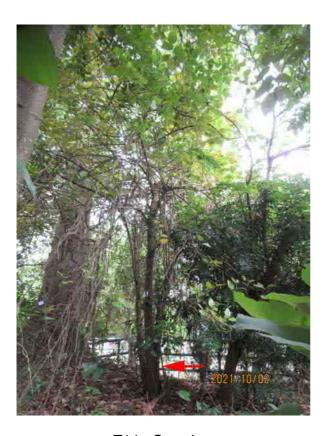
T13 - Lower Trunk and Ground Condition



T13 - Overview



T14 - Lower Trunk and Ground Condition



T14 - Overview



T15 - Lower Trunk and Ground Condition



T15 - Overview



T16 - Lower Trunk and Ground Condition



T16 - Overview



T17 - Lower Trunk and Ground Condition



T17 - Overview



T18 - Lower Trunk and Ground Condition



T18 - Overview



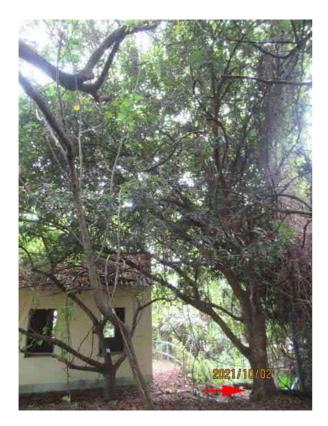
T19 - Lower Trunk and Ground Condition



T19 - Overview



T20 - Lower Trunk and Ground Condition



T20 - Overview



T21 - Lower Trunk and Ground Condition





T21 - Overview

T22 - Lower Trunk and Ground Condition



T22 - Overview



T23 - Lower Trunk and Ground Condition



T23 - Overview



T24 - Lower Trunk and Ground Condition



T24 - Overview



T25 - Lower Trunk and Ground Condition





T25 - Overview

T26 - Lower Trunk and Ground Condition



T26 - Overview

T27 - Lower Trunk and Ground Condition



T27 - Overview



T28 - Lower Trunk and Ground Condition



T28 - Overview



T29 - Lower Trunk and Ground Condition



T29 - Overview



T30 - Lower Trunk and Ground Condition



T30 - Overview



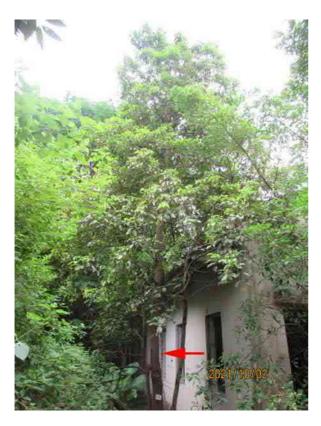
T31 - Lower Trunk and Ground Condition





T31 - Overview

T32 - Lower Trunk and Ground Condition



T32 - Overview



T33 - Lower Trunk and Ground Condition



T33 - Overview



T34 - Lower Trunk and Ground Condition



T34 - Overview



T35 - Lower Trunk and Ground Condition





T35 - Overview

T36 - Lower Trunk and Ground Condition



T36 - Overview



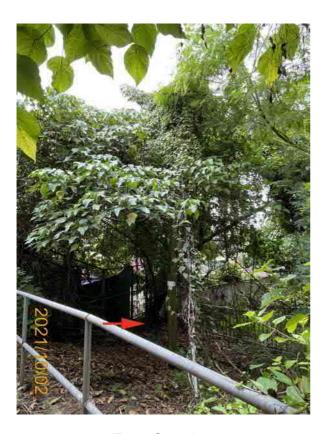
T37 - Lower Trunk and Ground Condition



T37 - Overview



T38 - Lower Trunk and Ground Condition



T38 - Overview



T39 - Lower Trunk and Ground Condition



T39 - Overview



T40 - Lower Trunk and Ground Condition



T40 - Overview



T41 - Lower Trunk and Ground Condition



T41 - Overview



T42 - Lower Trunk and Ground Condition



T42 - Overview



T43 - Lower Trunk and Ground Condition





T43 - Overview

T44 - Lower Trunk and Ground Condition



T44 - Overview



T45 - Lower Trunk and Ground Condition



T45 - Overview



T46 - Lower Trunk and Ground Condition



T46 - Overview



T47 - Lower Trunk and Ground Condition



T47 - Overview



T48 - Lower Trunk and Ground Condition



T48 - Overview



T49 - Lower Trunk and Ground Condition



T49 - Overview



T50 - Lower Trunk and Ground Condition



T50 - Overview



T51 - Lower Trunk and Ground Condition



T51 - Overview



T52 - Lower Trunk and Ground Condition



T52 - Overview



T53 - Lower Trunk and Ground Condition



T53 - Overview



T54 - Lower Trunk and Ground Condition



T54 - Overview



T55 - Lower Trunk and Ground Condition



T55 - Overview



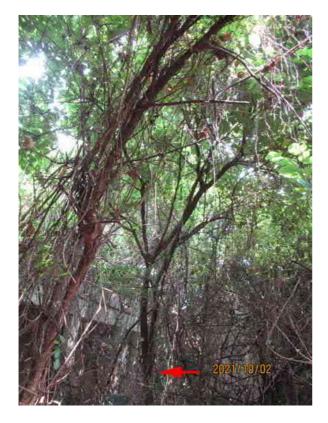
T56 - Lower Trunk and Ground Condition



T56 - Overview



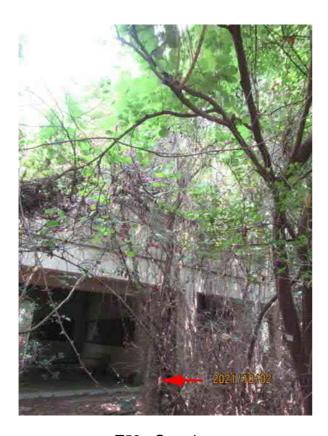
T57 - Lower Trunk and Ground Condition



T57 - Overview



T58 - Lower Trunk and Ground Condition



T58 - Overview



T59 - Lower Trunk and Ground Condition





T59 - Overview

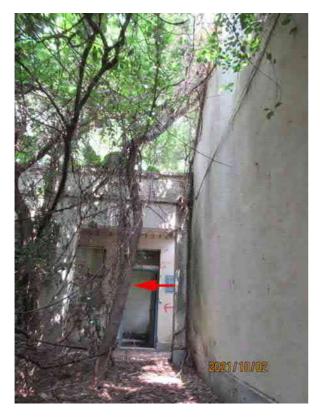
T60 - Lower Trunk and Ground Condition



T60 - Overview



T61 - Lower Trunk and Ground Condition





T61 - Overview

T62 - Overview (crown condition)



T62 - Overview (lower trunk and ground condition)



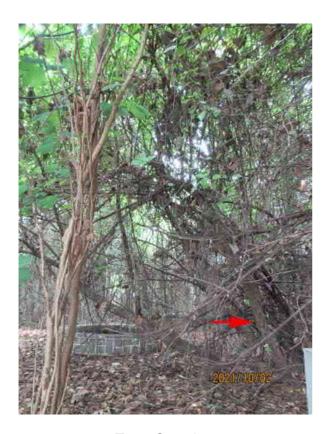
T63 - Lower Trunk and Ground Condition



T63 - Overview



T64 - Lower Trunk and Ground Condition



T64 - Overview



T65 - Lower Trunk and Ground Condition



T65 - Overview

T66 - Defect - Broken at Root Crown



T66 - Lower Trunk and Ground Condition

T66 - Overview



T67 - Lower Trunk and Ground Condition



T67 - Overview



T68 - Overview (crown condition)



T68 - Overview (lower trunk and ground condition)



T69 - Lower Trunk and Ground Condition



T70 - Lower Trunk and Ground Condition

T69 - Overview



T70 - Overview



T71 - Lower Trunk and Ground Condition



T71 - Overview



T72 - Lower Trunk and Ground Condition



T72 - Overview



T73 - Lower Trunk and Ground Condition

T73 - Overview



T74 - Defect - Dieback



T74 - Lower Trunk and Ground Condition



T74 - Overview



T75 - Lower Trunk and Ground Condition



T75 - Overview



T76 - Lower Trunk and Ground Condition





T76 - Overview

T77 - Lower Trunk and Ground Condition



T77 - Overview



T78 - Lower Trunk and Ground Condition





T78 - Overview

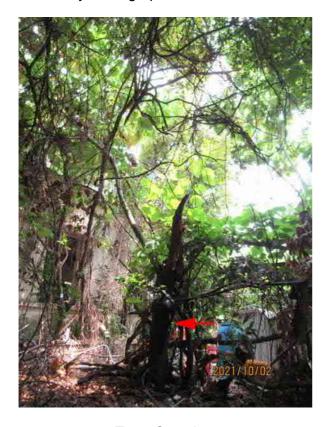
T79 - Lower Trunk and Ground Condition



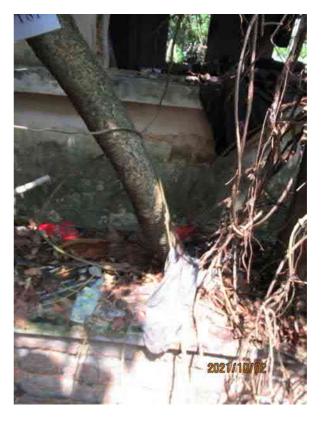
T79 - Overview



T80 - Defect - Leader Broken



T80 - Overview



T81 - Lower Trunk and Ground Condition



T81 - Overview



T82 - Defect - Leader Broken



T82 - Lower Trunk and Ground Condition



T82 - Overview



T83 - Lower Trunk and Ground Condition



T83 - Overview



T84 - Lower Trunk and Ground Condition



T84 - Overview



T84 - Overview (2)



T85 - Lower Trunk and Ground Condition



T85 - Overview



T86 - Defect - Dead Trunk



T86 - Lower Trunk and Ground Condition



T86 - Overview



T87 - Lower Trunk and Ground Condition



T87 - Overview



T88 - Lower Trunk and Ground Condition



T88 - Overview







T89 - Overview





T90 - Crown Condition

T90 - Lower Trunk and Ground Condition





T90 - Main Branch Condition

T90 - Overview





T90 - Overview (2)



T91 - Lower Trunk and Ground Condition



T91 - Overview



T92 - Lower Trunk and Ground Condition



T92 - Overview



T93 - Lower Trunk and Ground Condition



T93 - Overview



T94 - Crown Condition



T94 - Lower Trunk and Ground Condition

T94 - Main Branch Condition



T94 - Main Branch Condition (2)



T94 - Overview



T95 - Lower Trunk and Ground Condition



T95 - Overview



T96 - Lower Trunk and Ground Condition



T96 - Overview



T97 - Defect - Leader Broken

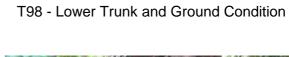


T97 - Lower Trunk and Ground Condition





T97 - Overview





T98 - Overview



T99 - Defect - Cavity at Root Crown



T99 - Lower Trunk and Ground Condition



T99 - Overview



T100 - Lower Trunk and Ground Condition



T100 - Overview



T101 - Lower Trunk and Ground Condition



T101 - Overview



T102 - Lower Trunk and Ground Condition



T102 - Overview



T103 - Defect - Decay on Trunk



T103 - Lower Trunk and Ground Condition



T103 - Overview



T104 - Lower Trunk and Ground Condition



T104 - Overview

S16 Application for Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE,

Lam Hau Tsuen, Yuen Long, New Territories

LANDSCAPE DESIGN PROPOSAL

APPENDIX C – TREE ASSESSMENT SCHEDULE

C.1 Tree Assessment Schedule

Tree Assessment Schedule

Contract No.:

Location:

Tree Survey for the Proposed Elderly Home at Former Wa Fung School, Lam Hau

Date of Inspection 02/10/2021 Surveyed by: Wong Yun Keung (ISA CA No. HK-0007BUM)

		Chinese	Height		Crown			Health	Structural		Suitab	ility for Transplanting	Conservation		nendation	Department to provide	
Tree No.	Scientific Name	Name	(m)	DBH (mm)	Spread (m)	above root collar	Form	Condition	Condition	(High, Medium, Low)	(High, Medium, Low)	Remarks	status	(Retain/Transplant /FeII)	Justification for tree felling	expert advice to LandsD	Additional Remarks
T2	Bridelia tomentosa	土蜜樹	4	150	4	16.20	Poor	Fair	Fair	Low	Low	a, c, f	-	F	A, C, D		Leaning, codominant trunks, branch conflict with fence
Т3	Macaranga tanarius var. tomentosa	血桐	6	290	8	16.25	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Multiple trunks, forked, branch conflict with fence
Т4	Celtis sinensis	朴樹	6	180	7	16.19	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Multiple trunks, vined, codominant trunks
T5	Macaranga tanarius var. tomentosa	血桐	7	160	7	16.09	Poor	Fair	Poor	Low	Low	a, b, c, f	-	F	A, C, D		Leaning, branch conflict with fence
Т6	Ficus variegata var. chlorocarpa	青果榕	8	159	5	16.09	Poor	Fair	Fair	Low	Low	a, c, f	-	F	A, C, D		Leaning, branch conflict with fence
Т7	Bombax ceiba	木棉	9	207	4	16.31	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Root restricted by slab, shared root zone with other trees
Т8	Bombax ceiba	木棉	9	207	4	16.29	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Root restricted by slab, shared root zone with other trees
Т9	Celtis sinensis	朴樹	7	110	5	16.32	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Sweeping trunk, shared root zone with other trees
T10	Macaranga tanarius var. tomentosa	血桐	7	127	6	16.35	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Exposed dead wood on trunk, shared root zone with other trees
T11	Albizia lebbeck	大葉合歡	5	111	6	16.40	Poor	Fair	Fair	Low	Low	a, c, f	-	F	A, C, D		Leaning, trunk conflict with fence
T12	Celtis sinensis	朴樹	5	160	6	16.44	Poor	Fair	Fair	Low	Low	a, c, f	-	F	A, C, D		Leaning, vined, codominant trunks, branch conflict with fence
T16	Celtis sinensis	朴樹	12	300	8	15.66	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Vined, root restricted by wall, trunk conflict with slab
T17	Morus alba	桑	5	130	5	15.71	Poor	Poor	Fair	Low	Low	a, c, f	-	R			Leaning, heavily vined
T18	Bridelia tomentosa	土蜜樹	7	191	5	15.54	Poor	Poor	Poor	Low	Low	a, c, f	-	F	A, C, D		Dying tree, heavily vined, dead branches
T19	Gleditsia fera	華南皂莢	8	480	8	15.78	Poor	Poor	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Heavily vined
T20	Dimocarpus longan	龍眼	9	410	8	14.80	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Vined, codominant main branches
T21	Macaranga tanarius var. tomentosa	血桐	7	250	9	14.72	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Forked, vined
T22	Macaranga tanarius var. tomentosa	血桐	8	160	7	14.09	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Forked
T23	Ficus microcarpa	細葉榕	7	130	4	14.35	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Leaning, vined, root restricted by slab, surface roots
T24	Liquidambar formosana	楓香	13	480	7	14.59	Fair	Fair	Fair	Medium	Low	b, c	-	F	A, C, D		Tree pit, root restricted by wall
T25	Platycladus orientalis	側柏	15	600	12	14.27	Fair	Fair	Fair	Medium	Low	b, c, d	-	F	A, C, D		Codominant trunk, epiphytes, shared root zone with other trees
T26	Melia azedarach	苦楝	6	127	7	14.11	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Leaning, shared root zone with other trees
T27	Ficus variegata var. chlorocarpa	青果榕	5	111	3	14.10	Fair	Fair	Fair	Medium	Low	b, c	-	F	A, C, D		Shared root zone with other trees
T28	Melia azedarach	苦楝	11	370	11	14.11	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Forked, codominant main branches, shared root zone with other trees
T29	Ficus variegata var. chlorocarpa	青果榕	8	220	6	14.11	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Shared root zone with other trees
Т30	Platycladus orientalis	側柏	15	550	10	14.10	Poor	Fair	Fair	Low	Low	a, b, c, d, f	-	F	A, C, D		Leaning, codominant trunk, shared root zone with other trees
T31	Macaranga tanarius var. tomentosa	血桐	5	170	6	14.08	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Leaning, multiple trunks, surface roots, shared root zone with other trees
T32	Bischofia javanica	秋楓	7	159	4	14.24	Fair	Fair	Fair	Medium	Low	b, c	-	F	A, C, D		Root restricted by foundation
Т33	Ficus microcarpa	細葉榕	5	127	4	14.08	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Codominant trunks, root restricted by foundation
T34	Sterculia lanceolata	假蘋婆	6	150	5	14.94	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Codominant trunks, root restricted by slab, branch conflict with fence
T35	Macaranga tanarius var. tomentosa	血桐	8	420	5	11.30	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Unbalanced form, forked, vined
T36	Bombax ceiba	木棉	9	175	4	11.38	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Vined, root restricted by kerb
T37	Michelia x alba	白蘭	14	480	7	11.35	Poor	Fair	Fair	Low	Low	a, b, c, f	-	R			Leaning, vined, root restricted by wall, shared root zone with other trees
T38	Macaranga tanarius var. tomentosa	血桐	7	286	5	11.56	Fair	Fair	Fair	Medium	Low	b, c	-	F	A, C, D		Leaning, forkedd, vined, root restricted by wall, shared root zone with other trees
T39	Ficus hispida	對葉榕	6	170	6	12.18	Poor	Fair	Fair	Low	Low	a, b, c, f	-	R			Leaning, heavily vined, root restricted by plinths
T40	Bauhinia sp.	羊蹄甲屬	10	320	5	12.01	Poor	Poor	Poor	Low	Low	a, c, f	-	F	A, C, D		Partially uprooted, heavily vined, abnormal bark crack on trunk, trunk conflict with fence
T41	Macaranga tanarius var. tomentosa	血桐	7	207	5	12.29	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Leaning, heavily vined, root restricted by wall
T42	Leucaena leucocephala	銀合歡	8	115	4	12.37	Poor	Poor	Fair	Low	Low	a, b, c, f, g	-	F	В		Undesirable species, leaning, root restricted by slab, trunk conflict with fence

Tree Assessment Schedule

Contract No.:

Location: Tree Survey for the Proposed Elderly Home at Former Wa Fung School, Lam Hau

Date of Inspection 02/10/2021 Surveyed by: Wong Yun Keung (ISA CA No. HK-0007BUM)

		Chinese	Height		Crown	Top of soil level	5	Health	Structural	Amenity Value	Suitab	ility for Transplanting	- Conservation		nendation	Department to provide	
Tree No.	Scientific Name	Name	(m)	DBH (mm)	Spread (m)	above root collar	Form	Condition	Condition	(High, Medium, Low)	(High, Medium, Low)	Remarks	status	(Retain/Transplant /Fell)	Justification for tree felling	expert advice to LandsD	
T43	Macaranga tanarius var. tomentosa	血桐	7	140	6	12.42	Poor	Poor	Fair	Low	Low	a, c, f	-	F	A, C, D		Leaning, heavily vined
T44	Leucaena leucocephala	銀合歡	7	150	6	12.52	Poor	Poor	Poor	Low	Low	a, c, f, g	-	F	В		Undesirable species, partially uprooted, heavily vined, codominant trunks, trunk conflict with railing
T45	Macaranga tanarius var. tomentosa	血桐	5	95	5	13.96	Poor	Poor	Fair	Low	Low	a, b, c, f	-	R			Leaning, vined, root restricted by wall & planter
T46	Leucaena leucocephala	銀合歡	7	127	6	13.46	Poor	Poor	Fair	Low	Low	a, b, c, f, g	-	R			Undesirable species, leaning, vined, root restricted by foundation
T47	Macaranga tanarius var. tomentosa	血桐	8	250	7	13.90	Poor	Fair	Fair	Low	Low	a, b, c, f	-	R			Leaning
T48	Dimocarpus longan	龍眼	8	143	7	13.80	Poor	Fair	Fair	Low	Low	a, b, c, f	-	R			Leaning
T49	Dimocarpus longan	龍眼	9	250	7	13.82	Poor	Fair	Fair	Low	Low	a, b, c, f	-	R			Leaning
T50	Celtis sinensis	朴樹	8	150	4	14.34	Poor	Poor	Poor	Low	Low	a, b, c, f	-	F	A, C, D		Bending trunk, dieback, abnormal bark crack on trunk, root restricted by wall & planter
T52	Macaranga tanarius var. tomentosa	血桐	8	143	8	13.98	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Heavily vined
T53	Melia azedarach	苦楝	9	223	6	14.06	Poor	Poor	Fair	Low	Low	a, c, f	-	F	A, C, D		Leaning, heavily vined, main branch broken
T54	Macaranga tanarius var. tomentosa	血桐	8	127	4	13.96	Poor	Poor	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Leaning, heavily vined, shared root zone with other trees
T55	Bauhinia purpurea	紅花羊蹄甲	9	230	6	13.99	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Leaning, heavily vined, shared root zone with other trees
T56	Choerospondias axillaris	南酸棗	7	127	6	13.97	Poor	Poor	Fair	Low	Low	a, c, f	-	F	A, C, D		Leaning, heavily vined
T57	Bauhinia purpurea	紅花羊蹄甲	8	250	8	14.00	Poor	Poor	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Leaning, codominant main branches, heavily vined
T58	Albizia lebbeck	大葉合歡	9	220	7	14.10	Poor	Poor	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Heavily vined, root restricted by foundation
T59	Bauhinia purpurea	紅花羊蹄甲	6	127	6	13.99	Poor	Poor	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Leaning, tree crossing with T60, heavily vined, root restricted by foundation
T60	Albizia lebbeck	大葉合歡	9	220	9	14.01	Poor	Poor	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Tree crossing with T59, heavily vined, root restricted by foundation
T61	Acacia confusa	台灣相思	9	191	4	13.98	Poor	Poor	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Leaning, heavily vined, root restricted by foundation
T62	Macaranga tanarius var. tomentosa	血桐	3	127	7	13.96	Poor	Poor	Fair	Low	Low	a, b, c, f	-	F	A, C, D		Leaning, bent trunk, heavily vined
T63	Bombax ceiba	木棉	6	127	3	13.97	Poor	Poor	Fair	Low	Low	a, c, f	-	F	A, C, D		Heavily vined
T64	Ficus hispida	對葉榕	6	127	6	14.03	Poor	Poor	Fair	Low	Low	a, c, f	-	F	A, C, D		Leaning, heavily vined
T65	Macaranga tanarius var. tomentosa	血桐	6	159	6	13.97	Poor	Poor	Fair	Low	Low	a, c, f	-	F	A, C, D		Severely leaning, heavily vined
T68	Bauhinia purpurea	紅花羊蹄甲	9	310	9	13.35	Poor	Fair	Fair	Low	Low	a, b, c, f	-	R			Leaning, codominant trunks, root restricted by wall & u-channel
T69	Bauhinia purpurea	紅花羊蹄甲	9	210	8	13.56	Poor	Fair	Fair	Low	Low	a, b, c, f	-	R			Leaning, multiple trunks, codominant trunks, root restricted by wall
T70	Litchi chinensis	荔枝	6	190	6	13.95	Fair	Fair	Fair	Medium	Medium	-	-	R			-
T71	Albizia lebbeck	大葉合歡	7	111	3	14.29	Poor	Poor	Fair	Low	Low	a, b, c, f	-	R			Leaning, vined, root restricted by wall & planter
T72	Celtis sinensis	朴樹	7	240	7	14.33	Poor	Fair	Fair	Low	Low	a, b, c, f	-	R			Multiple trunks, root restricted by wall & planter
T73	Albizia lebbeck	大葉合歡	6	500	7	14.01	Poor	Poor	Poor	Low	Low	a, b, c, d, f	-	R			One dead trunk, severely leaning, root restricted by foundation
T74	Litchi chinensis	荔枝	6	180	3	13.98	Poor	Poor	Poor	Low	Low	a, c, f	-	R			Dying tree
T75	Litchi chinensis	荔枝	4	120	4	14.00	Poor	Poor	Fair	Low	Low	a, c, f	-	R			Vined
T76	Macaranga tanarius var. tomentosa	血桐	8	200	8	13.97	Poor	Poor	Poor	Low	Low	a, b, c, f	-	R			Partially uprooted, leaning, root restricted by foundation
T77	Albizia lebbeck	大葉合歡	6	110	2	14.27	Poor	Poor	Fair	Low	Low	a, b, c, f	-	R			Leaning, vined, root restricted by wall & planter
T78	Albizia lebbeck	大葉合歡	4	220	8	14.09	Poor	Poor	Poor	Low	Low	a, b, c, f	-	R			Severely leaning, heavily vined, root restricted by foundation, root zone shared with other trees
T79	Albizia lebbeck	大葉合歡	7	130	4	14.28	Poor	Poor	Fair	Low	Low	a, b, c, f	-	R			Severely leaning, heavily vined, root restricted by foundation, root zone shared with other trees
T80	Macaranga tanarius var. tomentosa	血桐	5	250	2	13.98	Poor	Poor	Poor	Low	Low	a, c, f	-	R			Vined, leader broken
T81	Albizia lebbeck	大葉合歡	4	100	2	14.54	Poor	Poor	Fair	Low	Low	a, b, c, f	-	R			Leaning, heavily vined, root restricted by wall & planter
T82	Celtis sinensis	朴樹	6	120	6	14.43	Poor	Poor	Fair	Low	Low	a, b, c, f	-	R			One broken trunk, heavily vined, root restricted by wall & planter
T91	Delonix regia	鳳凰木	10	200	5	16.00	Poor	Fair	Fair	Low	Low	a, b, c, f	-	R			Leaning, root restricted by foundation

Tree Assessment Schedule

Contract No.:

Tree Survey for the Proposed Elderly Home at Former Wa Fung School, Lam Hau Location:

Date of Inspection 02/10/2021 Surveyed by: Wong Yun Keung (ISA CA No. HK-0007BUM)

		Chinese	Hoight		Crown	Top of soil level		Health	Structural	Amenity Value	Suitab	ility for Transplanting	— Conservation	Recomm	nendation	Department to provide	
Tree No.	Scientific Name	Name	Height (m)	DBH (mm)	Spread (m)	above root collar	Form	Condition	Condition	(High, Medium, Low)	(High, Medium, Low)	Remarks	status	(Retain/Transplant /Fell)	Justification for tree felling	expert advice to LandsD	Additional Remarks
T92	Macaranga tanarius var. tomentosa	血桐	7	200	5	16.27	Poor	Fair	Fair	Low	Low	a, b, c, f	-	R			Broken old trunk, shared root zone with other trees
Т93	Macaranga tanarius var. tomentosa	血桐	6	180	5	15.95	Poor	Fair	Fair	Low	Low	a, b, c, f	-	R			Leaning, shared root zone with other trees
T94	Delonix regia	鳳凰木	14	1100	12	16.41	Fair	Fair	Fair	High	Low	b, c, d	pOVT	R			Codominanty main branches, root restricted by foundation, shared root zone with other trees
T95	Delonix regia	鳳凰木	15	1000	6	15.84	Fair	Fair	Fair	High	Low	b, c, d	pOVT	R			Vined, codominant trunks
T98	Dead tree	枯死樹木	9	550	7	14.82	-	-	-	-	-	-	-	F			-
T99	Platycladus orientalis	側柏	11	500	7	14.73	Poor	Poor	Poor	Low	Low	a, b, c, d, f	-	F	C, D		Heavily vined, cavity on root crown, shared root zone with other trees
T100	Celtis sinensis	朴樹	5	190	8	14.73	Poor	Poor	Fair	Low	Low	a, b, c, f	-	F	D		Leaning, heavily vined, shared root zone with other trees
T101	Ligustrum sinense	山指甲	4	111	3	14.46	Poor	Poor	Fair	Low	Low	a, c, f	-	F	A,		Heavily vined
T102	Macaranga tanarius var. tomentosa	血桐	6	130	4	14.04	Poor	Poor	Fair	Low	Low	a, b, c, f	-	F	A, C		Heavily vined, root restricted by slab
T103	Celtis sinensis	朴樹	4	200	5	13.60	Poor	Poor	Poor	Low	Low	a, c, f	-	F	A, C		Heavily vined, decay on trunk, trunk conflict with fence
T104	Ficus microcarpa	細葉榕	7	400	8	14.07	Poor	Fair	Fair	Low	Low	a, b, c, f	-	F	С		Leaning, root restricted by foundation

* Justification for tree felling:

In direct conflict with the proposed works

Common undesirable species that are characterised by their aggressive and invasive growing habits

Tree with poor health, structure or form

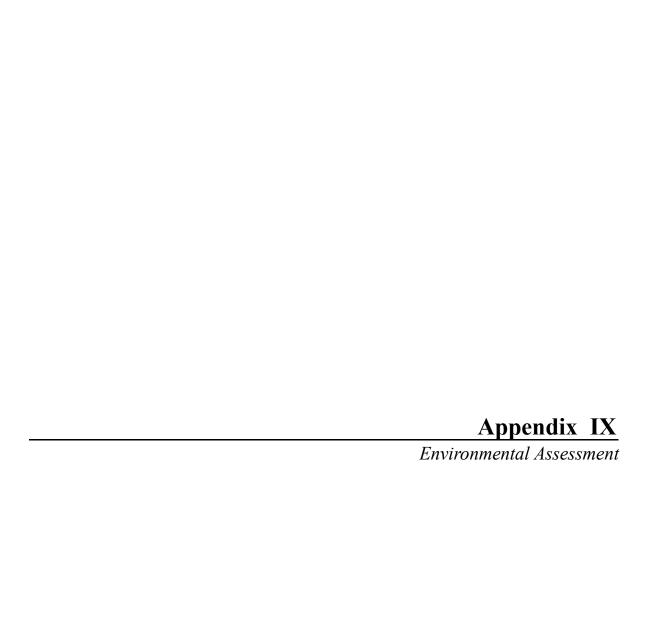
D Low amenity value

Low survival rate after transplantation

Suitability for transplanting: a Low amenity value

- Irrecoverable form after transplanting (e.g. if substantial crown and root pruning are necessary to facilitate the transplanting);
- Low survival rate after transplanting;
 Very large size (unless the feasibility to transplant has been considered financially reasonable and technically feasible during the feasibility stage);
 With evidence of over-maturity and onset of senescence;
 With poor health, structure or form (e.g. imbalanced form, leaning, with major cavity/cracks/splits)

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





Section 16 Planning Application for Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories

Environmental Assessment (Revision A)

November 2021

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> Section 16 Planning Application for Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories

Environmental Assessment (Revision A)

November 2021

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Impact Assessment

Figure 5.1 Water Quality Impact Assessment Area

1

1 Introduction

1.1 General

1.1.1 Mott MacDonlad Hong Kong Limited was commissioned to provide consultancy services and conduct an Environmental Assessment ("EA") to support Section 16 Planning Application for Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed temporary RCHE, Lam Hau Tsuen, Yuen Long, New Territories.

1.2 Objectives of Report

- **1.2.1** The objectives of this EA are to:
 - Identify and describe elements of community and environment likely to be affected by the proposed temporary residential care home for the elderly;
 - Identify emission sources (including air quality, noise, water quality and waste management) and determine the significance of impacts on sensitive receivers and potential affected uses; and
 - Propose mitigation measures so as to minimize pollution, environmental disturbance and nuisance during the construction phase and operational phase of the proposed temporary residential care home for the elderly.

1.3 Structure of the Report

- **1.3.1** This EA Report contains the following sections in addition to this introduction (Section 1):
 - Section 2 Project Description;
 - Section 3 Air Quality Impact Assessment;
 - Section 4 Noise Impact Assessment;
 - Section 5 Water Quality Impact Assessment;
 - Section 6 Waste Management Implications; and
 - Section 7 Conclusions of the EA Study.

2 Project Description

2.1 Project Background

2.1.1 The Applicant intends to convert the former Wa Fung School (part) in Lam Hau Tsuen (the Site) into a temporary residential care home for the elderly ("RCHE") for a period of 10 years under Section 16 of the Town Planning Ordinance. The Application Site covers a total land area of about 2,950 m², is located in Lam Hau Tsuen surrounded by some existing village houses, open storage and vehicle repair workshops in its vicinity. It is bounded by Yuen Long Highway to its north and Shan Ha Road to its south and the site is currently with an area zoned "Village Type Development" on the Approved Tong Yan San Tsuen Outline Zoning Plan (OZP) No. S/YL-TYST/14. The location of the Site is shown in **Figure 2.1**. This report is prepared to support the present planning application.

2.2 Key Development Parameters

2.2.1 The layout plans of the proposed temporary RCHE are provided in **Appendix A** and the key development data of the proposed development are given below:

Table 2.1 Data of the proposed temporary RCHE

Items	Details
Application Site Area	About 2,950 m ²
Development	Single Storey Elderly Home (about 100 beds)

2.3 Potential Concurrent Projects

- 2.3.1 The following planned nearby developments have been identified within the surrounding Statutory Planning Areas of Tong Yan San Tsuen OZP (No. S/YL-TYST/14) and presented in Figure 3.1:
 - Yuen Long South Development Stage 1

Yuen Long South Development - Stage 1

The Planning Department (PlanD) and Civil Engineering and Development Department (CEDD) commenced a Planning and Engineering Review on the Revised Recommended Outline Development Plan (RODP) for Yuen Long South Development in end 2018, in response to wider public views and demand for more housing after the promulgation of the RODP in 2017. The Revised RODP was promulgated in May 2020, which will provide about 32,850 new flats with a total population of about 101,200. The development covers approximately 223.5 ha and is located to the south of Yuen Long New Town. Other than housing development within the Proposed Development Area (PDA), there are also some other supporting infrastructure works (such as public transport interchange, road construction / improvement works, main laying, partial nullah decking and reclaimed water service reservoir) outside the PDA. According to the Information Digest¹ and proposed implementation programme in the Executive Summary of Planning and Engineering Review on the RODP², the project is tentatively scheduled to commence in 2021/22 for completion in 2038.

¹ https://www.yuenlongsouth.hk/links/information_digest.pdf

² https://www.yuenlongsouth.hk/links/ES_Revised_RODP_er.pdf

3 Air Quality Impact Assessment

3.1 Introduction

3.1.1 This section presents the assessment of potential air quality impacts associated with the construction and operation phases of the proposed temporary RCHE. Dust generated from construction activities is the primary concern during the construction phase. Due to the small-scale and limited extent of construction, dust emission induced by the proposed temporary RCHE would be expected to be insignificant. Recommendations for proper mitigation measures have also been made, where necessary, to minimize the potential construction air quality impacts. During operation phase, no air pollution sources associated with the proposed temporary RCHE would be anticipated.

3.2 Environmental Legislation, Standards and Guidelines

- **3.2.1** The assessment is carried out in accordance with the relevant criteria and standards as specified in the following legislation and guidelines for evaluating air quality impacts:
 - Environmental Impact Assessment Ordinance (EIAO) (Cap. 499 S.16), EIAO-TM, Annexes 4 and 12:
 - Air Pollution Control Ordinance (APCO) (Cap. 311);
 - Air Pollution Control (Construction Dust) Regulation (Cap. 311R);
 - Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (Cap. 311Z); and
 - Hong Kong Planning Standards and Guidelines (HKPSG) (Chapter 9)

Technical Memorandum on Environmental Impact Assessment Process

The proposed temporary RCHE does not fall under the assessment criteria for an EIA assessment; however the guidelines are a useful indicator of the projects' impact and acceptability. The criteria and guidelines for evaluating air quality impacts are set out in Section 1 of Annex 4 and Annex 12 of the EIAO-TM respectively. Annex 4 stipulates the criteria for evaluating air quality impacts. This includes meeting the Air Quality Objectives (AQOs) and other standards established under the APCO. Annex 12 provides the guidelines for conducting air quality assessments under the EIA process, including determination of Air Sensitive Receivers (ASRs), assessment methodology as well as impact prediction and assessment.

Air Quality Objectives (AQO) in Air Pollution Control Ordinance (APCO)

The principal legislation for the management of air quality is the APCO. It specifies AQOs which stipulate the statutory limits of air pollutants and the maximum allowable numbers of exceedance over specific periods. The prevailing AQOs which have been effective since 1st January 2014 are listed in **Table 3.1**.

Table 3.1 Air Quality Objectives

Pollutant	Averaging Time	AQO concentration (μg/m³)	Allowable exceedances
Sulphur Dioxide (SO ₂)	10 minutes	500	3
	24 hours	125	3
Respirable Suspended	24 hours	100	9
Particulates (RSP or PM ₁₀)	Annual	50	Not Applicable
	24 hours	75	9

Pollutant	Averaging Time	AQO concentration (μg/m³)	Allowable exceedances
Fine Suspended Particulates (FSP or PM _{2.5})	Annual	35	Not Applicable
Nitrogen Dioxide (NO ₂)	1 hour	200	18
	Annual	40	Not Applicable
Ozone (O ₃)	8 hours	160	9
Carbon Monoxide (CO)	1 hour	30,000	0
	8 hours	10,000	0
Lead	Annual	0.5	Not Applicable
Total Suspended Particulates (TSP)*	1 hour	500	0

Note: * Criterion specified under EIAO-TM, not an AQO

Air Pollution Control (Construction Dust) Regulation

The Air Pollution Control (Construction Dust) Regulation enacted under the APCO defines notifiable and regulatory works activities that are subject to construction dust control, as listed below:

Notifiable Works:

- Demolition of a building
- Work carried out in any part of a tunnel that is within 100 m of any exit to the open air
- Construction of the foundation of a building
- Construction of the superstructure of a building
- Road construction work

Regulatory Works:

- Renovation carried out on the outer surface of the external wall or the upper surface of the roof of a building
- Road opening or resurfacing work
- Slope stabilisation work
- Any work involving any of the following activities:
 - Stockpiling of dusty materials
 - Loading, unloading or transfer of dusty materials
 - Transfer of dusty materials using a belt conveyor system
- Use of vehicles
- Pneumatic or power-driven drilling, cutting and polishing
- Debris handling
- Excavation or earth moving
- Concrete production
- Site clearance
- Blasting

Notifiable works require that advance notice of activities shall be given to EPD. The Air Pollution Control (Construction Dust) Regulation also requires the works contractor to ensure that both notifiable works and regulatory works are conducted in accordance with the Schedule of the Regulation, which provides dust control and suppression measures.

Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation

The Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation comes into operation on 1 June 2015. Under the Regulation, Non-road mobile machinery (NRMMs), except those exempted, are required to comply with the prescribed emission standards. From 1 September 2015, all regulated machines sold or leased for use in Hong Kong must be approved or exempted with a proper label in a prescribed format issued by EPD. Starting from 1 December 2015, only approved or exempted NRMMs with a proper label are allowed to be used in specified activities and locations including construction sites. The Contractor is required to ensure the adopted machines or non-road vehicle under the proposed temporary RCHE could meet the prescribed emission standards and requirement.

Hong Kong Planning Standards and Guidelines (HKPSG)

The HKPSG buffer distance to "open space" sites have been adopted. According to the Table 3.1 in Chapter 9 of the HKPSG, guidelines on the buffer distance for air sensitive usage on industrial and vehicular emissions in relation to different categories of roads have been recommended. The different categories of roads and the respective minimum buffer distance for open space site are given in **Table 3.2**.

Table 3.2 Guideline on Usage of Open Space Site

Pollutant Source	Parameter	Buffer Distance (m)	Permitted Uses
Road and	Type of Road		
Highways	Trunk Road and Primary	>20	Active and passive recreation uses
	Distributor (PD)	3-20	Passive recreational uses
		<3	Amenity areas
	District Distributor (DD)	>10	Active and passive recreation uses
		<10	Passive recreational uses
	Local Distributor (LD)	>5	Active and passive recreation uses
		<5	Passive recreational uses
	Under Flyovers		Passive recreational uses
Industrial Area	Difference in Height between Industrial Chimney Exit and the Site		
	<20m	>200	Active and passive recreation uses
		5 – 200	Passive recreational uses
	20 – 30m	>100	Active and passive recreation uses
		5 – 100	Passive recreational uses
	30 – 40m	>50	Active and passive recreation uses
		5 – 50	Passive recreational uses
	>40m	>10	Active and passive recreation uses

3.3 Background Air Quality

3.3.1 The Site is located in Yuen Long District. Historical air quality monitoring data from EPD's Yuen Long Air Quality Monitoring Station (AQMS) have been examined. The latest 5-year

annual average concentration (Year 2016-2020) of air pollutants at Yuen Long AQMS are shown in **Table 3.3**.

Table 3.3 5-year Annual Average Concentration at Yuen Long Air Quality Monitoring Station (2016 – 2020)

	Annı	Annual Average Concentration (µg/m³)				5-year Annual Average
Pollutant	2016	2017	2018	2019	2020	Background Concentration (μg/m³)
Nitrogen Dioxide (NO ₂)	46	41	43	44	32	41
Sulphur Dioxide (SO ₂)	10	9	8	5	5	7
Respirable Suspended Particulates (RSP)	37	40	37	37	30	36
Fine Suspended Particulates (FSP)	23	22	20	20	16	20

Notes: 1) Monitoring results that exceeded prevailing AQO criteria are shown in bold characters

2) NM: No measurement is conducted at this station

3.3.2 With reference to EPD's Past Air Quality Monitoring Data, the 1-hour NO2 and 10-minute SO2 concentrations; as well as the 24-hour average RSP, FSP and SO2 concentration at Yuen Long Station are shown in **Table 3.4**.

Table 3.4 Background Concentrations for 1-hour average NO₂, 10-minute average SO₂, 24-hour average RSP, FSP and SO₂ (Year 2016 – 2020) at Yuen Long Station

	Averaging	Background Concentration (µg/m³)				
Pollutant	period	2016	2017	2018	2019	2020
Nitrogen Dioxide (NO ₂)	19 th Maximum 1-hour	149	156	150	161	135
Sulphur Dioxide (SO ₂)	4 th Maximum 10-minute	58	80	52	42	26
	4 th Maximum 24-hour	17	20	16	11	10
Respirable Suspended Particulates (RSP)	10 th Maximum 24-hour	86	87	75	83	77
Fine Suspended Particulates (FSP)	10 th Maximum 24-hour	63	52	46	45	36

3.3.3 In addition, the Environment Bureau released the report A Clean Air Plan for Hong Kong 2035 in June 2021. The report documents an air quality management system to reduce air pollution including, reducing roadside air pollution; reducing marine emissions; and emission control of power plant. It is anticipated that the future background air quality would be improving.

3.4 Air Sensitive Receivers

- 3.4.1 The study area for the air quality impact assessment shall generally be defined by a distance of 500m radius from the boundary of the Site, yet it shall be extended to include major existing and planned / committed air pollutant emission sources identified to have a bearing on the environmental acceptability of the proposed temporary RCHE.
- **3.4.2** In accordance with Annex 12 of the EIAO-TM, Air Sensitive Receivers (ASRs) include domestic premises, hotels, hostels, hospitals, clinics, nurseries, temporary housing accommodation, schools, educational institutions, offices, factories, shops, shopping centres, places of public worship, libraries, courts of law, sports stadiums or performing arts centres.

Any other premises or places that, in terms of duration or number of people affected, have similar sensitivity to the air pollutants as the abovementioned premises and places are also considered as sensitive receivers.

3.4.3 The ASRs include existing, planned / committed air quality sensitive developments and relevant uses earmarked on the latest Outline Zoning Plans (OZP), Outline Development Plan (ODP) and relevant land use plans published by Land Department. The first layer of ASRs around the Site has been selected as representative ASRs and summarized in Table 3.5. Apart from the proposed development, other planned ASRs are identified in the vicinity of Study Area. The location of the representative ASRs and the 500m boundary of the study area are shown in Figure 3.1.

Table 3.5 Representative ASRs Identified for Assessment

ASR ID	Description	Type of Use	Existing/ Planned	Horizontal Distance from Work Site Boundary (m)
A1	No. 191, Lam Hau Tsuen	Residential	Existing	7
A2	No. 190, Lam Hau Tsuen	Residential	Existing	3
A3	No. 1, Lam Hau Tsuen	Residential	Existing	50
A4	No. 193, Lam Hau Tsuen	Residential	Existing	12
A5	No. 2, Shan Ha Tsuen	Residential	Existing	121
A6	Proposed temporary RCHE	Residential	Planned	Within the Site

3.5 Evaluation of Environmental Impact

Construction Phase

- 3.5.1 Construction dust will be the primary concern of air quality impact during construction phase. The construction of the proposed temporary RCHE involves very small scale of demolition works, retrofit of 1-storey existing building structures of former Wa Fung School, construction of 1-storey new building structures beside the existing building structures, an activity courtyard at the south, repairing of existing walkway and utilities installation. In addition, the new building structures will be constructed by using Modular Integrated Construction (MIC) method to replace on-site construction activities with off-site industrialised prefabrication operations. Thus, the dust emission generated from these small construction works area is anticipated to be minimal.
- 3.5.2 With the implementation of the recommended dust control measures as detailed in Section 3.6 (e.g. regular and sufficient water spraying / enclosure of dusty activities, etc.), the dust emission to nearby ASRs (including the proposed temporary RCHE) is anticipated to be insignificant.

Operation Phase

Vehicular Emission

- 3.5.3 Roads located around the proposed temporary RCHE are some local access roads, Shan Ha Road and Yuen Long Highway. According to The Annual Traffic Census 2019 publish by Transport Department (TD), Yuen Long Highway is identified as Expressway (EX). Shan Ha Road and local access roads at southwest and northeast are conservatively assumed as Local Distributor (LD).
- 3.5.4 Yuen Long Highway is located about 200m away from the proposed temporary RCHE. The minimum buffer distances as stipulated in HKPSG, which are >5m (for active and passive

recreation uses) or <5m (for passive recreational uses), have been adopted in the assessment for Shan Ha Road and local access roads. The separation distances between Yuen Long Highway/ Shan Ha Road/ local access roads and the proposed temporary RCHE are shown in **Figure 3.2**. As there is no air sensitive user of the proposed development will be located within the buffer distances, the proposed temporary RCHE fully complies with the relevant buffer distance requirements recommended in HKPSG. Therefore, adverse air quality impact due to vehicular emission on the proposed temporary RCHE is not anticipated.

3.5.5 Due to the small-scale of the proposed temporary RCHE, additional traffic introduced by the proposed temporary RCHE is expected to be insignificant. Therefore, additional vehicular emission impact induced from the proposed temporary RCHE to the ASRs in the vicinity is not anticipated.

Industrial Emission

3.5.6 Site visit was conducted on 30 July 2021. No industrial chimney was identified within 500m radius of the Study Area. Therefore, adverse air quality impact due to industrial emission on the proposed temporary RCHE is not anticipated.

Odour Emission

3.5.7 As no existing public sewerage system is located in the vicinity of the Site, two options of sewerage arrangement have been proposed in the separate Sewerage Impact Assessment (SIA). The odour emission sources of the proposed temporary RCHE are listed below:

A. Sewage Treatment

• On-site sewage treatment plant (STP)

An on-site sewage treatment plant (STP) is proposed within the proposed temporary RCHE (see **Appendix 2.1**). The potential odour nuisance to the nearby ASRs (including proposed eldering home) would result. Nonetheless, the "Guidelines for the Design of Small Sewage Treatment Plants" published by EPD will be followed to minimize the odour impacts from the on-site sewage treatment plant. In addition, the odour mitigation measures (e.g. enclosing the STP facilities with negative pressure, forced ventilation system fitted with deodourization (DO) unit will be adopted in order to protect the ASRs. The ventilation exhaust of STP is proposed directing to the south of the proposed temporary RCHE which is away from the surrounding ASRs. Hence, the potential odour nuisance to the ASRs is anticipated to be minimal; or

Deliver the sewage off-Site by tanker

Sewage generated from the proposed temporary RCHE will be stored in a storage tank within the Site. The stored sewage will be delivered off site by tanker at regular intervals. The storage tank will be equipped with deodourization (DO) unit. The ventilation exhaust of the tanker is proposed directing to the south of the proposed temporary RCHE which is away from the surrounding ASRs. Hence, the potential odour nuisance to the ASRs is not anticipated.

B. Cooking fume/odour from the kitchen

Oily fume and cooking odour will be emitted via exhaust outlet from the kitchen during the cooking process. Cooker hoods with grease filter will be installed to control oily fume and cooking odour emission to the surrounding. In addition, water curtain scrubber and hydrovent are provided in the ventilation system to collect and further remove the fine oil particles of the oily fume after passing through the grease filter. Therefore, adverse air quality impacts caused by the cooking process is not anticipated.

3.6 Mitigation Measures

Construction Phase

3.6.1 Relevant dust control practices as stipulated in the Air Pollution Control (Construction Dust)
Regulation are recommended to be adopted so as to minimize the construction dust impacts
of the proposed temporary RCHE. These practices include:

Good Site Management

• Good site management is important to help reduce potential air quality impact down to an acceptable level. As a general guide, the Contractor should maintain high standards of housekeeping to prevent emissions of fugitive dust. Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimise the release of visible dust emission. Any piles of materials accumulated on or around the work areas should be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimising generation of fugitive dust emissions. The material should be handled properly to prevent fugitive dust emission before cleaning.

Disturbed Parts of the Roads

- Main temporary access points should be paved with concrete, bituminous hardcore materials or metal plates and be kept clear of dusty materials; or
- Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet.

Exposed Earth

• Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seating with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies.

Loading, Unloading or Transfer of Dusty Materials

• All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.

Debris Handling

- Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides.
- Before debris is dumped into a chute, water should be sprayed onto the debris so that it remains wet when it is dumped.

Transport of Dusty Materials

 Vehicles used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards.

Wheel washing

 Vehicles used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards.

Use of vehicles

- The speed of the trucks within the site should be controlled to about 10 km/hour in order to reduce adverse dust impacts and secure the safe movement around the site.
- Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels.

 Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle.

Site hoarding

- Where a site boundary adjoins a road, street, service lane or other area accessible to the
 public, hoarding of not less than 2.4 m high from ground level should be provided along the
 entire length of that portion of the site boundary except for a site entrance or exit.
- **3.6.2** With proper implementation of the recommended mitigation measures as well as the relevant control requirements stipulated in the Air Pollution Control (Construction Dust) Regulation, no adverse air quality impacts are anticipated during the construction phase.

Operation Phase

3.6.3 As there is no adverse air impact anticipated during operation phase, no specific mitigation measure is required.

4 Noise Impact Assessment

4.1 Introduction

4.1.1 This section presents the assessment of potential noise impacts associated with the construction and operation phases of the proposed temporary RCHE. Noise generated from various construction activities is the primary concern during construction phase. Road traffic noise and fixed noise sources are the major noise impacts during the operation phase. Suitable mitigation measures, where necessary, have been recommended to protect the NSRs and to ensure that the legislative criteria and guidelines can be satisfied.

4.2 Environmental Legislation, Standards and Guidelines

Construction Phase

4.2.1 Legislation, Standards, Guidelines and Criteria relevant to the consideration of construction noise impacts under this assessment include the following:

General Construction Activities during Non-Restricted Hours

ProPECC PN 2/93 provides assessment criteria as well as requirements relating to construction noise not currently controlled under the NCO. The Practice Note also provides information on noise abatement measures. Noise impacts arising from general construction activities other than percussive piling during the daytime period (0700-1900 hours on any day not being a Sunday or general holiday) would be assessed against the noise standards tabulated in **Table 4.1** below. Practicable direct mitigation measures will be evaluated and exhausted to maximise the protection of NSRs.

Table 4.1 Noise Standards for Daytime Construction Activities

Noise Sensitive Uses	0700 to 1900 hours on any day not being a Sunday or general holiday, L _{eq (30 min)} , dB(A)
Dwellings	75
School	70 65 during examination

Source: Practice Note for Professional Persons (ProPECC) PN 2/93 "Noise from Construction Activities – Non-

Statutory Controls" issued by EPD in 1993.

Notes: The above noise standards apply to uses, which rely on opened windows for ventilation.

The above standards shall be viewed as the maximum permissible noise levels assessed at 1 m from the

external facade.

General Construction Activities during Restricted Hours

Noise impacts arising from general construction activities (excluding percussive piling) conducted during the restricted hours (1900-0700 hours on any day and anytime on Sunday or general holiday) and percussive piling during anytime are governed by the NCO.

According to the construction programme, the proposed construction works would be carried out during non-restricted hours. In case of any construction activities during restricted hours, it is the Contractor's responsibility to ensure compliance with the NCO and the relevant Technical Memoranda. The Contractor will be required to submit CNP application to the Noise Control Authority and abide by any conditions stated in the CNP, should any be issued.

Operation Phase

Road Traffic Noise

- **4.2.2** Legislation, Standards, Guidelines and Criteria relevant to the consideration of planning against possible road traffic noise impact under this assessment include the following:
 - Chapter 9 of the Hong Kong Planning Standards and Guidelines (HKPSG)
- **4.2.3** The noise criteria for evaluating noise impact of planning development with respect to road traffic noise are based on the HKPSG. The summary of road traffic noise criteria are given in **Table 4.2** below.

Table 4.2 Relevant Road Traffic Noise Standards for Planning Purposes

Use	s	Road Traffic Noise Peak Hour Traffic L _{10 (1 Hour)} , dB(A)
All d	omestic premises including temporary housing accommodation, offices	70
Notes	(i) The above standards apply to uses which rely on opened windows for (ii) The above standards should be viewed as the maximum permissible r	

4.2.4 According to the **Table 4.3** under Chapter 9 of the HKPSG, it provides approximate separations required for achieving the noise standard for residential developments fronting various types of roads. The broad guidelines of separations required between various types of roads and residential development are extracted in **Table 4.3** below.

Table 4.3 Broad Guidelines of Separations Required between Various Types of Roads and Residential Development (Table 4.3 of HKPSG)

Road Type	Assu	Assumptions		tion to Meet L ₁₀ 70 dB(A)
	Traffic Flow (veh/hr)	Vehicular Speed (kph)	Without Screening	With Screening*
Trunk	5,000	70	Approx. 300m	Approx. 50m
Primary Distributor	3,000	50	Approx. 180m	Approx. 40m
District Distributor/ Local Distributor	2,000	50	Approx. 120m	Approx. 30m

Notes: * under or about 45° angle of view of receiver on road traffic

Fixed Noise Sources

external façade.

- **4.2.5** Legislation, Standards, Guidelines and Criteria relevant to the consideration of planning against possible fixed noise impact under this assessment include the following:
 - Control Ordinance (NCO) (Cap. 400);
 - Chapter 9 of the Hong Kong Planning Standards and Guidelines (HKPSG); and
 - Technical Memorandum on Noise from Places other than Domestic Premises, Public Places or Construction Sites (IND-TM)
- 4.2.6 For fixed noise sources impact assessment, the Acceptable Noise Levels (ANLs) for the Noise Sensitive Receivers (NSRs) are based on the Area Sensitivity Rating, which is defined in the IND-TM issued under the Noise Control Ordinance (NCO). The Area Sensitivity Rating depends on the type of area and the degree of impact that Influencing Factors (IFs) have on

the NSRs and as illustrated in **Table 4.4** below. Industrial area, major road or the area within the boundary of Hong Kong International Airport shall be considered to be an IF.

Table 4.4 Area Sensitivity Rating

	Degree to which NSR is affected by IF			
Type of Area Containing NSR	Not Affected ^(c)	Indirectly Affected ^(d)	Directly Affected ^(e)	
(i) Rural area, including country parks ^(a) or village type developments	А	В	В	
(ii) Low density residential area consisting of low-rise or isolated high-rise developments	А	В	С	
(iii) Urban area ^(b)	В	С	С	
(iv) Area other than those above	В	В	С	

Source: IND-TM, Table 1 – Area Sensitivity Rating Definitions:

- a) "Country park" means an area that is designated as a country park pursuant to section 14 of the Country Parks Ordinance.
- b) "Urban area" means an area of high density, diverse development including a mixture of such elements as industrial activities, major trade or commercial activities and residential premises.
- c) "Not Affected" means that the NSR is at such a location that noise generated by the IF is not noticeable at the NSR.
- d) "Indirectly Affected" means that the NSR is at such a location that noise generated by the IF, whilst noticeable at the NSR, is not a dominant feature of the noise climate of the NSR.
- e) "Directly Affected" means that the NSR is at such a location that noise generated by the IF is readily noticeable at the NSR and is a dominant feature of the noise climate of the NSR.
- **4.2.7** Fixed noise impact arising from the existing fixed noise source is controlled under the NCO and shall comply with the ANLs laid down in the Table 2 of the IND-TM. For a given Area Sensitivity Rating, the ANL, in dB(A), is given by **Table 4.5** below.

Table 4.5 Acceptable Noise Level for Fixed Noise Sources

	Area Sensitivity Rating, (ANL Leq (30 min), dB(A))			
Time Period	Α	В	С	
Day-time (0700 to 1900 hours)	00	GE.	70	
Evening (1900 to 2300 hours)	60	65		
Night-time (2300 to 0700 hours)	50	55	60	

Source: IND-TM, Table 2 - Acceptable Noise Levels

- Note: (i) The above standards apply to uses which rely on opened windows for ventilation.
 - (ii) The above standards should be viewed as the maximum permissible noise levels assessed at 1m from the external facade.
- 4.2.8 The proposed temporary RCHE is located in a low density sub-urban diverse development area including village houses, vehicle repair workshops and open storage area. Therefore, the type of area containing the NSRs is considered as "Area other than those above" as defined in the IND-TM. In accordance with the Annual Traffic Census 2020 published by Transport Department, Yuen Long Highway from Shap Pat Heung Interchange to Tong Yan San Tsuen Interchange with Annual Average Daily Traffic (AADT) of 82,380 which exceeds 30,000, should be considered as an IF. As the proposed NSRs are considered not affected / indirectly affected by the IF, the ASRs for the representative NSRs in this study have been classified as "B" according to **Table 4.4**. The noise criteria of the existing/ cumulative fixed noise sources (planned/ existing) are summarised in **Table 4.6**. The Area Sensitivity Rating and ANLs adopted in this EA are used for assessment purpose only, they should not bind the

Noise Control Authority's decision in determining the noise criteria based on the legislation and practices being in force, and contemporary conditions/ situations of adjoining land uses.

Table 4.6 Noise Criteria of Existing/ Cumulative Fixed Noise Sources

Area Sensitivity Rating	Noise Criteria, dB(A)	
	Day-time & Evening	Night-time
В	65	55

4.2.9 The noise criteria (ANL-5 dB(A)) of planned fixed noise sources is adopted for the surrounding NSRs and is shown in **Table 4.7** below. The assessment area for noise impact is within 300m from the boundary of the proposed temporary RCHE, as shown in **Figure 4.1**. The locations of surrounding NSRs are shown in **Figure 4.1**.

Table 4.7 Noise Criteria of Planned Fixed Noise Sources

NSR ID	Time Period	ANL - 5, dB(A)#
N1, N2, N3, N4, N5	Day-time & Evening (0700 to 2300 hours)	60
	Night-time (2300 to 0700 hours)	50

Notes:

(#) Refer to Table 4.5 for the Area Sensitivity Rating.

4.3 Assessment Area

4.3.1 The assessment area for noise impact is within 300m radius from the boundary of the proposed temporary RCHE, as shown in **Figure 4.1**.

4.4 Construction Noise Impact Assessment

Identification of Noise Impact

4.4.1 The potential source of noise impact for construction of the proposed temporary RCHE would be the use of PME for various activities, including retrofit of existing building structures and walkway of former Wa Fung School, an activity courtyard at the south and utilities installation in the Site. PME likely to be used include hand-held breaker, concrete lorry mixer, air compressor, and generator etc. As confirmed by the Applicant, construction activities for the proposed temporary RCHE would only be carried out during non-restricted hours (0700-1900 hours) on normal working dates.

Evaluation of Noise Impact

- 4.4.2 The construction activities involve retrofit of existing building structures and walkway of former Wa Fung School, an activity courtyard at the south and utilities installation. Therefore, the number of PME is expected to be limited. Given that the small-scale and limited extent of construction, the construction noise is anticipated to be minimal.
- 4.4.3 With the implementation of recommended noise mitigation measures as detailed in below (e.g. scheduling noisy activities, use of silenced equipment / movable noise barrier, etc.), the construction noise impact to the nearby NSRs (including the proposed temporary RCHE) is anticipated to be insignificant.

Mitigation Measures

4.4.4 It is recommended that the following noise mitigation measures should be implemented to minimize the construction noise impact, e.g. "Recommended Pollution Control Clauses for

Construction Contracts" available on EPD's website³. A noise control plan should be set up to ensure regular maintenance of all plant and equipment, reduce noise generation at source, and that appropriate silencing applications are in use based upon the best reasonable practice. In addition, the new building structures will be constructed by using MIC method to replace on-site construction activities with off-site industrialised prefabrication operations. Thus, the construction noise generated from these small construction works area is anticipated to be minimal.

- **4.4.5** Typical noise mitigation measures include:
 - good site practice to limit noise emission at source;
 - scheduling of construction works outside school examination periods;
 - · use of silenced equipment;
 - use of movable noise barrier:
 - use of noise enclosure/ acoustic shed;
 - reduction in the number of items of PME operation at any given time; and
 - · avoidance of works in restricted hours etc.
- **4.4.6** These mitigation measures can be enforced by specifying a construction noise control plan as part of the contract document.

4.5 Road Traffic Noise Impact Assessment

Identification of Noise Sources

4.5.1 Road traffic noise from the nearby road network is anticipated. An area within 300m from the site boundary is proposed for noise impact assessment in this study. **Figure 4.1** shows the nearby road network within the 300m Assessment Area. The adjacent road, site access roads to the northeast and west surrounding the Project site, Shan Ha Road and Yuen Long Highway, are dominant sources of road traffic noise as they are close to the proposed development.

Assessment Methodology

- 4.5.2 The peak hour road traffic noise levels at the proposed development have been predicted based on calculation method in accordance with the "Calculation of Road Traffic Noise" (CRTN) issued by the UK Department of Transport. The existing and planned roads within 300m from the project site have been included in the assessment. According to Section 2.3, Yuen Long South (YLS) Development Stage 1 will be completed in 2038, thus, planned roads in the approved YLS EIA report (Register No.: AEIAR-215/2017) has been considered in this study.
- 4.5.3 The proposed mitigation measures for road traffic noise which include low noise road surfacing with reference to YLS EIA report (Register No.: AEIAR-215/2017), are incorporated into this assessment. The location of proposed mitigation measures are presented in Appendix 4.1.
- 4.5.4 According to the latest layout, all NSRs (e.g. bedroom and general office) which rely on openable windows for ventilation at the proposed development are identified. Traffic noise assessment points to all openable windows of all the NSRs, building structures with noise screening effect, topographical contours and road segments with traffic flow data are input

 $^{^3\} https://www.epd.gov.hk/epd/english/environmentinhk/eia_planning/guide_ref/rpc_3.html$

into the traffic noise model in evaluating the potential traffic noise impacts. Traffic data included traffic flow, percentage of heavy vehicles and speeds.

4.5.5 During the preparation of this EA, it was identified that the operation year of the proposed eldering home would be 2024. The assessment year adopted in this EA was determined based on the maximum traffic projection within 15 years upon occupation of the proposed development (i.e. 2024 + 15 years). Therefore, the projected AM peak traffic forecast for Year 2039 traffic data were adopted in the assessment under worst-case scenario. The traffic data adopted for this study had been checked and confirmed by competent party (i.e. the Traffic Consultant, Ho Wang SPB Ltd.). The peak hour traffic flow data adopted for this study is presented in **Appendix 4.1**.

Evaluation of Noise Impact

4.5.6 In order to reduce the road traffic noise impact, mitigation measures as recommended in *"Planning and Designing Noise Sensitive Development"* (ProPECC PN 4/93) and HKPSG have been incorporated under base case scenario.

Screening by Noise Tolerant Buildings

4.5.7 Due to the limited site area, the noise tolerant buildings (e.g. multi-storey carparks and commercial centres) cannot be provided.

Setback of Building

4.5.8 According to the latest design, the proposed eldering home has been incorporated 5m setback from site access roads to the northeast and west surrounding the Project site and Shan Ha Road. Due to limited site area, it is not possible to allow further setback of the proposed eldering home.

Extended Podium

4.5.9 The proposed eldering home is a 1-storey building structure, the podium design and canopy would not be feasible.

Internal Building Layout

4.5.10 Internal layout of proposed eldering home has been designed in such way that all noise sensitive units would be facing away from noise sources as much as practicable to achieve compliance of 70 dB(A).

Building Orientation

- **4.5.11** The Site is mainly affected by site access roads to the northeast and west surrounding the Project site. Due to limited development area and the shape of the site, the special building designs where noise tolerant portions (e.g. bathroom, kitchen and corridors etc.) orienting to site access roads and Shan Ha Road would not be feasible.
- 4.5.12 The development layout has been optimized according to the ProPECC PN 4/93 and HKPSG. It is expected that the compliance rate would be lower without measures discussed in Section 4.5.6-4.5.11. Based on the given layout plan, all openable windows for ventilation of all the NSRs (see Figure 4.2) have been assigned as assessment points. Predicted road traffic noise

levels during the peak hour at representative noise sensitive facades are summarized in **Table 4.8**. Detail breakdown of the road traffic noise results is shown in **Appendix 4.2**.

Table 4.8 Summary of Predicted Road Traffic Noise Results

NSR	Noise Criterion L _{10 (1 Hour)} dB(A)	Total No. of NSRs	Predicted Maximum L ₁₀ (Peak Hour), dB(A)	No. of NSR with Noise Exceedance	Compliance Rate (%)
Proposed temporary RCHE	70	17	70	0	100

4.5.13 It is found that no NSRs is predicted with road traffic noise exceedances against the L_{10 (1 Hour)} 70 dB(A) noise criterion and the compliance rate is 100%.

4.6 Fixed Noise Sources Impact Assessment

Identification of Noise Sources

Existing Fixed Noise Sources

4.6.1 Site visits have been conducted on 30 July 2021. It is observed that existing car repairing workshops, car parks, open storage areas and logistics company within the noise assessment area. A 2.5m high solid boundary wall (min. 10 kg/m²) is proposed to be erected along the southwest of the proposed temporary RCHE to block the direct line of sight between the proposed temporary RCHE and existing fixed noise sources. The locations of the identified existing noise sources are shown in **Figure 4.1**. Details of the identified existing fixed noise sources are summarised below:

Chung Wai Tat Logistics Ltd. (CWT)

4.6.2 CWT is located at 1m south of the site boundary. According to the interview with the employee, the operation of CWT is from 0700 to 2300 hours on Monday to Saturday. Based on the interview, the major noise sources are heavy vehicles movements along haul roads and material loading and unloading at the open storage area. However, no noisy activities were observed during the site survey on 30 July 2021. As 2.5m high solid boundary wall (min. 10 kg/m²) is proposed to be erected around the proposed temporary RCHE, and the proposed temporary RCHE is a 1-storey development including retrofit of existing buildings and construction of new buildings, the line of sight between the proposed eldering home and noise sources would be fully blocked by 2.5m high solid boundary wall (min. 10 kg/m²). Therefore, adverse fixed noise impact due to the noisy activities to proposed eldering home is anticipated to be minimal.

Hanyang Group (HY)

4.6.3 HY is located at 40m from the site boundary. According to the interview with the persons from the nearby companies, the operation of HY is from 0900 to 1800 hours on Monday to Saturday. Based on the site inspection, open storage is consisted of heavy vehicles and warehouse, and no noisy activity such as vehicle movement was identified. As 2.5m high solid boundary wall (min. 10 kg/m²) is proposed to be erected around the proposed temporary RCHE, the noise sources of the open storage are fully screened by the solid boundary wall. Therefore, no fixed noise impact from the open storage to the proposed temporary RCHE is anticipated.

Sunstar Motor Engineering Ltd. (CR1)

4.6.4 CR1 is a car repairing shop located at 20m from the site boundary. Based on the interview with the employee, the operation of CR1 is from 0900 to 1800 on Monday to Saturday. In

accordance with interview, car repairing, hammering and ties pumping are the major noise sources. The noise sources of the CR1 are fully screened by the proposed 2.5m high solid boundary wall (min. 10 kg/m²), and no direct line of sight from the proposed temporary RCHE. Hence, no adverse fixed noise impact from SME to the proposed temporary RCHE is anticipated.

Star Power Motor Engineering Ltd. (CR2)

4.6.5 CR2 is a car repairing shop located at 25m from the site boundary. Based on the interview with the employee, the operation of CR2 is from 0830 to 1800 on Monday to Saturday. In accordance with interview, car repairing, hammering and ties pumping are the major noise sources. The noise sources of the CR2 are fully screened by the proposed 2.5m high solid boundary wall (min. 10 kg/m²), and no direct line of sight from the proposed temporary RCHE. Hence, no adverse fixed noise impact from SME to the proposed temporary RCHE is anticipated.

Mass Autotech Co. Ltd. (CR3)

4.6.6 CR3 is a car repairing shop located at 60m from the site boundary. Based on the interview with the employee, the operation of CR3 is from 0900 to 1800 on Monday to Saturday. In accordance with interview, car repairing, hammering and ties pumping are the major noise sources. The noise sources of the CR3 are fully screened by the proposed 2.5m high solid boundary wall (min. 10 kg/m²), and no direct line of sight from the proposed temporary RCHE. Hence, no adverse fixed noise impact from SME to the proposed temporary RCHE is anticipated.

Car Repairing Workshop (CR4)

OS1 is located at 60m from the site boundary. According to the interview with the employee, the operation of HY is from 0800 to 1900 hours on Monday to Saturday. In accordance with interview, car repairing, hammering and ties pumping are the major noise sources. Based on the site inspection, open storage is consisted of heavy vehicles, and no vehicle movement was identified. As 2.5m high solid boundary wall (min. 10 kg/m²) is proposed to be erected around the proposed temporary RCHE, the noise sources of the open storage are fully screened by the solid boundary wall. Therefore, no fixed noise impact from noisy activities to the proposed temporary RCHE is anticipated.

Car Park (CP1)

4.6.7 CP1 is located at 165m from the site boundary. Based on the site observation, the only non-frequent vehicles are slow in movement without any tyre noise, skidding noise and braking noise in the car park. As 2.5m high solid boundary wall (min. 10 kg/m²) is proposed to be erected around the proposed temporary RCHE, the noise sources of the car park are fully screened by the solid boundary wall. As the separation distance from the planned NSR and the proposed development is quite far and the direct line of sight from planned NSRs to the noise source will be blocked by the village houses at Lam Hau Tsuen, no adverse fixed noise impact from the car parks to the proposed temporary RCHE is anticipated.

Assessment Methodology

4.6.8 For the assessment of noise from the planned fixed noise sources, the maximum allowable sound power levels (Max SWLs) of the identified fixed noise sources were determined by adopting standard acoustics principles. The following standard equation is used for calculating the Max SWLs of the fixed plant:

SPL = Max SWL - DC + FC

where

SPL: Sound Pressure Level in dB(A)

Max SWL: Maximum Allowable Sound Power Level in dB(A)

DC: Distance Attenuation in $dB(A) = 20 \log D + 8$ [where D is the distance in metres] FC: Façade Correction in dB(A) = +3 dB(A)

- 4.6.9 If exceedance to the planned noise criteria is found for one NSR, the initial SWL of the dominant sources to that NSR would be gradually lowered until the corrected SPL at that NSR meets the acceptable level. The process would be repeated for other representative NSRs with exceedance in the noise criteria until all corrected SPLs at the representative NSRs meet the noise criteria. The maximum allowable SWLs of the planned fixed noise sources will then be predicted.
- **4.6.10** The first layer of noise sensitive uses located close to the fixed noise sources of the planned development have been selected as assessment points / identified as representative NSRs within the study area for prediction of noise impact levels.
- **4.6.11** The noise levels at NSRs from the fixed noise sources are predicted based on basic acoustics equation for point source propagation. They were compared against the relevant fixed noise criteria to determine whether mitigation measures are required.

Evaluation of Noise Impact

Planned Fixed Noise Sources

4.6.12 The major fixed noise sources for the proposed temporary RCHE involve the outdoor units of split type air conditioners, ventilation openings for pumping room and two sewage treatment options, including Sewage Treatment Plant (STP) and Tanker. All equipment is expected to be operated 24 hours in a day. During the operation phase, noise will be generated from fixed plants including screens, blowers, pumps and fans, etc. The outdoor units are located dispersedly in the ground outside the rooms (e.g. bedroom, office) of the proposed temporary where most of them do not have a direct line of sight with the surrounding NSRs. The proposed STP, tanker and pumping room are fully enclosed with installation of silencer at the ventilation openings, so the potential breakout noise impact upon the surrounding NSRs is minimal. The maximum allowable sound power level (SWL) for all ventilation openings is determined in order to ensure the compliance with statutory requirements and guidelines. The day and evening time maximum allowable SWLs for all outdoor E&M equipment and ventilation openings are determined based on the shortest horizontal distance between the noise source and the closest NSR for conservative approach. The maximum allowable SWLs of the planned fixed noise sources are predicted as summarised in Table 4.9 below.

Table 4.9 Maximum Allowable SWLs of the Planned Fixed Noise Sources

Description	Day-time / Evening Period	Night-time Period
Planned Fixed Noise Standards	60 dB(A)	50 dB(A)
Shortest Horizontal Distance between Noise Source and NSR ¹	3′	1 m
Distance Correction	+ 18	dB(A)
Tonality Correction	-6 d	JB(A)
Façade Correction	-3 c	dB(A)
Suggested Mitigation Measures Noise Reduction Correction ²	+10	dB(A)
Total Maximum Permissible Sound Power Level	99 dB(A)	89 dB(A)

Notes:

- The nearest distance between planned fixed noise sources and NSR is identified as No. 190, Lam Hau Tsuen.
- 2. The direct line of sight of the nearest NSR and outdoor units will be screened by enclosed building structures while the pumping room and STP are fully enclosed with installation of silencer at the ventilation openings. Therefore, noise attenuation of 10 dB(A) will be adopted in the maximum permissible sound power levels calculation under a conservative approach.

4.6.13 With the adoption of the proposed maximum allowable SWLs of the planned fixed noise sources, directing the planned fixed noise sources away from NSRs, installation of silencer and 2.5m high solid boundary wall (min. 10 kg/m²) along the proposed temporary RCHE which block the direct line of sight from it to existing fixed noise sources, no adverse fixed noise impact from the proposed temporary RCHE to the nearby NSRs and from existing fixed noise sources to the proposed temporary RCHE is anticipated.

5 Water Quality Impact Assessment

5.1 Introduction

5.1.1 This section presents the assessment of potential water quality impacts associated with the construction and operation phases of the proposed temporary RCHE. Recommendations for mitigation measures have been made, where necessary, to minimize the potential water quality impacts. During operation phase, the proposed temporary RCHE is unlikely to produce any adverse water quality impact.

5.2 Environmental Legislation, Standards and Guidelines

- **5.2.1** Relevant legislations, standards and guidelines governing water quality in Hong Kong include the following:
 - Chapter 9 of Hong Kong Planning Standards and Guidelines (HKPSG);
 - Water Pollution Control Ordinance (WPCO) (Cap. 358);
 - Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters; and
 - Practice Note for Professional Persons on Construction Site Drainage (ProPECC Note PN 1/94)

Chapter 9 of Hong Kong Planning Standards and Guideline (HKPSG)

5.2.2 The assessment of potential water quality impacts associated with the construction and operation phases of the proposed temporary RCHE while planning of this development should make reference to the Chapter 9 of HKPSG. Recommendations for mitigation measures to minimize the water quality impacts being identified should also be provided.

Water Pollution Control Ordinance (WPCO)

5.2.3 The Water Pollution Control Ordinance (WPCO) (Cap. 358) provides the statutory framework for the protection and control of water quality in Hong Kong. According to the Ordinance and its subsidiary legislation, Hong Kong waters are divided into ten Water Control Zones (WCZs). Water Quality Objectives (WQOs) were established to protect the beneficial uses of water quality in WCZs and specific WQOs are applied to each WCZ. The Site is located within the catchment of the Deep Bay WCZ. The corresponding WQOs for Deep Bay WCZ are listed in Table 5.1.

Table 5.1 Summary of Relevant Water Quality Objectives for Deep Bay WCZ

Parameters	Objectives	Sub-Zone
Aesthetic appearance	(a) Waste discharges shall cause no objectionable odours or discolouration of the water.	Whole Zone
	(b) Tarry residues, floating wood, articles made of glass, plastic, rubber or of any other substances should be absent.	Whole Zone
	(c) Mineral oil should not be visible on the surface. Surfactants should not give rise to a lasting foam.	Whole Zone
	(d) There should be no recognisable sewage- derived debris.	Whole Zone
	(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.	Whole Zone

Parameters	Objectives	Sub-Zone
	(f) Waste discharges shall not cause the water to contain substances which settle to form objectionable deposits.	Whole Zone
Bacteria	(a) The level of <i>Escherichia coli</i> 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 <i>Escherichia coli</i> 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 <i>Escherichia coli</i> 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 <i>Escherichia coli</i> 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.	Yuen 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 (DO)	(a) Waste discharges shall not cause the level of dissolved oxygen to fall below 4 milligrams per litre for 90% of the sampling occasions during the year; values should be taken at 1 metre below surface.	Inner Marine Subzone excepting Mariculture Subzone
	(b) Waste discharges shall not cause the level of dissolved oxygen to fall below 4 milligrams per litre for 90% of the sampling occasions during the year; values should be calculated as water column average (arithmetic mean of at least 2 measurements at 1 metre below surface and 1 metre above seabed). In addition, the concentration of dissolved oxygen should not be less than 2 milligrams per litre within 2 metres of the seabed for 90% of the sampling occasions during the year.	Outer Marine Subzone excepting Mariculture Subzone
	(c) The dissolved oxygen level should not be less than 5 milligrams per litre for 90% of the sampling occasions during the year; values should be taken at 1 metre below surface.	Mariculture Subzone
	(d) Waste discharges shall not cause the level of dissolved oxygen to be less than 4 milligrams per litre.	Yuen Long & Kam Tin (Upper and Lower) Subzones, Beas Subzone, Indus Subzone, Ganges Subzone, Water Gathering Ground Subzones and other inland waters of the Zone
рН	(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

Parameters	Objectives	Sub-Zone
Turumotoro	(b) Waste discharges shall not cause the pH of the	Yuen Long & Kam Tin (Upper
	water to exceed the range of 6.5-8.5 units.	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 (SS)	(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-ionised 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 Subzone
	(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 metre above seabed).	Outer Marine Subzones
5-day biochemical oxygen demand (BOD)	(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)
(COD)		Subzone, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones

Parameters	Objectives	Sub-Zone
	(b) Waste discharges shall not cause the chemical oxygen demand to exceed 30 milligrams per litre.	Yuen Long & Kam Tin (Lower) Subzone and other inland waters
Toxins	(a) Waste discharges shall not cause the toxins in water to attain such levels as to produce significant toxic carcinogenic, mutagenic or teratogenic effects in humans, fish or any other aquatic organisms, with due regard to biologically cumulative effects in food chains and to toxicant interactions with each other.	Whole Zone
	(b) Waste discharges shall not cause a risk to any beneficial uses of the aquatic environment.	Whole Zone
Phenol	Phenols shall not be present in such quantities as to produce a specific odour, or in concentration greater than 0.05 milligrams per litre as C6H5OH.	Yung Long Bathing Beach Subzone
Turbidity	Waste discharges shall not reduce light transmission substantially from the normal level.	Yung Long Bathing Beach Subzone

5.3 Assessment Area

5.3.1 The assessment area for the water quality impact assessment shall generally include areas within 500m radius from the boundary of the proposed temporary RCHE. This has been identified accordingly and is shown in **Figure 5.1**.

5.4 Assessment Area

5.4.1 The key WSRs are listed in Table 5.2. The indicative locations of WSRs are shown in Figure 5.1.

Table 5.2 Water Sensitive Receivers

WSR ID	Description
WSR 1	Nullah along Shan Ha Road and Long Hon Road
WSR 2	Nullah along Lam Hi Road and Lam Tai East Road

5.5 Construction Phase Assessment

Construction Site Runoff

- 5.5.1 The surface runoff from construction works areas may contain increased loads of suspended solids (SS) and contaminants. Potential sources of pollution from construction site drainage include:
 - Runoff and erosion from site surfaces, drainage channels, demolition works, earth working areas and stockpiles;
 - Release of any bentonite slurries, concrete washings and other grouting activities;
 - Wash water from dust suppression spray facilities; and
 - Fuel, oil, solvents and lubricants from maintenance of mechanical equipment.
- **5.5.2** Sediment laden runoff particularly from works areas subjected to excavation or earth works, if uncontrolled, may cause increased levels of suspended solids and pollutants entering the stormwater drainage system and into the marine environment.
- 5.5.3 Mitigation measures and good site practices outlined in ProPECC Note PN 1/94/ and ETWB TC (Works) No. 5/ 2005 and listed in **Section 5.7** should be implemented to control construction site runoff and drainage from the works area. The Contractor would also be

required to apply for a discharge license under the WPCO. With implementation of the recommended mitigation measures along with compliance of the effluent standards set under TM-DSS, construction site runoff can be effectively controlled, and adverse impacts to storm drains or the marine environment is not anticipated.

General Construction Activities

- **5.5.4** The following on-site construction activities may cause water pollution:
 - uncontrolled discharge of debris and rubbish such as packaging, construction materials and refuse; and
 - spillages of liquids stored on-site, such as oil, diesel and solvents, which will result in water quality impacts if they enter the nearby stormwater drainage channels.
- 5.5.5 Good construction and site management practices should be observed to ensure that litter, fuels and solvents do not enter the drainage system and marine environment. With proper implementation of the good construction and site management practices mentioned in Section 5.7, water pollution arising from the general on-site construction activities can be prevented, and water quality impacts would not be anticipated.

Sewage Effluent from the Construction Workforce

5.5.6 Domestic sewage would be generated from the workforce during the construction phase. However, portable chemical toilets will be provided within the construction site. With implementation of mitigation measures suggested in **Section 5.7**, adverse water quality impact or impact on the identified sensitive receivers are not anticipated.

5.6 Operation Phase Assessment

Sewage generated by the proposed temporary RCHE during operation phase

There is no public sewerage system in the vicinity of the proposed development site. Sewage generated will be treated by on-site STP or stored in a storage tank within the Site and delivered off site by tanker at regular intervals. An on-site sewage treatment plant (STP) or storage tank are proposed within the Site for serving total of population approx. 150. The location of the on-site STP or storage tank is shown in **Appendix 2.1**. Detailed discussion of the proposed sewerage arrangement is provided in the separate Sewerage Impact Assessment (SIA).

5.7 Recommendation of Mitigation Measures

Construction Phase

5.7.1 The assessment has indicated that the development works, if properly controlled, will not cause adverse impacts to the existing drainage and sewerage systems. Hence, no additional mitigation measures are required. Appropriate on-site measures are defined to reduce potential impacts, which will be sufficient to prevent adverse impacts to water quality from the construction activities. All effluent discharge from the works will be subject to control under the WPCO.

Construction Site Runoff and Drainage

5.7.2 At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and

culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities.

- **5.7.3** The good site practices outlined in ProPECC PN 1/94 "Construction Site Drainage" should be followed as far as practicable in order to minimise surface runoff and erosion, and also to retain and reduce any suspended solids prior to discharge. The following measures are recommended:
 - Surface run-off from construction sites should be discharged into storm drains via
 adequately designed sand/silt removal facilities such as sand traps (see Appendix A1
 of ProPECC PN 1/94), silt traps and sediment basins. Channels or earth bunds or sand
 bag barriers should be provided on site to properly direct stormwater to such silt
 removal facilities. Perimeter channels at site boundaries should be provided where
 necessary to intercept storm run-off from outside the site so that it will not wash across
 the site. Catchpits and perimeter channels should be constructed in advance of site
 formation works and earthworks.
 - Sand/ Silt removal facilities such as sand traps, silt traps and sedimentation tanks should be provided to remove particles from run-off. These facilities should be properly and regularly maintained. The solids removed from these facilities during maintenance desilting should be disposed of to landfill.
 - The Contractor is required to obtain a wastewater discharge license under the WPCO prior to implementing any wastewater discharge.
 - Programming of the works to minimise soil excavation works during rainy seasons.
 - Exposed soil surface should be protected by shortcrete or hydroseeding as soon as possible to reduce the potential for soil erosion.
 - Temporary access roads should be protected by crushed gravel and exposed slope surfaces should be protected when rainstorms are likely.
 - Precautions be taken at any time of year when rainstorms are likely, actions to be taken
 when a rainstorm is imminent or forecasted, and actions to be taken during or after
 rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention
 should be paid to the control of silty surface runoff during storm events, especially for
 areas located near steep slopes.
 - Oil interceptors should be provided in the drainage system downstream of any oil/fuel
 pollution sources. The oil interceptors should be emptied and cleaned regularly to
 prevent the release of oil and grease into the storm water drainage system after
 accidental spillage.

General Construction Activities

5.7.4 Best Management Practices (BMPs) should be implemented at the construction site, including proper handling, sorting and storage of construction solid waste, debris and refuse generated on-site prior to disposal. General refuse and recyclable materials should be collected separately and stored in appropriately labelled bins and removed regularly to minimise the risk of windblown waste / debris discharging into the harbour.

Sewage Effluent from the Construction Workforce

5.7.5 The Contractor should provide temporary sanitary facilities, such as portable chemical toilets within the construction site to handle sewage from the workforce. The Contractor has the responsibility to ensure that chemical toilets are used and properly maintained, and that licensed Contractors are employed to collect and dispose of the waste off-site at approved locations.

Operation Phase

5.7.6 With implementation of proposed on-site STP or tanker away which deliver sewage off site, no adverse water quality impact is anticipated during operation phase. Nonetheless, the contingency and mitigation measures proposed in the separate Sewerage Impact Assessment (SIA) including:

Option 1: Regularly Disposed to nearby Public Sewage Treatment Works via Tanker Away

 An emergency storage tank with 2 days storage volume will be provided for tanker away.

Option 2 - Provision of On-site Tertiary Sewage Treatment Plant (STP)

- Dual source electricity supply as an emergency measures of STP will be provided to prevent power failure.
- Standby pumps, in addition to the duty pumps will be provided as backup solution during operation when the duty pump is failure to be operated or for maintenance inspection.
- An emergency storage tank with storage capacity for storing 6 hours of ADWF will be provided to storge the overflow of raw sewage during maintenance or the STP failure.
- A sludge tank for emergency storage of 14 days sludge volume would be provided for the sludge treatment in STP.
- In case of necessary and emergency, provision of tanker service to tank away the excessive raw sewage by licensed collector will be arranged and mobilized.
- 5.7.7 The potential water quality impact during the operation phase will be the run-off or non-point source pollution from road surfaces and developed areas. Proper pre-treatment facilities such as sand-trap and petrol interceptor should be installed at the peripheral drainage. In addition, good management measures such as regular cleaning and sweeping of road surface and open areas are suggested to implement. Therefore, with implementation of proper pre-treatment facilities and good management measures, the potential water quality impact is anticipated to be insignificant.

6 Waste Management Implications

6.1 Introduction

6.1.1 This section identifies the potential waste arising from the construction and operation activities of the proposed temporary RCHE and evaluates the potential environmental impacts that may result from waste generated. Mitigation measures and good site practices, including waste handling, storage and disposal, are recommended with reference to applicable waste legislation and management guidelines to minimise potential waste management impacts.

6.2 Environmental Legislation, Standards and Guidelines

- 6.2.1 The following legislation relates to the handling, treatment and disposal of wastes in Hong Kong and has been used in assessing potential impacts:
 - Waste Disposal Ordinance (Cap. 354);
 - Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C);
 - Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N);
 - Public Health and Municipal Services Ordinance (Cap. 132) Public Cleansing and Prevention of Nuisances Regulation (Cap. 132BK); and
 - Land (Miscellaneous Provisions) Ordinance (Cap. 28)

Waste Disposal Ordinance

6.2.2 The Waste Disposal Ordinance (WDO) prohibits the unauthorised disposal of wastes. Construction waste is defined as any substance, matter or thing that is generated from construction work and abandoned, whether or not it has been processed or stockpiled before being abandoned, but does not include any sludge, screenings or matter removed in or generated from any desludging, desilting or dredging works. Under the WDO, wastes can be disposed of only at designated waste disposal facilities.

Waste Disposal (Chemical Waste) (General) Regulation

- **6.2.3** Under the WDO, the Chemical Waste (General) Regulation provides regulations for chemical waste control, and administers the possession, storage, collection, transport and disposal of chemical wastes.
- 6.2.4 According to the Waste Disposal (Chemical Waste) (General) Regulation, all producers of chemical waste must register with Environmental Protection Department (EPD) and treat their wastes, either utilising on-site plant licensed by EPD, or arranging for a licensed collector to transport the wastes to a licensed facility. The Regulation also prescribes the storage facilities to be provided on site, including labelling and warning signs, and requires the preparation of written procedures and training to deal with emergencies such as spillages, leakages or accidents arising from the storage of chemical wastes.
- 6.2.5 The EPD has also issued a 'guideline' document, the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes (1992), which details how the Contractor should comply with the regulations on chemical wastes.

Waste Disposal (Charges for Disposal of Construction Waste) Regulation

6.2.6 Under the Waste Disposal (Charges for Disposal of Construction Waste) Regulation, enacted in January 2006, 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 facility (PFRF) for disposal must consist entirely of inert material.

Public Health and Municipal Services Ordinance

6.2.7 The Public Cleansing and Prevention of Nuisances Regulation provides control on illegal tipping of wastes on unauthorised (unlicensed) sites.

Land (Miscellaneous Provisions) Ordinance

- 6.2.8 The Land (Miscellaneous Provisions) Ordinance requires that dumping licenses be obtained by individuals or companies who deliver public fill to public filling areas. The CEDD issues the licences under delegated powers from the Director of Lands. The current policy related to dumping of construction and demolition (C&D) material is documented in the Works Branch Technical Circular No. 2/93 Public Dumps. C&D materials that are wholly inert should not be disposed of to landfill but taken to fill banks or public filling areas. Other relevant documents and guidelines that are also applicable to waste management and disposal in Hong Kong as follow:
 - ETWB Technical Circular (Works) No. 19/2005, Environmental Management on Construction Sites:
 - Development Bureau (DEVB) Technical Circular (Works) No. 6/2010, Trip Ticket System for Disposal of Construction and Demolition Materials;
 - ETWB Technical Circular (Works) No. 22/2003A, Additional Measures to Improve Site Cleanliness and Control Mosquito Breeding on Construction Sites;
 - ETWB Technical Circular (Works) No. 6/2002A, Enhanced Specification for Site Cleanliness and Tidiness:
 - ETWB Technical Circular (Works) No.12/2000, Fill Management;
 - Chapter 4 of Project Administration Handbook (PAH) for Civil Engineering Works, 2020 Edition

6.3 Construction Phase Assessment

- 6.3.1 The construction activities will be confined inside the small site area which is approximately about 2,950m² in size. The proposed temporary RCHE involves very small scale of demolition works, repairing of existing building structures of former Wa Fung School, construction of new 1-storey buildings as extension area and utilities installation. Therefore, it is anticipated that only limited amount of waste will be generated. The identified waste types include:
 - Construction and demolition (C&D) materials:
 - · Chemical waste; and
 - General refuse.
- **6.3.2** Each type of the above waste arising is described below, together with an evaluation of the potential environmental impacts associated with the waste generation, handling, storage, transport and disposal.

Construction and demolition (C&D) materials

6.3.3 It is expected that a small amount of inert and non-inert C&D materials will be generated as the site will be involved small area of excavation, and the new 1-storey structures will be adopted with Modular Integrated Construction (MiC). The inert materials should be segregated from the C&D materials on-site for reuse as far as practicable. In order to minimise the impact resulting from collection and transportation of C&D material for off-site disposal,

the C&D material that could be reused on-site as fill materials as far as practicable. The surplus inert C&D materials could be disposed of at the Government's Public Fill Reception Facilities (PFRFs) for beneficial use by any other projects in Hong Kong. Non-inert C&D materials would be disposed to designated landfill. The management options for non-inert C&D materials (i.e. C&D waste) including avoid/ reduce/ minimise the generation of C&D materials and well-planned delivery programme for offsite disposal will be considered during construction phase.

6.3.4 With proper implementation of good construction site practice and mitigation measures recommended, potential dust, noise and water quality impacts associated with on-site handling and transportation of C&D materials are not anticipated.

Chemical Waste

- 6.3.5 Chemical wastes arising during the construction phase may pose environmental, health and safety hazards if not stored and disposed of in an appropriate manner as stipulated in the Waste Disposal (Chemical Waste) (General) Regulations. The potential hazards include:
 - Toxic effects to workers:
 - Adverse impacts on water quality from spills and associated adverse impacts on marine biota; and
 - Fire hazards.
- 6.3.6 The maintenance and servicing of construction plant and equipment may generate some chemical wastes such as used solvents, contaminated rags and waste lubricating oil. It is difficult to quantify the amount of chemical waste that will arise from the construction activities since it will be dependent on the Contractor's on-site maintenance requirements and the amount of plant utilised. However, it is anticipated that the quantity of chemical waste, such as waste lubricating oil and solvents produced from plant maintenance. The amount of chemical waste to be generated will be quantified in the Waste Management Plan (WMP) to be prepared by the Contractor for the site.
- 6.3.7 Materials classified as chemical wastes will require special handling and storage arrangements before removal for off-site disposal at the approved Chemical Waste Treatment Facility (CWTF) or recycling by licensed facilities. Mitigation and control requirements for chemical wastes are detailed in **Section 6.5**. Provided that the handling, storage and disposal of chemical wastes are in accordance with these requirements, adverse environmental impacts are not expected.

General Refuse

6.3.8 The construction workforce will generate refuse comprising food scraps, waste paper and empty containers etc. Such refuse will be properly managed so that intentional or accidental release to the surrounding environment will be avoided. Disposal of refuse at sites other than approved waste transfer or disposal facilities will be prohibited. Effective collection of site wastes will be required to prevent waste materials being blown around by wind, flushed or

leached into the marine environment, or creating an odour nuisance or pest/ vermin problem. Waste storage areas will be well maintained and cleaned regularly.

6.3.9 With the implementation of good waste management practices at the site, adverse environmental impacts are not expected to arise from the storage, handling and transportation of workforce wastes.

6.4 Operation Phase Assessment

- **6.4.1** The following types of wastes would be generated during operation of the proposed temporary RCHE:
 - Grit and Sludge to be Generated from the Operation of the STP;
 - Household waste; and
 - General refuse.

Grit and Sludge to be Generated from the Operation of the STP

- by the EPD for the design of the sewage treatment plant, a sludge dewatering machine capable of attaining 30% w/w dry solids content for landfill disposal and a sludge tank for emergency storage of 14 days sludge volume would be provided for the sludge treatment. The sludge generated from the STP will be dewatered for landfill disposal. The Average Dry Weather Flow (ADWF) for the STP is about 33 m³/day, as such, about 2.97 m³/day of sludge will be generated from the STP. After the dewatering process by the sludge dewatering machine, about 0.039 m³/day of dewatered sludge would be generated and a sludge tank of volume about 0.55 m³ would be provided for emergency storage of 14 days sludge volume.
- 6.4.3 The screening and grits will be properly stored in a fully enclosed container before disposal to designated landfill sites. The total quantity of screening and grits generated in the proposed STP is expected to be so small. Considering the small amount of screening and grits generated, the number of containers required for disposal of screening and grits would be minimal. The transportation and disposal of the screening will be handled by a reputable licensed waste collector. No adverse environmental impact is anticipated given proper handling and disposal of the screening and grits generated.

Household Waste

- 6.4.4 Household waste (such as food waste, scraps, waste paper, empty containers, etc) from operation phase of the proposed temporary RCHE will mainly comprise the domestic waste generated from future residences of housing. Such household waste will be properly managed by suitable waste collectors so that intentional or accidental release to the surrounding environment will not occur.
- **6.4.5** Effective collection of general wastes will be implemented to prevent waste materials from creating odour nuisance or pest/ vermin problem. Waste storage areas will be well maintained and cleaned regularly. To reduce waste and improve recycling, it is expected that waste such as waste paper, plastics and aluminium can be segregated for off-site recycling.

Chemical Waste

6.4.6 Chemical waste will be generated from various routine maintenance and servicing activities for electrical and mechanical equipment. Chemical waste such as waste lubricating oil, contaminated rags, waste paint, used solvents and spent chemicals are expected to be generated from these activities. It is difficult to quantify the amount of chemical waste that will

arise from those activities at this stage since it will be dependent on the equipment maintenance requirements and the amount of equipment utilised.

6.4.7 Chemical wastes may pose environmental, health and safety hazards if not stored and disposed of in an appropriate manner as stipulated in the Waste Disposal (Chemical Waste) (General) Regulation. Chemical wastes will require special handling and storage arrangements in accordance with the relevant regulations before removal for off-site disposal at the approved CWTF or recycling by licensed facilities. Mitigation and control requirements for chemical wastes are detailed in Section 6.5. Provided that the handling, storage and disposal of chemical wastes will be in accordance with these requirements, adverse environmental impacts are not anticipated.

6.5 Recommendation of Mitigation Measures

Construction Phase

Good Site Practices

- 6.5.1 Adverse impacts related to waste management such as dust, odour, noise and wastewater discharge will not be expected to arise, provided that good site practices will be strictly followed. Recommendations for good site practices during the construction activities include:
 - Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site;
 - Training of site personnel in proper waste management and chemical handling procedures;
 - Provision of sufficient waste disposal points and regular collection of waste;
 - Appropriate measures to minimise windblown litter and dust / odour during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;
 - Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads; and
 - Well planned delivery programme for offsite disposal such that adverse environmental impact from transporting the inert or non-inert C&D materials is not anticipated.

Waste Reduction Measures

- **6.5.2** Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:
 - Sort inert C&D materials to recover any recyclable portions such as metals;
 - Segregation and storage of different types of waste in different containers or skips to enhance reuse or recycling of materials and their proper disposal;
 - Encourage collection of recyclable waste such as waste paper and aluminium cans by providing separate labelled bins to enable such waste to be segregated from other general refuse generated by the work force;
 - Proper site practices to minimise the potential for damage or contamination of inert C&D materials; and
 - Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.

6.5.3 In addition to the above measures, specific mitigation measures are recommended below for the identified waste arising to minimise environmental impacts during handling, transportation and disposal of these wastes.

C&D materials

- 6.5.4 In order to minimise impacts resulting from collection and transportation of inert C&D materials for off-site disposal, the excavated materials should be reused on-site as fill material as far as practicable. In addition, inert C&D materials generated from excavation works could be reused as fill materials in local projects that require public fill for reclamation.
- 6.5.5 The surplus inert C&D materials will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong.
- 6.5.6 Liaison with the CEDD PFC on the allocation of space for disposal of the inert C&D materials at PFRF is underway. No construction work is allowed to proceed until all issues on management of inert C&D materials have been resolved and all relevant arrangements have been endorsed by the relevant authorities including PFC and EPD.
- 6.5.7 The C&D materials generated from general site clearance should be sorted on site to segregate any inert materials for reuse or disposal of at PFRFs whereas the non-inert materials will be disposed of at the designated landfill site. The Contractor should explore any mitigation measures/ management options for non-inert C&D generated from works other than site clearance, such as avoidance/ reducing/ reuse packaging waste/ paper/ timber from construction works, install the recycle facilities to encourage the recycle of material (e.g. paper and plastic bottom etc.).
- 6.5.8 In order to monitor the disposal of inert and non-inert C&D materials at respectively PFRFs and the designated landfill site, and to control fly-tipping, it is recommended that the Contractor should follow the Technical Circular (Works) No. 6/2010 for Trip Ticket System for Disposal of Construction & Demolition Materials issued by Development Bureau. In addition, it is also recommended that the Contractor should prepare and implement a WMP detailing their various waste arising and waste management practices in accordance with the relevant requirements of the Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site.

Chemical Waste

- 6.5.9 If chemical wastes are produced at the construction site, the Contractor will 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, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor should use a licensed collector to transport and dispose of the chemical wastes at the approved CWTF or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.
- **6.5.10** Potential environmental impacts arising from the handling activities (including storage, collection, transportation and disposal of chemical waste) are expected to be minimal with the implementation of appropriate mitigation measures as recommended.

General Refuse

6.5.11 General refuse should be stored in enclosed bins or compaction units separated from inert C&D materials. A reputable waste collector should be employed by the Contractor to remove

general refuse from the site, separately from inert C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.

Operation Phase

Household Waste

6.5.12 Household waste should be collected on daily basis and delivered to the refuse collection point accordingly. A reputable waste collector should be employed to remove general refuse regularly to avoid odour nuisance or pest/vermin problem. Sufficient recycling containers are recommended to be provided at suitable locations of the proposed temporary RCHE to encourage recycling of such waste as aluminium cans, plastics and waste paper.

Chemical Waste

6.5.13 If chemical wastes are expected to be produced during the operation phase, the Applicant should register with the EPD as a chemical waste producer and 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, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidising, irritant, toxic, harmful, corrosive, etc. Licensed collector should be deployed to transport and dispose of the chemical wastes at the approved Chemical Waste Treatment Centre or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.

7 Conclusion

7.1 Air Quality Impact

Construction Dust

7.1.1 Due to the small-scale and limited extent of construction, dust emission induced by the proposed temporary RCHE would be expected to be insignificant. With the implementation of proper mitigation measures, no adverse air quality impacts are anticipated during construction phase.

Vehicular Emission

7.1.2 Considering that adequate buffer distances have been provided between the sensitive uses in the proposed temporary RCHE and the nearby road networks, no adverse impact arising from road traffic emissions is anticipated.

Industrial Emission

7.1.3 No industrial chimney was identified within 500m radius of the Study Area. Therefore, adverse air quality impact due to industrial emission on the proposed temporary RCHE is not anticipated.

Odour Emission

7.1.4 As the odour mitigation measures (e.g. enclosing the STP or storage tank facilities with negative pressure, forced ventilation system fitted with deodourization (DO) unit, cooker hoods with grease filter, water curtain scrubber and hydrovent, and directing away the exhaust air from the ARS etc.) will be adopted in order to protect the ASRs, the potential odour nuisance to the ASRs is anticipated to be minimal.

7.2 Noise Impact

Construction Noise Impact

7.2.1 Due to the small-scale and limited extent of construction, construction noise due to the proposed temporary RCHE would be expected to be insignificant. With the implementation of proper mitigation measures, no adverse construction noise impacts are anticipated during construction phase.

Road Traffic Noise Impact

7.2.2 Road traffic noise assessment results indicated that the compliance rate of the proposed eldering home is 100.0% and no road traffic noise exceedance are anticipated in the proposed eldering home. Therefore, no adverse road traffic noise impact is anticipated.

Fixed Noise Impact

7.2.3 With the adoption of the proposed maximum allowable SWLs of the planned fixed noise sources, directing the planned fixed noise sources away from NSRs, installation of silencer and 2.5m high solid boundary wall (min. 10 kg/m²) along the proposed temporary RCHE which block the direct line of sight from it to existing fixed noise sources, no adverse fixed noise

impact from the proposed temporary RCHE to the nearby NSRs or from existing fixed noise sources to the proposed temporary RCHE is anticipated.

7.3 Water Quality Impact

7.3.1 Proper sewerage facilities would be provided during the construction and operation of the proposed development. No adverse water quality impact is anticipated.

7.4 Waste Management

7.4.1 Handling, collection, transportation and disposal practices of the waste generated during the construction phase would follow the relevant guidelines and good practices. Proper waste collection and transportation system will also be provided in the proposed temporary RCHE in order to minimize potential adverse environment impacts. Provided that the environmental control measures are properly implemented, no adverse environmental impact is anticipated with respect to solid waste management.

Appendices

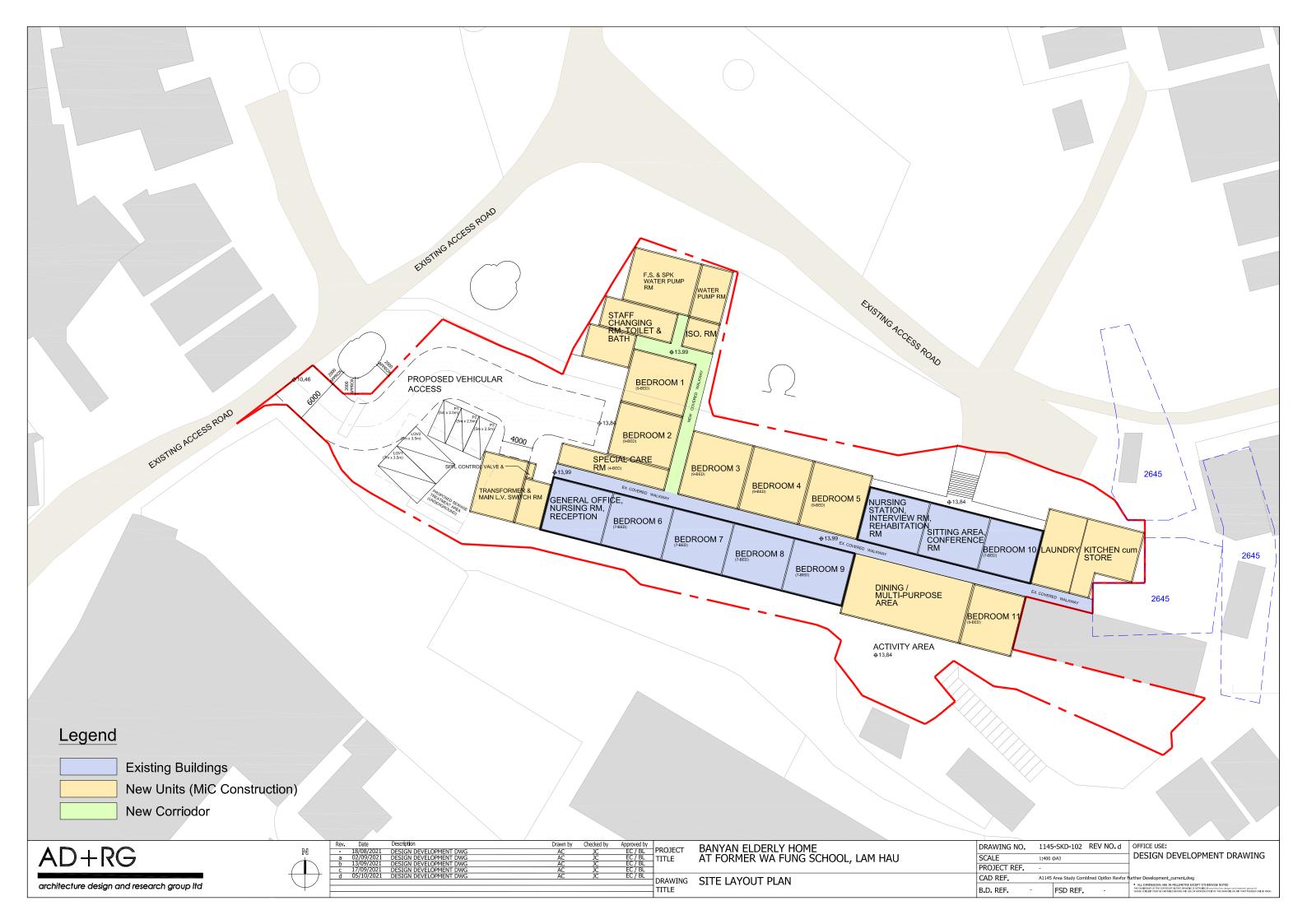
Appendix 2.1	Location	Plan of	Application	Site
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Appendix 4.1 Traffic Forecast with Key Plan

Appendix 4.2 Road Traffic Noise Results

Appendix 4.3 TD's Endorsement on Traffic Forecast Data (To be provided)

Appendix 2.1 Location Plan of Application Site



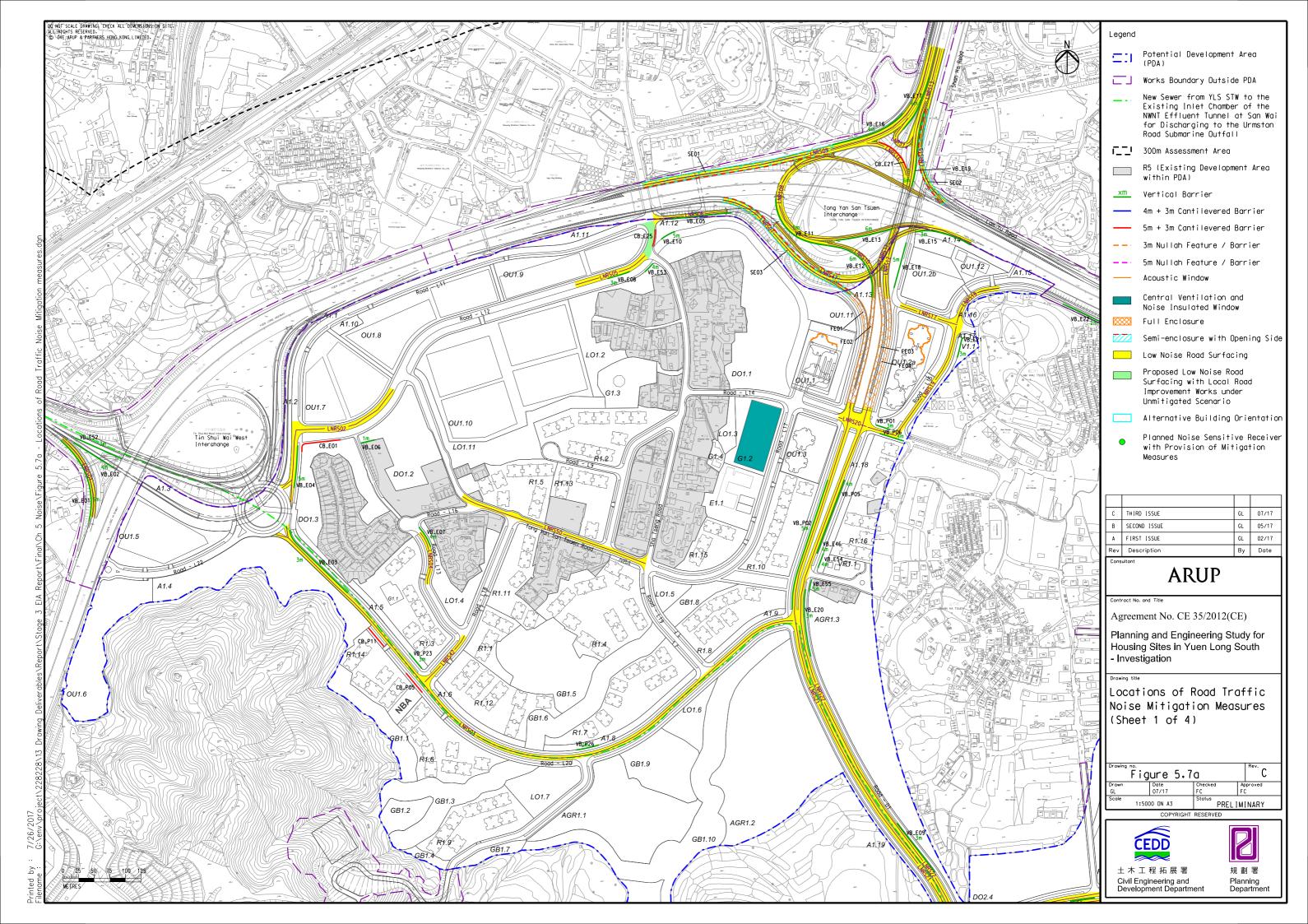
Appendix 4.1 Traffic Forecast with Key Plan

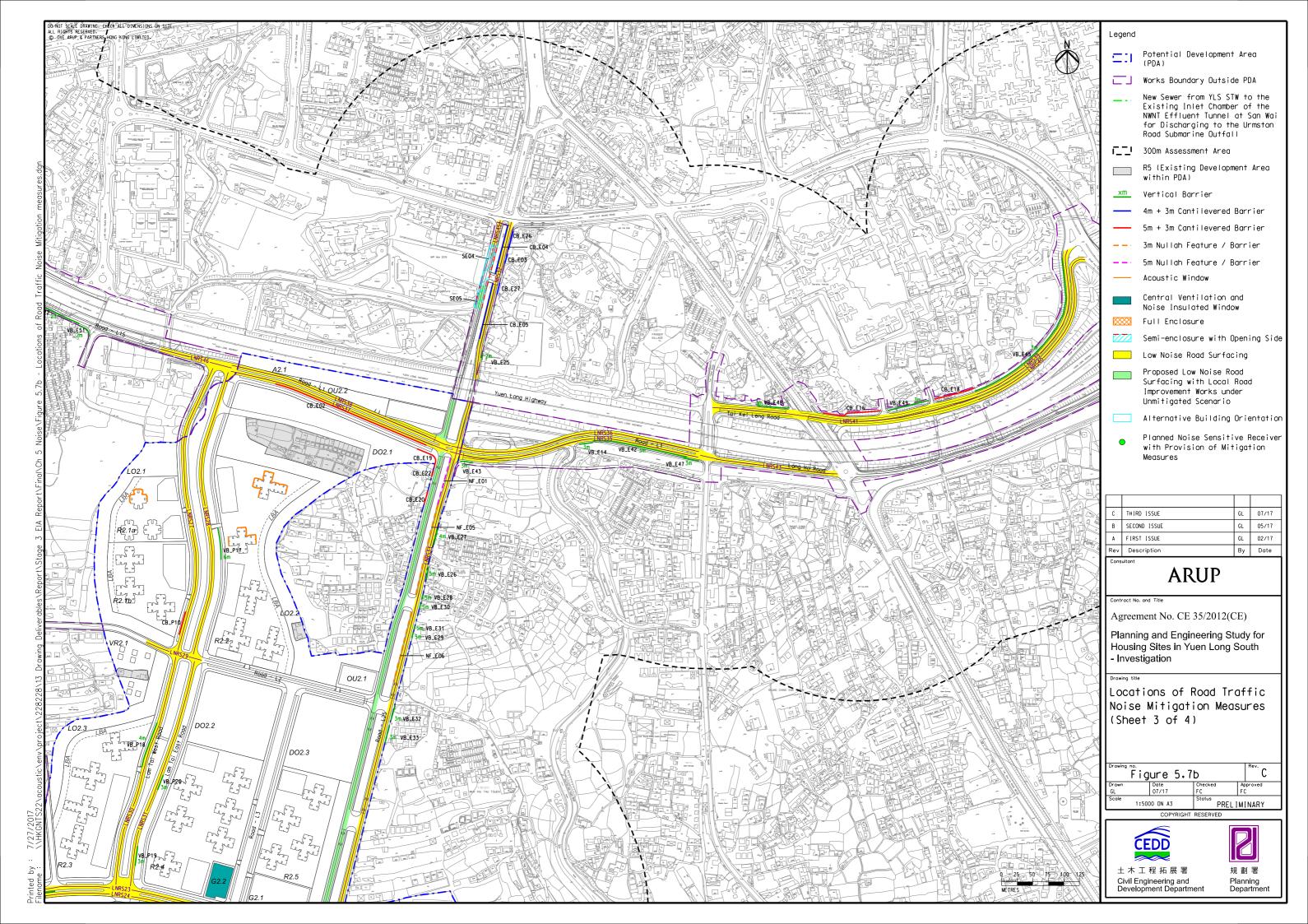
Traffic Forecast Data

Index	Road	1-Way/2-Way	Direction	Speed Limit (kph)	2039 Flow (veh/hr)	Heavy Veh %
1a	Yuen Long Highway	1-way	WB	80	7265	47.2
1b	Yuen Long Highway	1-way	EB	80	6629	34.0
2a	Shan Ha Road	2-way	NB & SB	50	105	32.9
2b	Shan Ha Road	2-way	EB & WB	50	345	35.0
3a	Tong Yan San Tsuen Interchange	1-way	SB	50	565	25.5
3b	Tong Yan San Tsuen Interchange	1-way	SB	50	90	33.4
3c	Tong Yan San Tsuen Interchange	1-way	SB	50	655	26.5
3d	Tong Yan San Tsuen Interchange	1-way	NB	50	385	26.1
3e	Tong Yan San Tsuen Interchange	1-way	NB	50	735	14.9
3f	Tong Yan San Tsuen Interchange	1-way	NB	50	1120	18.8
3g	Tong Yan San Tsuen Interchange	1-way	WB	50	1820	34.8
4a	Lam Yu Road	2-way	EB & WB	50	583	19.4
4b	Lam Yu Road	2-way	EB & WB	50	572	29.0
5a	Lam Hau Tsuen Road	2-way	NB & SB	50	887	17.5
5b	Lam Hau Tsuen Road Roundabout	1-way	SB	50	477	25.2
5c	Lam Hau Tsuen Road Roundabout	1-way	WB	50	525	34.2
5d	Lam Hau Tsuen Road Roundabout	1-way	NB	50	863	20.4
6a	Lam Hi Road	2-way	NB & SB	50	20	10.0
7a	Lam Tai West Road	2-way	NB & SB	50	535	36.5
8a	Lam Tai East Road	2-way	NB & SB	50	565	25.4
9a	Planned Road	2-way	EB & WB	50	105	39.8
9b	Planned Road	2-way	EB & WB	50	555	25.3
9c	Shan Ha Road	2-way	EB & WB	50	370	32.1
9d	Shan Ha Road	2-way	EB & WB	50	340	29.7
10a	Planned Road	1-way	NB	50	940	15.3
10b	Planned Road	1-way	SB	50	400	30.0
11a	Planned Road	2-way	NB & SB	50	445	11.0
11b	Planned Road	2-way	EB & WB	50	445	17.4
11c	Planned Road	2-way	EB & WB	50	425	17.4
12a	Site Access Road	2-way	NB & SB	50	30	34.8

Key Plan

Mitigation Measures from Yuen Long South EIA (Register No.: AEIAR-215/2017)





Appendix 4.2 Road Traffic Noise Results

Section 16 Planning Application for Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories

Project:

NSR ID	Noise Sensitive Use	Floor	Noise Criterion L10 (1 Hour) dB(A)	Assessment Height, mPD	Noise Level (Base Case), (dB(A))	Exceedance?
PN1	Isolation Room^				64	NO
PN2					65	NO
PN3	Bedroom				66	NO
PN4					68	NO
PN5	Nursing Station [^] , Invterview Room, Rehabitation Room [^]				68	NO
PN6	Sitting Area, Conference Room				67	NO
PN7	Bedroom	1/F		15.2	66	NO
PN8	Bedroom		70		60	NO
PN9	Dining/Multi-purpose Area				61	NO
PN10					61	NO
PN11	Bedroom				62	NO
PN12	Bedroom				62	NO
PN13					62	NO
PN14	General Office, Nursing Room^, Reception				63	NO
PN15	Special Care Room^				70	NO
PN16	Bedroom				65	NO
PN17	Deuroom				60	NO

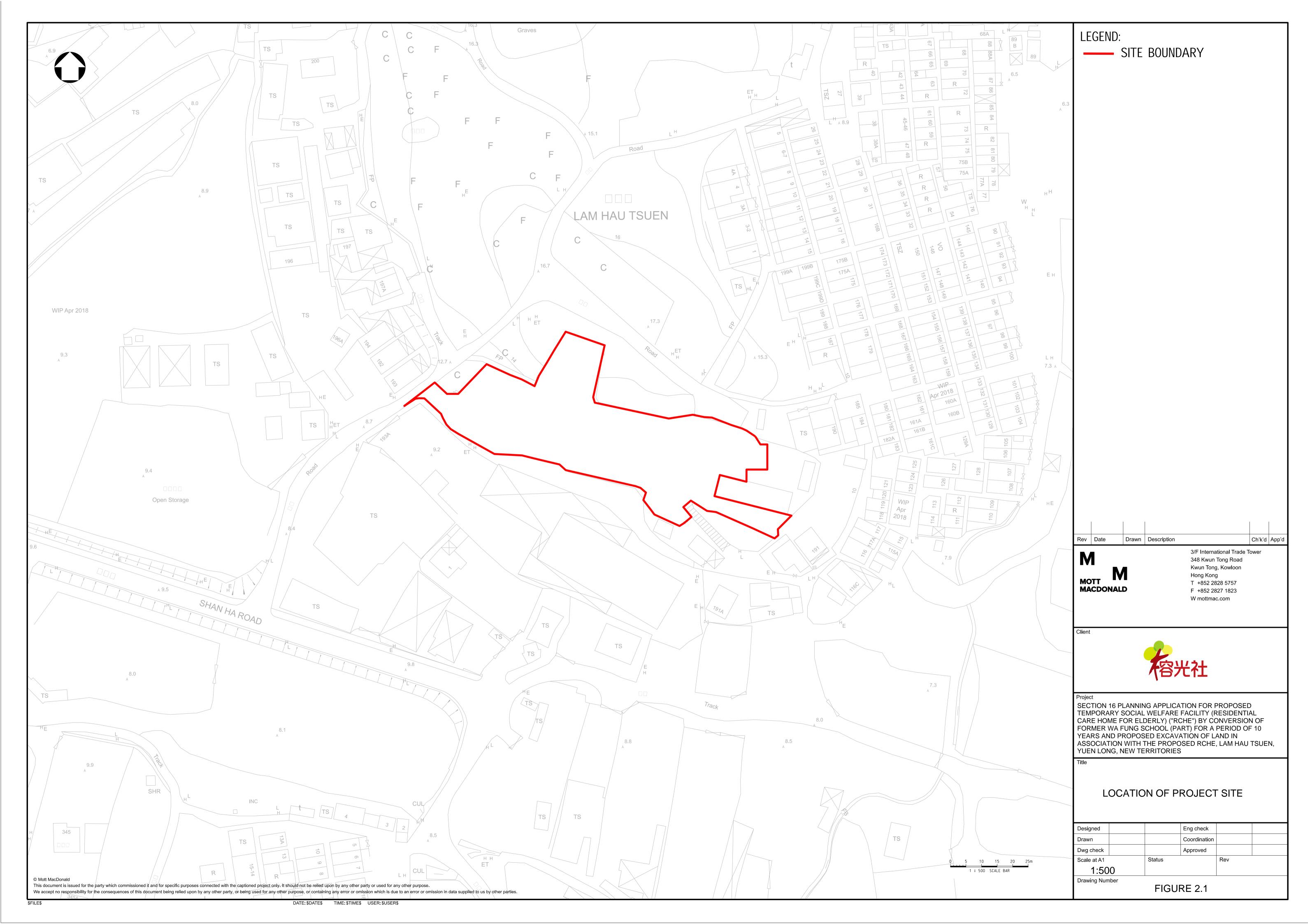
Note:

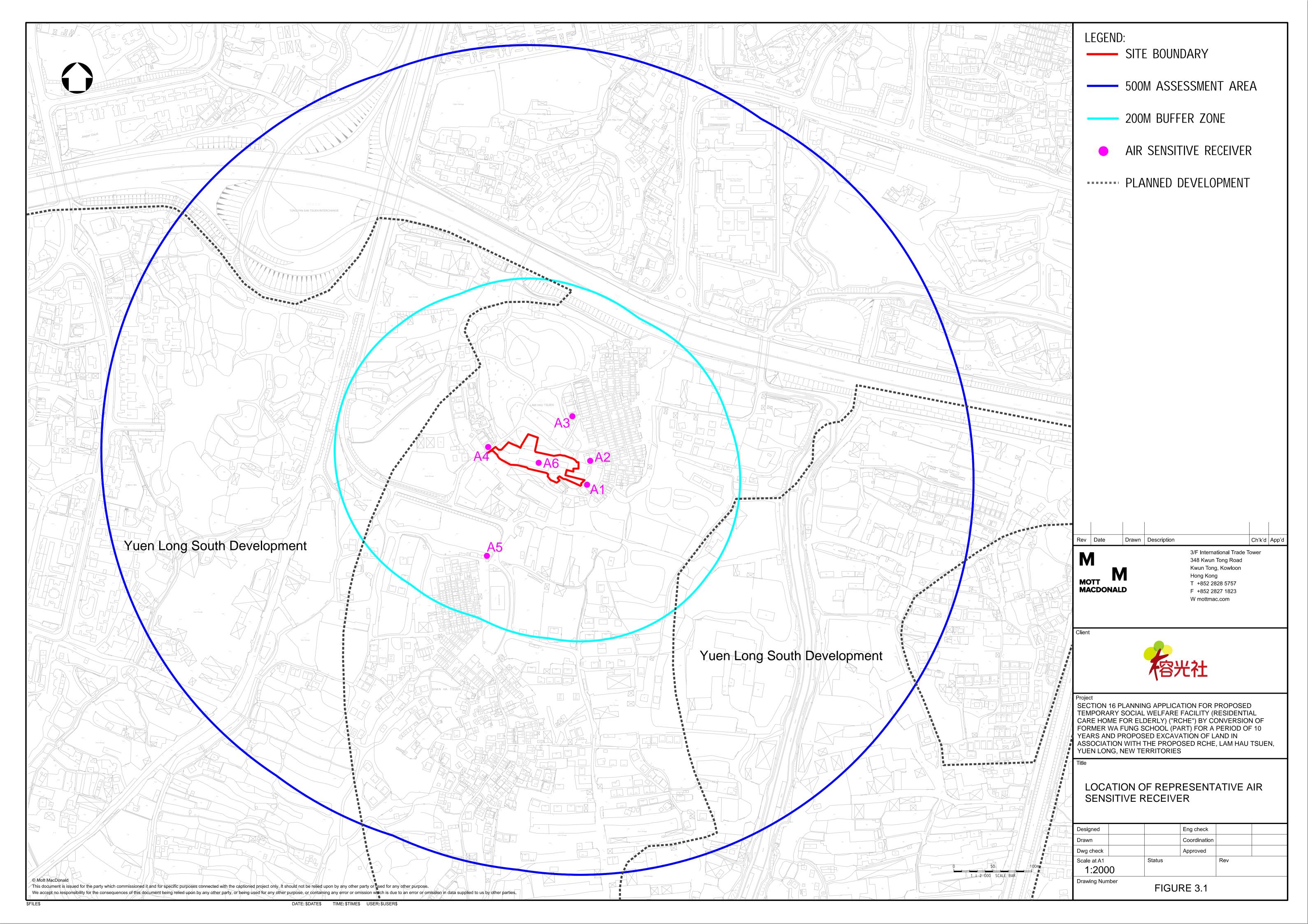
^Isolation Room, Nursing Station, Rehabitation Room, Nursing Room will not involve diagnosis room, ward and long staying registered nurse to provide medical treatment, so these rooms are considered to be same as residential dwellings and offices. Therefore, with reference to HKPSG, the noise criterion of L10(1 Hour) 70 dB(A) is adopted.

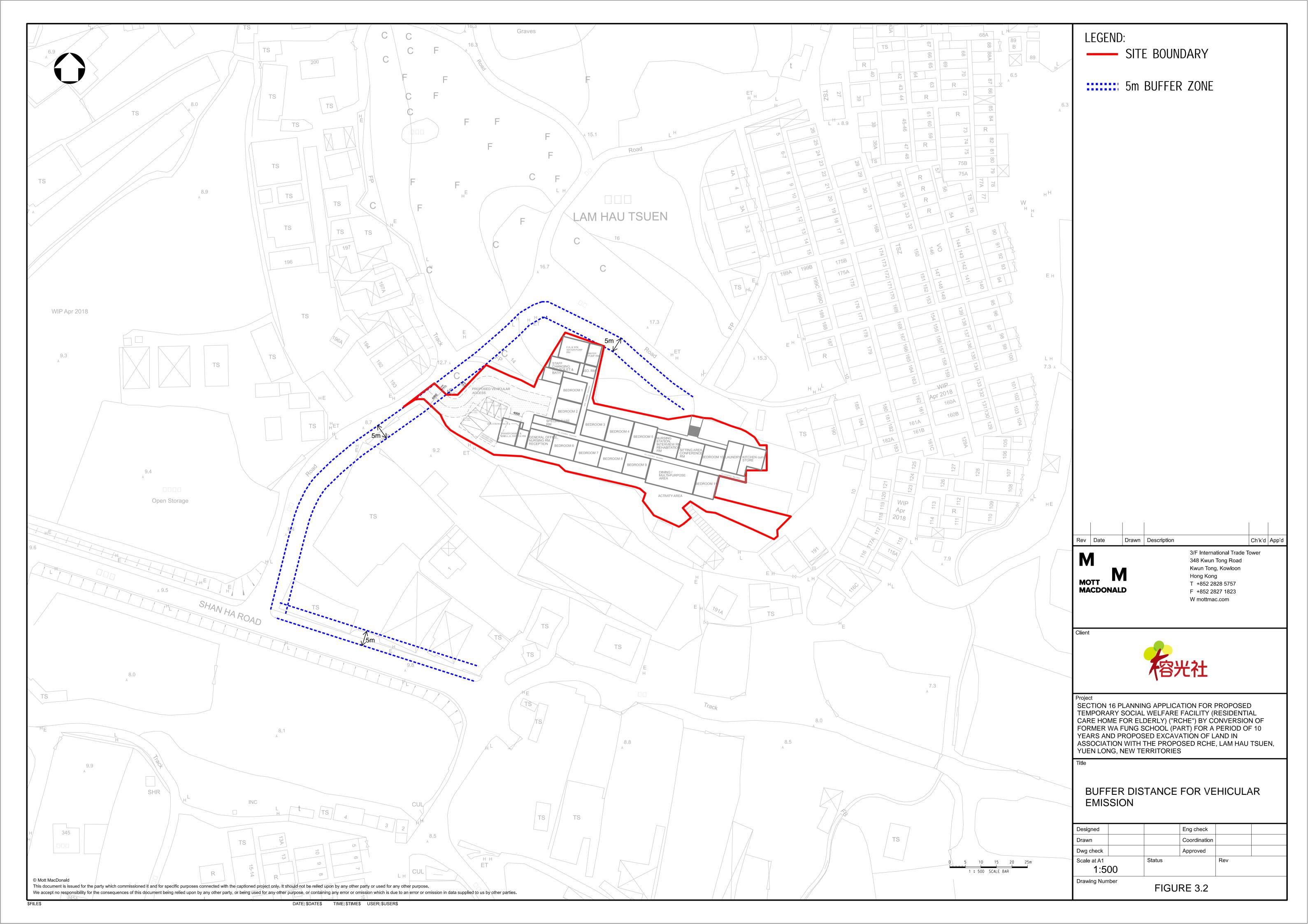
Appendix 4.3

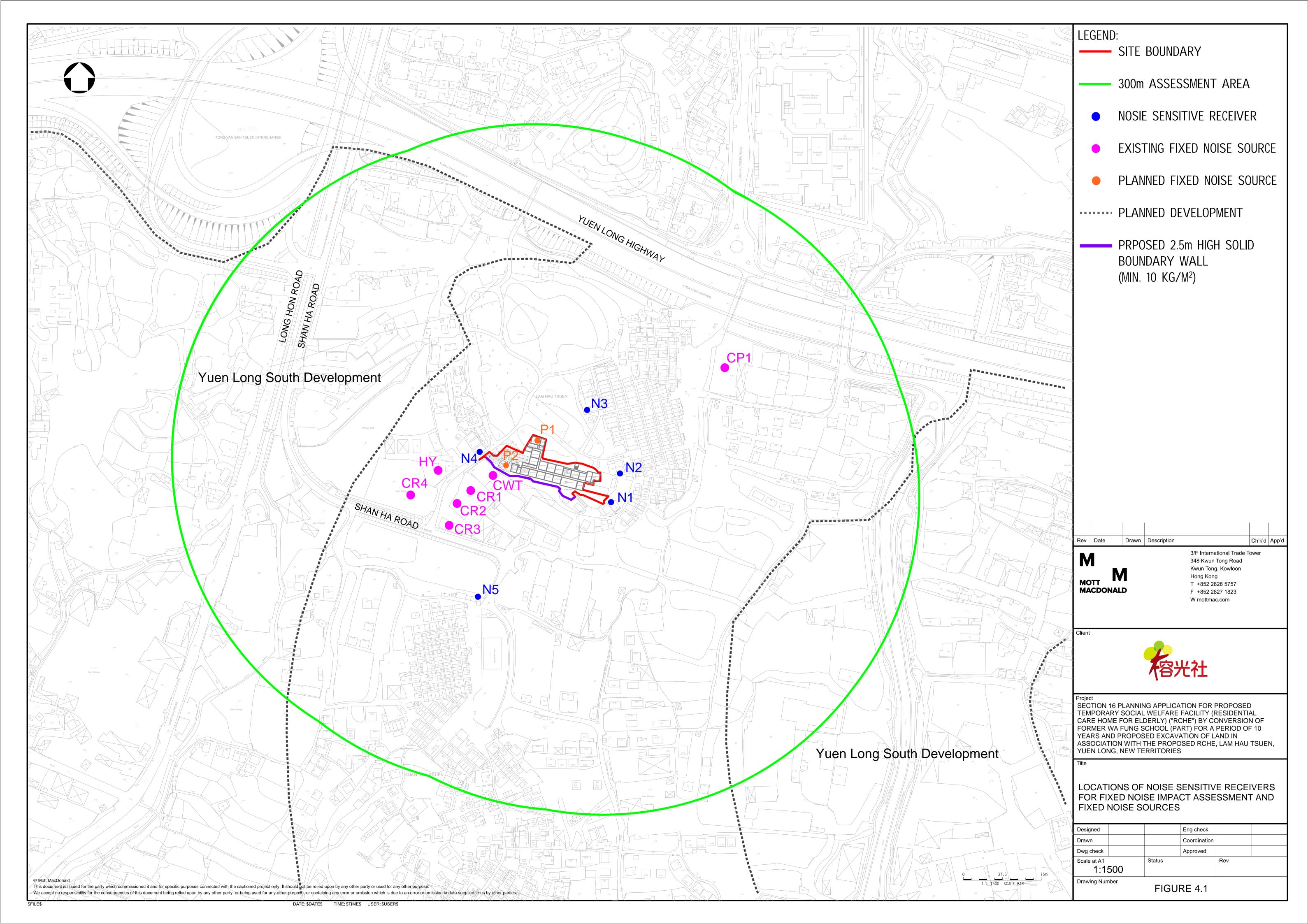
TD's Endorsement on Traffic Forecast Data (To be provided)

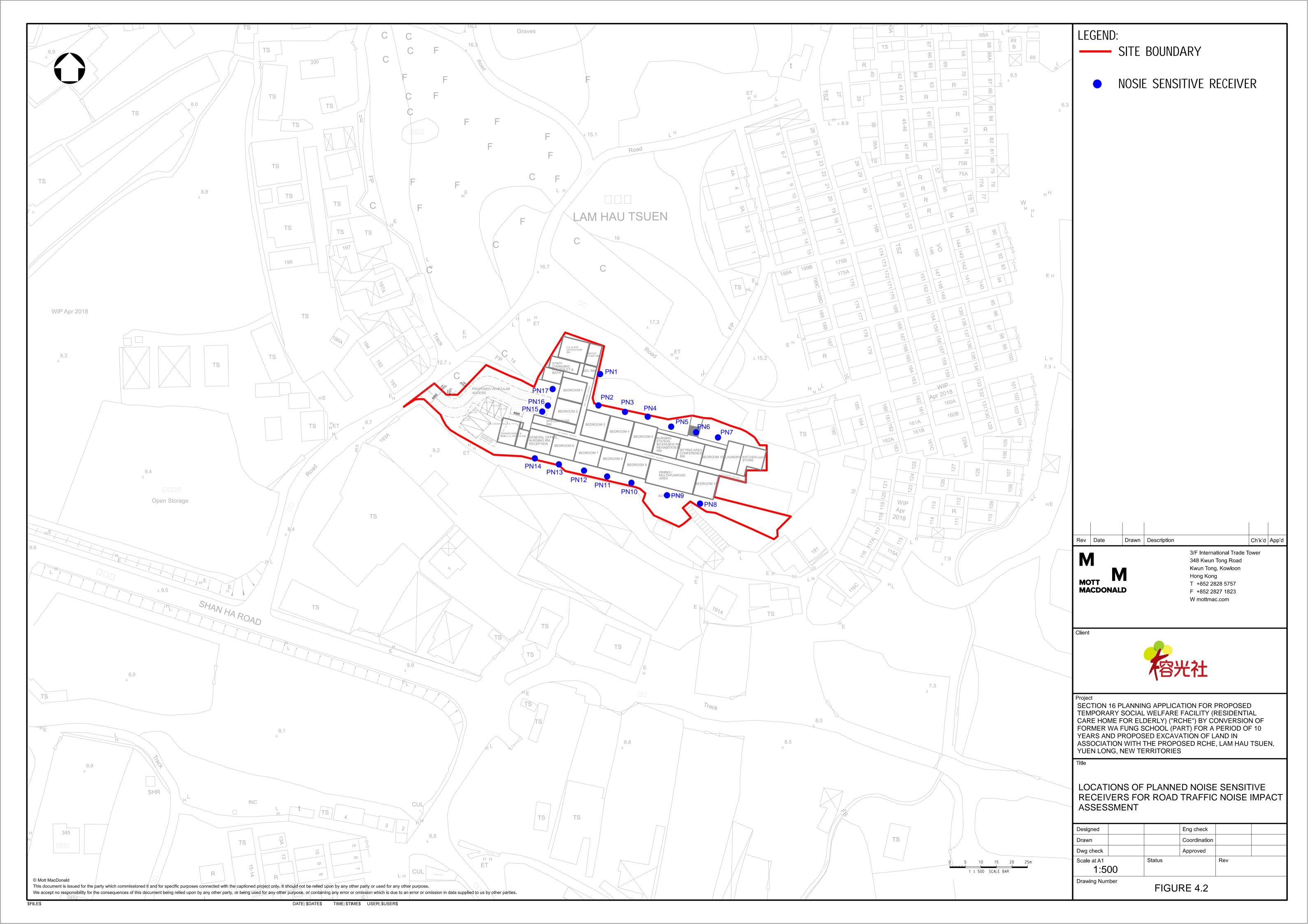
Figures

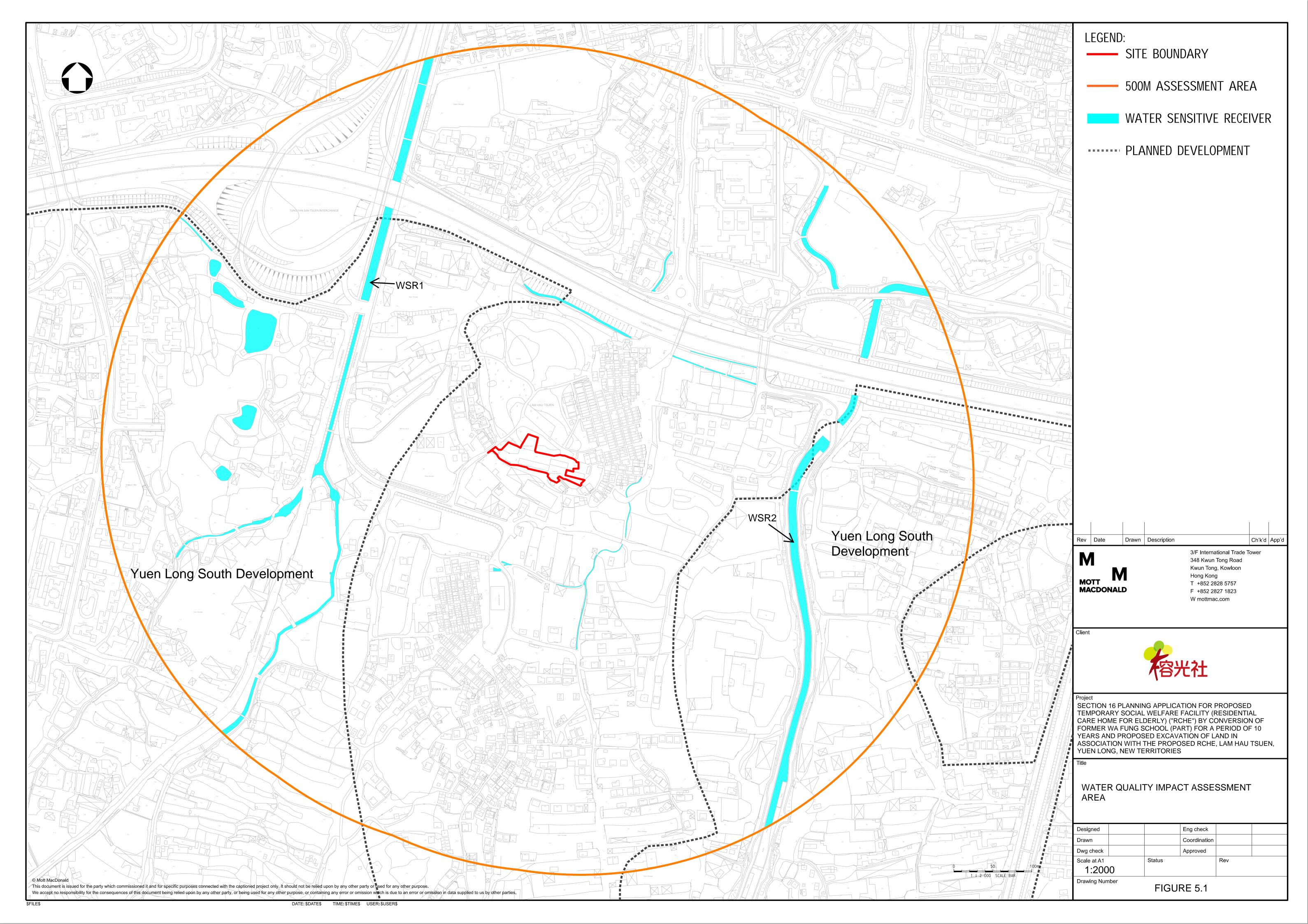


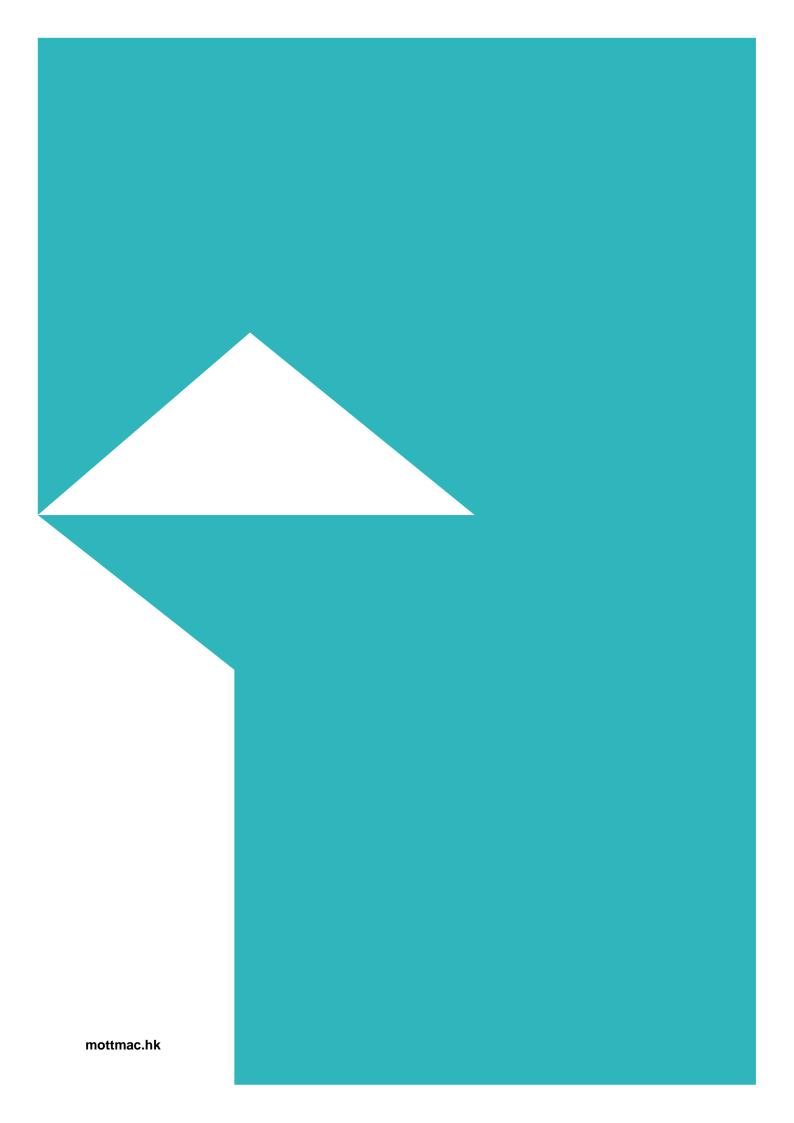


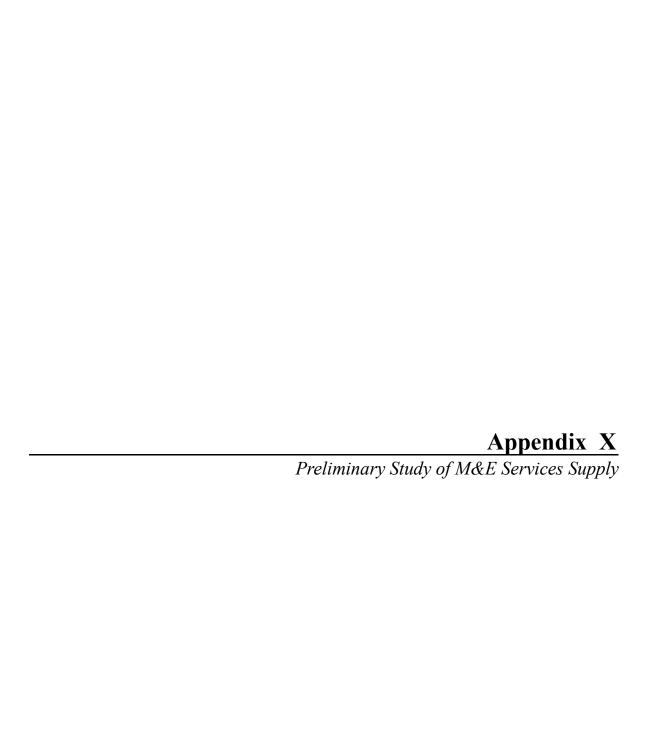












Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE")

by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE,

Lam Hau Tsuen, Yuen Long, New Territories

Preliminary Study of M&E Services Supply

October 2021

CONTENT

- 1.0 Introduction
- 2.0 Utility Services Availability
- 3.0 Electrical Supply
- 4.0 Water Supply for Plumbing Services
- 5.0 Water Supply for Fire Services
- 6.0 Summary

APPENDIX

- A. Site location plan
- B. Replies from Utility Services Companies
- C. Electrical Loading Estimation
- D. Estimation of Water Tank Capacity
- E. Preliminary planning layout
- F. M&E plant room mark-up

REVISION STATUS

Issue	Date	Status	Prepared by	Checked by	
1	12 Oct 2021	For comment	JL	PC	
2	21 Oct 2021	Revise as per comment	JL	PC	
3	04 Nov 2021	Revise as per comment	JL	PC	
4	18 Nov 2021	Revise as per comment	JL	PC	

1.0 Introduction

The former single-storey Wa Fung School (Part) in Lam Hau Tsuen, Yuen Long (the Site) with site area approx. 2,950m² intends to convert it into a temporary residential care home for the elderly ("RCHE") for a period of 10 years with approx. 100 beds in a single storey building and proposed excavation of land in associated with proposed RCHE.

Talent Mechanical & Electrical Engineers Ltd. (TMEE) was commissioned to provide M&E design input for this development study. This report presents the design planning of major mechanical and electrical services supply for the RCHE, including: -

- 1. Utility services availability;
- 2. Electrical supply;
- 3. Water supply for plumbing services and fire Services.

2.0 <u>Utility Services Availability</u>

Enquiry to major utility services companies for existing utility services in the vicinity of the site were issued. Replies received are summaries as follows:-

Utilities	Letter ref.	Services available in vicinity of the site
WSD	(15) in WSD/NTW 1370/2/3/2005 TJ(3)	Yes
CLP	N-2021-1026	Yes
Towngas	UNE2021/02097/N	No
HKT	HKT-20210729-0019-R-HKT	Yes
HKBN	(by fax)	No
HGC	HGC-NMP-20210728-0007	No
Drainage	Preliminary info. from Geoinfo Map	No

The above replies are attached in Appendix B for reference.

According to as-fitted information from utility services companies, major main supplies including water supply pipe, high voltage power supply cable, and telephone services line are available in the vicinity of the site for future connection. Exact arrangement would be subject to the utility services companies' proposal and designed in detail design stage

As gas supply is not available, extra electrical power should be allowed for electrical water heaters, kitchen cooking equipment, and laundry equipment.

Besides, there is no public sewerage infrastructure in the vicinity of the site. New underground drainage pipe works and facilities would be required Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories

subject to further study of Sewage Impact Assessment (SIA) and Drainage Impact Assessment (DIA).

3.0 Electrical Supply

3.1 Electrical Loading Estimation

Electrical loading of the RCHE is estimated at approximately 758kVA (i.e. approx. 1,150A 3-ph). The loading estimation includes power consumption of: -

- a. General power and lighting;
- b. Air-conditioning;
- c. Instantaneous electric water heaters;
- d. Electrical kitchen appliance;
- e. Laundry equipment; and
- f. M&E plant equipment

One (1) 1,000kVA power transformer is required for the site. Electrical loading estimation is attached in Appendix C.

3.2 Power Supply to Sub-Station

11kV high voltage supply will be fed by the CLP Power HK Ltd. (CLP) to the proposed sub-station for this development as shown on the planning layout in Appendix E.

Detail arrangement of high voltage supply and internal layout of the substation will be subject to detail design by the CLP.

4.0 Water Supply for Plumbing Services

4.1 Fresh and Flushing Water Supply

Fresh and flushing water supply will be fed from government supply main available in vicinity of the site to individual water tank of correspondent fresh water and flushing systems. Water storage tanks are proposed, instead of direct feed supply, to ensure minimum water supply to the RCHE in case of water supply suspension. Proposed locations for water tanks are shown on the planning layout in Appendix E.

Details of water supply main pipe arrangement will be subject to the Water Supply Department (WSD).

4.2 Estimation of Water Storage Capacity

Water storage capacity are estimated in accordance with the Waterworks Regulation as shown below: -

Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories

- a. Fresh water supply system with approx. 4,750L water tank
- b. Flushing water supply system with approx. 900L water tank

Assumptions:

Fresh water storage - 25 litres / bed

25 litres / seat of dining area

Flushing water storage - 40 litres / water closet

Estimation of water tank capacity refers to Appendix D.

5.0 Water Supply for Fire Services

5.1 Fire Services Requirements

According to the Codes of Practice for Minimum Fire Service Installations and Equipment issued by Fire Services Department (FSD), the RCHE (institution use) will be protected by firefighting systems including

- a. Fire Hydrant / Hose Reel System
- b. Automatic Sprinkler System, and

The above firefighting systems are "wet" systems and require water supply.

5.2 Water Supply to Firefighting Systems

Water supply will be fed from government supply main available in vicinity of the site to individual water tank of correspondent systems. Details of water supply main pipe arrangement will be subject to the WSD.

- a. Hose reel system with 2m³ water tank.
 (Fire hydrant installation is not necessary for single storey building)
- b. Automatic sprinkler system with 37m³ water tank. (RCHE classified as Ordinary Hazard Group 1 (OH1) according to the LPC Rules for Automatic Sprinkler Installations Incorporating BS EN 12845:2003 and with assumption of 2/3 of full storage capacity with direct telephone line to Fire Services Communications Centre (FSCC)

Alternative – Automatic sprinkler system with 55m³ water tank (According to Codes of Practice for Fire Safety in Buildings issued by Buildings Department (BD), full storage capacity of 55m³ sprinkler water tank as an enhanced fire safety provision to compensate for deficiency / non-provision of EVA might be required subject to comment from BD and FSD on future general building plans (GBP) submission.)

Proposed locations for water tanks, including alternative of upgrading of sprinkler water tank, are shown on the planning layout in Appendix E.

Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories

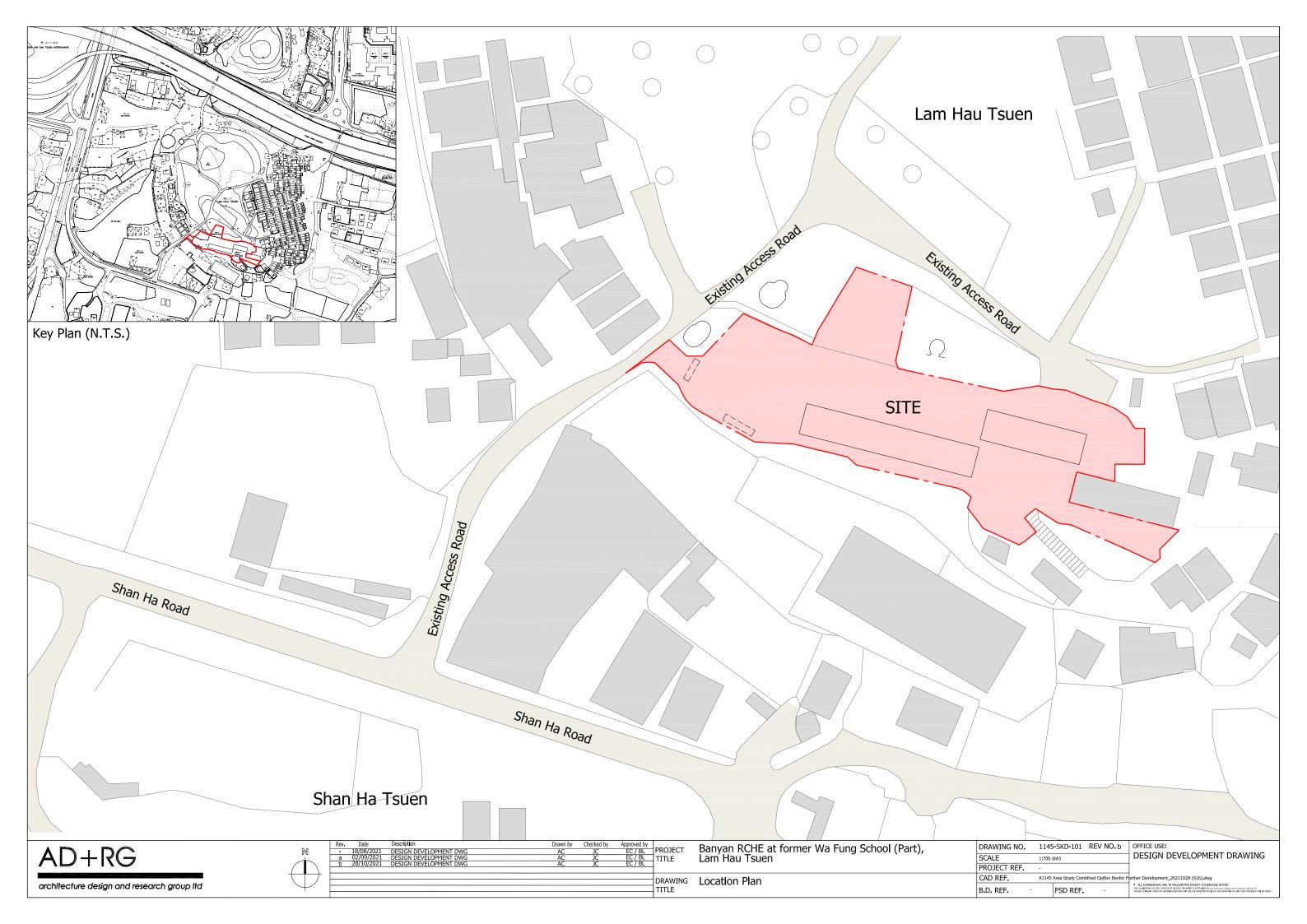
6.0 **Summary**

As-fitted information of utilities services are collected. Water supply, power supply, and telephone services are available in the vicinity of the site for future connection subject to detail arrangement of the utility services companies.

Preliminary planning design for M&E services including electrical supply loading, water tanks for plumbing services and fire services are studied. To facilitate the planning of layout, associated M&E plant rooms are proposed to suit the RCHE.

Appendix A

Site Location Plan



Appendix B

Replies from Utility Services Companies



水務署

Water Supplies Department

天水圍大樓 Tin Shui Wai Building 新界天水圍天柏路20號 20 Tin Pak Road, Tin Shui Wai, New Territories



本署檔號

(15) in WSD/NTW 1370/2/3/2005 TJ(3)

Tel.

電話: 37015014

Our ref. 來函檔號

202121/U/52785

傳真: 23980581

Your Ref.

DC

ALENT M & E ENGINEERS IF ax. SEEN ACTION DATE

28/07/2021

Talent Mechanical & Electrical Engineers Limited

Unit 203, 2/F, Dominion Centre 43-59 Queen's Road East, Wanchai Hong Kong

(Attn:Mr. W. C. Chow)

Dear Sir

Enquiry of Underground Utility Services Proposed Eldering Home in Former Wa Fung School, Lam Hau

I refer to your letter under reference dated 21 July 2021 and would like to return herewith a copy of plan(s) showing the existing water mains and waterworks installations in the vicinity. You are requested to note that the alignment of the water mains shown on the plan(s) returned is indicative only. Although it is our intention to provide you with the most up to date information, we cannot guarantee that the information returned to you is exhaustive. In particular, we cannot guarantee that all our water mains, especially those laid only recently, have been incorporated in our central records and hence on the plan(s) returned.

The exact lines and levels of the water mains as well as the materials that the water mains are made of should be established by hand dug trial holes on site if they are of significance to your works. You should instruct your consultants and/or contractors (as the case may be) to take all necessary measures during the design and/or construction stages (as the case may be) to avoid causing damage to the water mains and waterworks installations, for which you will be held responsible. A list of conditions for working in the vicinity of waterworks installations is also attached. Please also advise your Contractor/site staff to follow the procedures and practices described in the "Guidelines for Excavation near Water Mains" which is posted on WSD Internet Website www.wsd.gov.hk









04 Aug, 2021

Talent Machanical & Electrical Engineers Ltd.
Unit 203, 2/F
Dominion Centre
43-59 Queen's Road East
Wanchi, H.K.

Attention: W. C. Chow

Our ref.: N-2021-1026 Your ref.: 202121/U/52786

Dear Sir/Madam,



中華電力有限公司 CLP Power Hong Kong Limited

北區 North Region

香港新界上水嘉高坊 16 號 16 Ka Fu Close, Sheung Shui New Territories, Hong Kong

電話 Tel(852)2678 2156 傳真 Fax(852)2678 2180 網址 Website www.clpgroup.com

Proposed Eldering Home in Former Wa Fung School, Lam Hau

We refer to your letter dated 21 Jul, 2021 and enclose herewith our record sheet(s) showing the present location(s) of this Company's underground cables and / or overhead lines. The alignments of the cables and overhead lines could be altered in the future to meet the requirements of our power system.

You will find certain measurements, dimensions and distances marked on these record sheets. Although these figures are accurate to the best of our knowledge, information and belief, site conditions may have been altered since the measurements were taken. As such, CLP Power's record sheets are sent to you on the express condition that the locations of the underground cables and / or overhead lines and all measurements are our best approximation only, and should not be taken as accurate.

We request you, for the sake of safety, not to disturb any part of our equipment and not to construct manholes over and on top of our cable joints. No work or excavation shall be done in close proximity to any of our equipment without giving prior notice to us. We shall hold you responsible for any damage caused to our equipment.

You are advised to contact our Operations Engineer - Tuen Mun, WONG CHIU CHUN on telephone number 2678 3407 as soon as you are ready to commence work. To facilitate site co-ordination, please provide us with the name(s) of the responsible person(s), contact telephone number and tentative work commencement date.

2/.....



Cont. Page 2 of 2 Our ref.: N-2021-1026

Please be informed that the record of public lighting within your work site should be referred to relevant Lighting Division for details.

Yours faithfully,

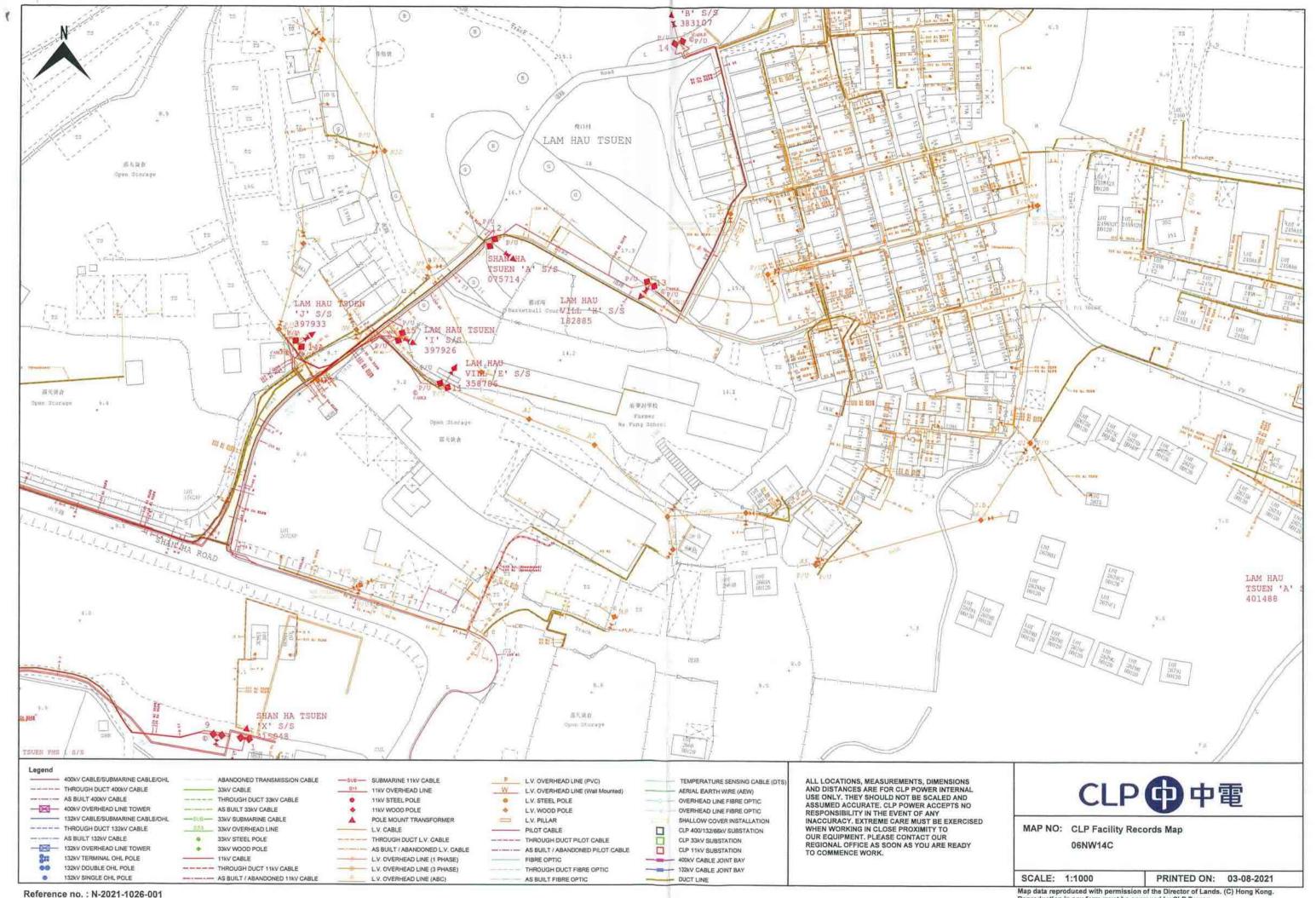
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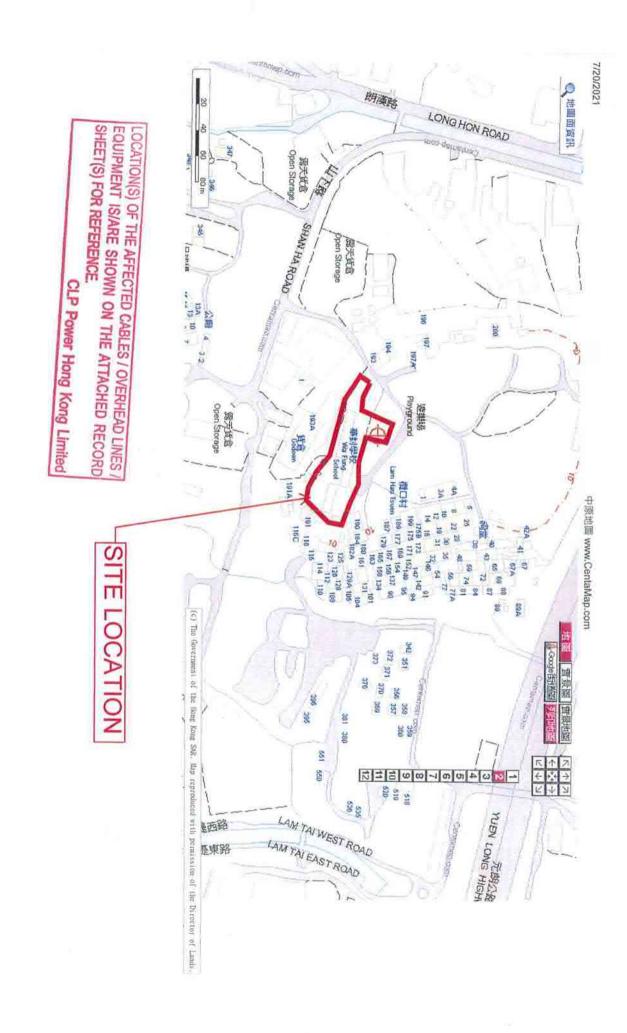
POON CHI FAI for Senior Planning & Design Manager North Region

cc. PD - Mr. LUI KEVIN KIN CHUNG

- Encl.: 1. Guidelines For Contractors Working In The Vicinity Of Electricity Cables And Overhead Lines
 - 2. EMSD Reference Document No. NU/26/01
 - 3. Drawing Reference No.: N-2021-1026-001

P.S.You are advised to note a Video For Contractors Working In The Vicinity Of Electricity Cables And Overhead Lines via a link of (http://clp.to/contractor-safety)







香港特別行政區政府 機電工程署 香港九龍啟成街 3 號 Electrical and Mechanical Services Department Government of the Hong Kong Special Administrative Region 3 Kai Shing Street, Kowloon, Hong Kong www.emsd.cov.hk

Our reference 本署檔號:

EMSD/ELD-NU/26/01

Your reference 來函檔號:

Telephone 電話號碼:

Focsimile 圓文傳真: (852) 2895 4929

25 November 2019

Dear Sir/ Madam,

Safety Requirements Relating to Works near Electricity Supply Lines

To prevent electrical accident and power interruption due to damage to electricity supply lines (underground electricity cables and overhead electricity lines owned by electricity suppliers) arising from works in the vicinity, the Government enacted the Electricity Supply Lines (Protection) Regulation (Chapter 406H) to regulate works in the vicinity of electricity supply lines and require certain safety precautions to be taken before and during the course of the works.

As you or your company may be involved in works in the vicinity of electricity supply lines, I would like to advise you that Section 10 (1) of the Regulation requires that, before carrying out the works, all <u>reasonable steps</u> have to be taken to ascertain the existence of the electricity supply lines and the information relating to their alignment, depth/ safety clearance, etc. In the case of underground electricity cables, you shall ensure that a competent person, approved by this Department, is employed to ascertain the information as part of the reasonable steps. In addition, Section 10 (2) of the Regulation requires that, during the course of the works, all <u>reasonable measures</u> have to be taken to prevent the occurrence of electrical accident or interruption to electricity supply arising from those works. A person who contravenes any requirement of the Regulation commits an offence and is liable to a maximum fine of \$200,000 and to imprisonment for 12 months.

To prevent damage to electricity supply lines, you are therefore strongly advised to comply with the safety requirements of the Regulation when carrying out works in the vicinity of electricity supply lines. A pamphlet containing brief information on the subject is attached for your perusal (http://www.emsd.gov.hk/emsd/eng/pps/electricity_pub.shtml). A Code of Practice published to provide practical guidelines on how to comply with those safety requirements is available at EMSD's website

(http://www.emsd.gov.hk/emsd/eng/pps/electricity_pub_cp.shtml).

Should you have any enquiry on this matter, please contact our Senior Electrical Inspector Mr. Y.M. LEUNG at telephone no. 2808 3176.

Yours faithfully,

(K.M. CHENG)

for Director of Electrical and Mechanical Services

敬啟者:

有關在供電電纜附近進行工程的安全規定

為避免因施工不慎而損毀供電電纜(供電商所擁有的地下電纜及架空電纜),引起電力意外及停電事故,政府制定《供電電纜(保護)規例》(第 406H 章),規定在供電電纜附近進行工程時,在施工前及在施工期間,必須採取若干安全預防措施。

若閣下或貴公司可能會在供電電纜附近進行工程,請注意該規例第 10(1)條規定在施工前,閣下或貴公司必須採取一切<u>合理步驟</u>以確定是否有供電電纜存在,並確定該供電電纜的有關資料,例如其位置、深度/安全距離等。就地下電纜而言,閣下或貴公司必須安排一名獲本署認可的合資格人士負責確定上述資料的工作,作為其中一項應採取的合理步驟。此外,該規例第 10(2)條亦規定,在施工期間,閣下或貴公司必須採取一切<u>合理措施</u>,以防止因該工程的進行而造成電力意外或電力供應故障。任何人如違反該規例的規定,最高可處罰款 20 萬元及監禁 12 個月。

為避免供電電纜遭受損毀,現促請閣下或貴公司在供電電纜附近進行工程時, 嚴格遵守上述規例的安全規定。現隨函附上宣傳單張以供參考

(http://www.emsd.gov.hk/emsd/chi/pps/electricity_pub.shtml),

至於如何符合上述規例要求的實際指引,閣下或貴公司可參閱上載於本署網頁的《有關在供電電纜附近工作的實務守則》

(http://www.emsd.gov.hk/emsd/chi/pps/electricity_pub_cp.shtml) •

如對有關事宜有任何查詢,請致電 2808 3176 與本署高級電氣督察梁耀明先 牛聯絡。

機電工程署署長

(鄭冠文 (加州 代行)

2019年11月25日

GUIDELINES



FOR CONTRACTORS WORKING IN THE VICINITY OF UNDERGROUND ELECTRICITY CABLES AND OVERHEAD LINES

These Guidelines provide reference for contractors and relevant persons who may require to plan or work in the vicinity of CLP Power Hong Kong Limited (CLP)'s underground electricity cables and overhead lines (Electricity Supply Lines). For the details of technical requirement of working near underground electricity cables (cables) and overhead lines, please contact CLP representatives.

Contractors are reminded to refer to the Electricity Supply Lines (Protection) Regulation and the Code of Practice on Working near Electricity Supply Lines which are issued by Electrical and Mechanical Services Department (EMSD) before commencement of works.

Pre-planning

Check the cable and overhead line drawings to see if any electricity supply lines are in the vicinity of works. If the drawings are not available, contact CLP for assistance.

Inform CLP Representative

Contact CLP representative by telephone if necessary. A contact list is shown on the back page. Or you can call the CLP's 24-hour hotline on 2728 8333.

Locating Cable Alignment (for Overhead Line Alignment, Go to Step 6)

Before excavation commences, contractor shall request a registered Competent Person to detect and verify any cable in or near the proposed works site by using suitable non-destructive cable locating device. Details of the detection shall refer to the Code of Practice on Working near Electricity Supply Lines issued by EMSD.

Site Meeting

If site meeting is necessary at any work stage, ensure the 'approximate' alignment of the cables and boundary of works on ground level are marked on site first before explaining the scope of works to CLP representative.

Trial Holes

After detection, ascertain and confirm the exact position of cables by hand digging trial holes. Before beginning trial hole excavation, the contractor shall inform CLP of the nature of the intended works if (a) the target cables are of 132kV or above; or (b) the works involve trenchless excavation or horizontal drilling such as pipe jacking and soil nailing, etc. Arrange temporary protection according to CLP's requirement if cables are exposed.

Cables and Overhead Lines Identification

Should there be any doubt regarding discrepancies between the detection / location result and the CLP's cable / overhead lines drawings, or the contractor encounters genuine difficulty in identifying the cables / overhead lines shown in the drawings, contact CLP representative for assistance or clarification on site when required. Arrangement is to be made for this as in STEP 2.

Arrange Precautions and Protection

Cable: Install temporary cable markers to indicate the exact position of the cables and take necessary precautions, as appropriate to guard against accidental damage to the cables. Protect and support the cables properly on site.

Overhead Line: (a) Set up ground level barrier and gateway as appropriate to limit the working area and height when working near overhead lines; and (b) Assign a signaler to guide the movement of equipment, plant and tools to maintain a safe working distance from overhead lines.

Regular Inspection

Contractors should carry out regular inspections to ensure that the workers do follow the instructions given. For large construction sites, a representative shall be nominated to liaise with CLP representative and carry out the regular inspections.

Resolving Site Problems

When site problems arise due to the presence of electricity supply lines, contact CLP representative for assistance.

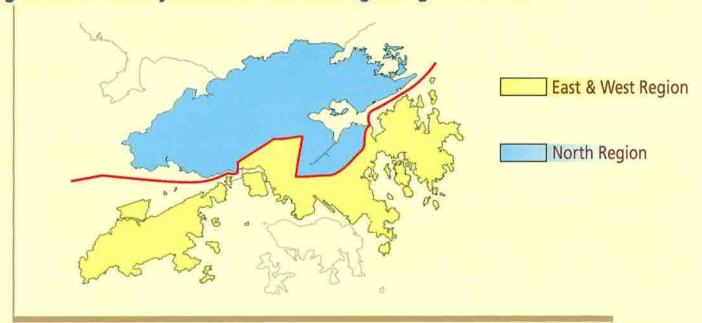
Backfilling

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Inform CLP representative to inspect the cables prior to soil backfilling. The works area and ground condition shall be reinstated to their original status.

Regional Boundary of CLP Power Hong Kong Limited



Contact Details of CLP Power Hong Kong Ltd.

General enquiries for mark-up drawing of planned site work:

Regional Office	F	Responsible Ar	reas	Telephone No. Fax No.		Address	
East & West Region	Yau Tong Kwun Tong Lam Tin Sau Mau Ping Kowloon Bay Ngau Tau Kok Choi Hung San Po Kong Wong Tai Sin Diamond Hill Lantau	Tsz Wan Shan Sai Kung Tseung Kwan O Clear Water Bay Tsim Sha Tsui Yau Ma Tei Hung Hom Tai Kok Tsui Mong Kok To Kwa Wan	Sham Shui Po Shek Kip Mei Cheung Sha Wan Lai Chi Kok Kwai Chung Tsuen Wan Tsing Yi Tung Chung Peng Chau Cheung Chau	2678 3799	2678 3737	1 To Wah Road, Jordan, Kowloon	
North Region	Sham Tseng Siu Lam Tuen Mun Yuen Long Kam Tin Tin Shui Wai	Sheung Shui Fanling Tai Po Shek Kong Tai Mei Tuk	Sha Tau Kok Lok Ma Chau Tai Wai Sha Tin Ma On Shan	2678 2156	2678 2180	16 Ka Fu Close, Sheung Shui, N.T.	

Emergency enquiries for mark-up drawing of emergency site work:

Tel No.: 2678 6704 (Office hours: 08:30 - 17:00, Monday - Friday)

Tel No.: 2728 8333 (After office hours)

Fax No.: 2678 6757 (24-hour)

Incident reporting

Tel No.: 2728 8333 (24-hour hotline)



工作指引



承建商於地下電纜及架空電纜附近工作

本指引供需要於中華電力有限公司(簡稱"中電")地下電纜及架空電纜(簡稱"供電電纜")附近進行規劃或工程的承建商及有關人士參考。有關於地下電纜(簡稱"電纜")及架空電纜附近工作的技術要求,請聯絡中電代表。

施工前,承建商必須參考《供電電纜(保護)規例》及機電工程署出版之《有關在供電電纜附近工作的實務守則》。

事前規劃

檢查電纜及架空電纜圖則,確定工地範圍內是否敷設供電電纜。如未能取得有關圖則,請聯絡中電以要求協助。

通知中電代表

在有需要時,請聯絡中電代表。通訊資料已載列於本指引背頁。如有任何疑問,亦可致電 24小時緊急服務熱線: 2728 8333。

確定地下電纜敷設路線(有關果空電纜敷設路線,參照步驟六)

在進行挖掘工程前,承建商必須僱用合資格人士及使用已調校的非破壞性電纜探測器進行探測,以確定於建議工地範圍內或附近電纜的敷設路線。有關進行探測的詳情,請參閱機電工程署出版之《有關在供電電纜附近工作的實務守則》。

步。召開工地會議

四 如在工程過程中有需要召開工地會議,先確認已在工地地面標明電纜所在大概位置 及工程範圍,才向中電代表解釋工作範圍。

試孔

探測工序完成後,應使用手掘方法挖掘試孔,以確定電纜敷設的準確位置。在挖掘試孔前,如果(a)目標電纜的電壓在132千伏或以上;或(b)工程涉及無開坑挖掘或橫向鑽探,例如:頂管工程及打泥釘等,承建商必須把擬進行工程的性質通知中電。挖掘過程中如發現電纜顯露於泥面,則根據中電要求採取臨時保護措施。

確定地下電纜及架空電纜

若對探測/位置之確定結果與中電的地下電纜/架空電纜圖則之間的差異有任何 疑問,或承建商在確定圖則所示的地下電纜/架空電纜時遇到困難,請聯絡中電 代表以尋求協助。或要求中電代表到工地加以澄清。聯絡方法可參照步驟二。

採取預防及保護措施

電纜:按情况設置臨時電纜標誌以顯示電纜所在的確實位置,並採取必要的預防措施以保護及防止電纜遭受意外損壞。請於工地內作適當保護及支撐電纜。

架空電纜:(a)於架空電纜附近工作時,應在地面架設適當的屏障和閘口,以限制工程範圍和高度及;(b)承建商必須委派一名信號員負責指引有關設備、機械及工具的移動以確保與架空電纜有足夠安全工作距離。

進行定期檢查

承建商須進行定期檢查,以確保工人遵守所發出的工作指引。如工程涉及大型建築工地,承建商須委派代表與中電代表保持聯繫,並定期執行上述的檢查。

解決工地問題

力 在工程進行中有關電纜或架空電纜導致的工地問題,可聯絡中電代表以尋求協助。

回填

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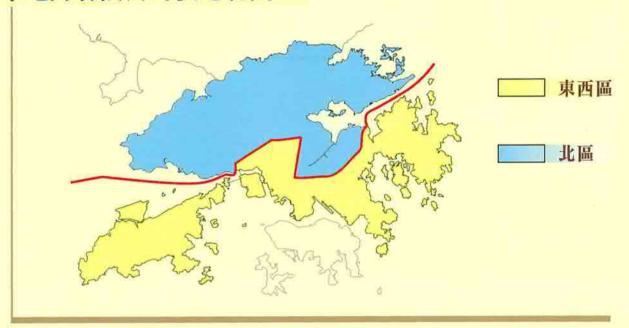
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險

於回填前,應通知中電代表以檢查電纜,在檢查電纜完成後始將工地範圍和地面回復原狀。

中華電力有限公司供電範圍



中華電力有限公司通訊資料

有關地下電纜及架空電纜規劃工程圖則的一般查詢:

地區辦事處	管轄	地區		-電話	- 傳真	
東西區	油塘 黃大仙 觀塘 鑽石山 慈雲山 秀茂坪 西貢 九龍灣 將軍澳 牛頭角 清水灣 彩虹 新蒲崗 油麻地	紅 大旺土深石長荔	葵 蒼 灣 衣 嶼 涌 瀬 天 興 飛 洲 長	2678 3799	2678 3737	九龍佐敦 渡華路1號
北區	深井 錦田 小欖 天水園 屯門 上水 元朗 粉嶺	大埔 石崗 大尾篤 沙頭角	落馬洲 大園 沙田 馬鞍山	2678 2156	2678 2180	新界上水 嘉富坊16號



有關地下電纜及架空電纜工程圖則的緊急援助查詢:

電話: 2678 6704 (辦公時間: 08:30 - 17:00, 星期一至星期五)

電話: 2728 8333 (辦公時間後) 傳真: 2678 6757 (二十四小時)

二十四小時緊急服務熱線:電話:2728 8333



Please note that existing asbestos cement (AC) or unknown water pipes are identified in the vicinity of your project/works area. It is very likely that the unknown water pipes are AC water pipes. You are strongly advised to make special provisions including monitoring measures as necessary to protect these water pipes that are vulnerable to damage. Should diversion/replacement of AC or unknown water pipes be found necessary to be carried out in conjunction with your proposed works after detailed investigations or studies, you should instruct your consultants and/or contractors (as the case may be) to take all necessary measures during design and/or construction stages (as the case may be) to comply with all prevailing statutory requirements for the safe handling, removal, transportation and disposal of AC pipes.

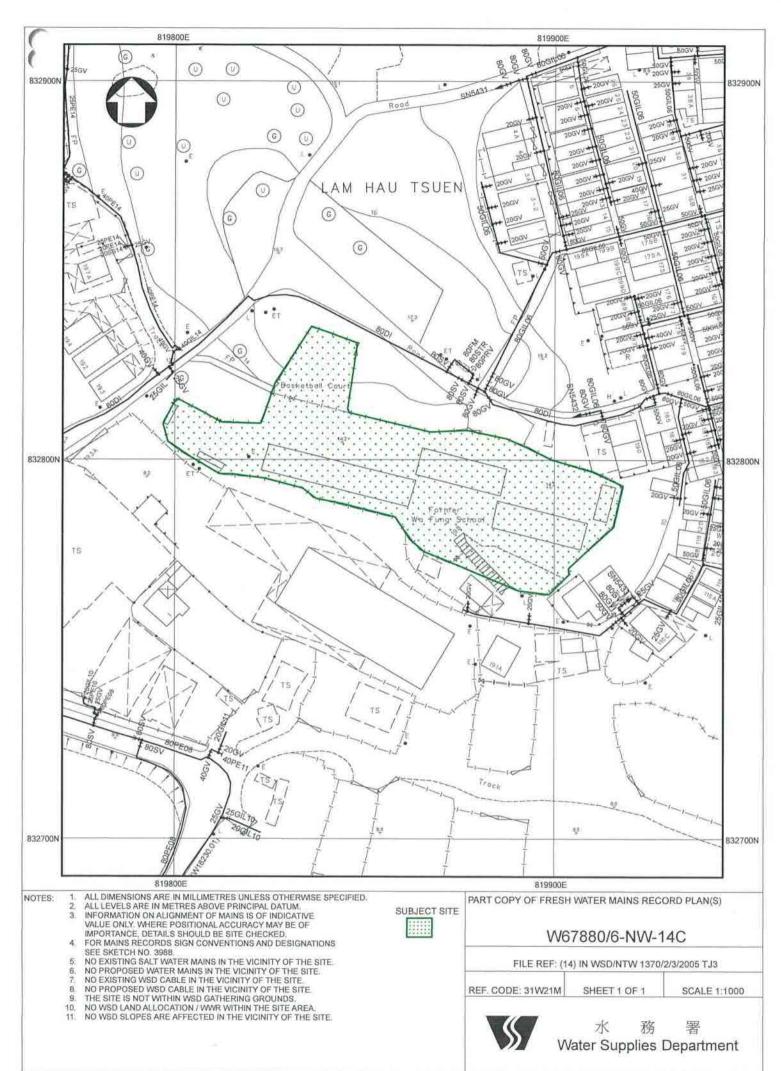
Yours faithfully,

(LAI CHUN FUNG)

for Chief Engineer/New Territories West Water Supplies Department

Encl.

SIGN CONVENTIO	NS	ABBREVIATIONS						
		ADDICTIONS						
MAINS TYPE	LEGEND	PIPE N	IATERIAL			METER	1	
FRESH / SALT WATER MAINS		AC	ASBESTO	OS CEMENT		EMFM	ELECTROMAGNETIC FLOV	VMETER
RAW / UNTREATED WATER MAINS / CONDUIT	-0-0-0-	CI	CAST INC	NC		FM	FLOWMETER	
WASHOUT PIPE / OVERFLOW PIPE		CONC	CONCRE			WDM	WASTE DETECTION METE	R
SLUDGE PIPE	- • • -	COPP	COPPER			DM	DISTRICT METER	
TREATED EFFLUENT MAINS		DI	DUCTILE			VALVE		
WATER MAINS REQUIRE REGULAR FLUSHING		GIL		ZED IRON ALVANIZED IRON		BV	BUTTERFLY VALVE	
PIPE LAID IN SLEEVE PIPE LAID IN TROUGH		GMS		ZED MILD STEEL		GV	GATE VALVE	
PIPE LAID INSIDE TUNNEL		GRP		BRE REINFORCE) PLASTIC	SC	STOP COCK	
BEING LAID MAINS		MDPE	MEDIUM	DENSITY POLYET	HYLENE	sv	SLUICE VALVE	
WATER TUNNEL	====	MS	MILD STE			ν	GENERIC VALVE	
PROPOSED MAINS		PE	POLYETH	IYLENE		WOV	WASHOUT VALVE	
PRIVATE MAINS (SEE NOTE 2)		SS	STEEL	SS STEEL		AIR VA	LVE	
MAINS OF OTHER DEPARTMENTS (SEE NOTE 3)		UPVC		ICISED POLYVINY	(LCHLORIDE	AV	GENERIC AIR VALVE	
FIRE SERVICE	₹pH				C OTTEST NO.	SAV	SINGLE AIR VALVE	
PEDESTAL FIRE HYDRANT	Q GH	REHA	HLITATION	METHOD		DAV	DOUBLE AIR VALVE	
GROUND FIRE HYDRANT HEAVY DRAW-OFF FIRE HYDRANT		RA		N PLACE PIPE		MDAV	MULTI - PURPOSE DOUBLE	AIR VALVE
SWAN NECK FIRE HYDRANT	r - sn	RB		FIT (FOLD AND FO	•	ATV	GENERIC AIR VALVE ON IN	
TWIN OUTLET SWAN NECK FIRE HYDRANT		RD		NG / SLIP INSERTI		STV	SINGLE AIR VALVE ON INS	
VALVE		RE RF		IT (SWAGELINING INFORCED PLAST		DTV	DOUBLE AIR VALVE ON INS	SPECTION TEE
		RG RG		LINFORCED PLAST LLINING REPAIRS		ALPHA	BET OF ESSENTIAL VALV	<u>'E</u>
VALVE (SEE ABBREVIATIONS) NORMALLY CLOSED VALVE	——————————————————————————————————————	RH		L COATING REPA			ENCE NUMBER	_
NORMALLY CLOSED VALVE FLAP VALVE	- CAFV	RK		TION OF INTERNA		FRESH	WATER NETWORK SYSTEM	
FLOW REGULATING VALVE	FRV	1	LINING RI	EPAIRED AND EXT		В	CONTROL VALVES OF DIRI	FCT
NON RETURN / REFLUX VALVE	— NRV	RL	COATING PIPE BUR	REPAIRED		J	TEEING OFF TO SUPPLY F	MOR
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Conditions of Working in the Vicinity of Waterworks Installations

Water Mains

- 1. No water mains or their support shall be interfered with or buried without the prior approval of WSD.
- 2. The Contractor shall check the location of water mains and cables and other services by hand dug trial holes and take precautionary measures to protect them.
- 3. Free access shall be maintained at all times for the staff of WSD, their contractors and vehicles to go into and/or through the site to carry out installation, inspection, operation, maintenance or repair works.
- 4. No additional filling material is to be deposited over a water main without the approval of WSD.
- 5. No structures shall be erected or materials stored within 3 metres from the centre line of mains of 900mm diameter or under, and 5 metres for mains exceeding 900mm in diameter.
- 6. No cable, pipe or duct shall be laid over, in parallel to, or within the Waterworks Reserve or 300mm around, the water mains without prior written approval form WSD. No trees or shrubs with penetrating roots shall be planted within the Waterworks Reserve or within 2.5m from the edge of the water mains. No planting or obstruction of any kind except turfing shall be permitted within the space of 1.5m around the cover of any WSD valve or within a distance of 1m from any hydrant outlet.
- 7. No footing shall be constructed above any existing water mains. Isolated footings shall be constructed instead of continuous footing for installation of the hoarding in the vicinity of the existing water mains. A minimum clearance of 300mm between the footing and the existing water mains shall be maintained.
- 8. Full details of any proposed temporary works affecting waterworks installations and of any temporary support or protective measure to mains shall be submitted to the Client Department where appropriate for approval and to WSD for information. Work shall not commence until approval is given by the Client Department.
- 9. Diversion of WSD mains, other than those already shown on the contract drawings, shall only be considered when all other options such as protection of the mains or modification of design have been considered and found to be impracticable.
- 10. The programme for laying or diversion of all WSD mains shall be agreed with WSD in advance. A 14-day notice shall be served to WSD to confirm site availability for the commencement of any agreed diversion. WSD shall also be notified of any change required in the agreed programme as soon as possible.

11. All excavation works within 1.5m of water mains exceeding 900 mm in diameter shall be carried out by hand. No excavation shall be carried out within lines 45° below the centre line of such mains or 45° below the edges of the foundation of their supports without approved ground support. If the support is in the form of steel sheets, they shall be left in place after works. Removal of support from underneath the mains is not permitted. In general, the maximum acceptable differential settlement of existing pipe is as follows unless otherwise specified —

Pipe material	AC	DI	GI	PVC	MS
Maximum acceptable differential settlement	1 in 400	1 in 200	1 in 200	1 in 400	1 in 200

- 12. No earth fill ramps are to be used to form temporary crossings of the large diameter mains. Temporary ramps/bridges in steel, timber, or concrete shall be used with the deck and support piers clear of the mains so that no loading is imposed on the mains.
- 13. All temporary works near the large diameter water mains shall be kept to at least 1 metre away from the edge of the mains and the length of mains affected shall be well protected by a temporary timber cover raised 250 mm clear of the mains to ensure no impact damage.

Blasting, Drilling and Piling near Waterworks Installations

- 14. No blasting, drilling, or pile driving (including sheet piling) within a distance of 60m from waterworks tunnels shall be carried out. Furthermore, blasting within 50m from any water retaining structure other than watermains; 6m from watermains of 600mm diameter and above; and 6m from any non-water-retaining structure shall not be carried out without the prior approval of WSD.
- 15. The maximum particle velocity and amplitude of ground movements due to blasting or pile driving as measured at the nearest waterworks tunnel or other water retaining structures shall not exceed 13mm/sec. and 0.1mm respectively.
- 16. The maximum particle velocity and amplitude of ground movements due to blasting or pile driving as measured at the nearest water mains shall not exceed 25mm/sec. and 0.2mm respectively.
- The size of charge, pattern and timing of detonation etc. will be decided by the Commissioner of Mines after carrying out test firing at site.
- 18. The movement of mains and structures shall be monitored by surveys jointly attended by WSD, the project Department and the Contractor. One week's notice shall be given to WSD for any survey request.
- 19. Vibration from blasting, piling or other causing activities shall be monitored by means of agreed vibrograph readings. The vibrograph shall comply with the Specification below and shall be provided free by the Contractor.

20. The results of monitoring of the vibration and any movement of water mains and waterworks structures shall be submitted to WSD for record purpose. If the aforementioned vibration limits are exceeded or movement in excess of 5mm is detected, works shall be suspended until approved remedial works are completed. Full details of the proposed works shall be approved by WSD before any work commences.

Specification for Vibrograph

- (a) The machine shall be a direct reading type peak particle velocity vibrograph.
- (b) It shall have 3 channels, recording in 3 mutually perpendicular directions.
- (c) It must be able to record particle velocity and amplitude, although not necessarily at the same time.
- (d) It must produce a permanent trace on paper, preferably by using ultra-violet light.
- (e) The recording paper must be easily obtainable locally.
- (f) The instrument must be portable and battery operated (or else a generator must be supplied free).
- (g) Operating instructions must be in English.

Excavation near Waterworks Installations ---

- 21. Excavation shall not be permitted within lines drawn at 45° downwards from a point 6m away from the foundation lines of any waterworks structures.
- 22. No excavation should be carried out within 60 metres, horizontally of any tunnel and no excavation or well driving shall be carried out above any tunnel.
- 23. No quarrying operations shall be carried out above and/or within 150 metres horizontally from any waterworks tunnel.

Prevention of Pollution of Waterworks Catchments

- 24. Site formation, construction and drainage plans shall be submitted to WSD for approval prior to commencement of work.
- 25. Protective measures shall be taken by the Contractor to prevent pollution or siltation to the catchment area. Any bulk excavation within the catchment shall be provided with silt traps to prevent any particular matter from entering streams or intakes. The details of silt traps shall be submitted to WSD for approval. Silt traps shall be cleared out regularly and in particular after any rainstorm.

- 26. The storage and discharge of pesticides, toxicant, flammable or toxic solvents, petroleum oil, diesel, tar or other toxic substances are strictly prohibited within the gathering grounds.
- No labour lines shall be allowed within waterworks catchment area.
- 28. Only dry-type portable toilet facility with regular desludging schedules is allowed during the construction period. The sludge must be disposed of properly outside the gathering grounds. Portable toilets shall be kerbed on all sides, located at least 30 metres away from the streams and desludged on a regularly basis.
- 29. The Contractor shall be responsible for cleaning frequently any waterworks roads and associated drainage works of mud and debris.
- Should pollution be detected in future due to the development, immediate remedial actions to clear the pollution must be taken by the Contractor.

Waterworks Installations (e.g. Treatment Works) Nearby

- 31. The Contractor will not be permitted access to any adjacent waterworks installations.
- 32. An unimpeded free vehicular access shall be maintained at all times to and from the adjacent waterworks installations in the vicinity.

Special provisions

33. WSD may impose further conditions as deemed necessary for the protection of waterworks that may be adversely affected by the proposed works including but not limited to the appointment of independent checking engineer and specialists at the expense of the project.

Subways/ Underpasses Nearby

- 34. The contractors to check if the proposed works in the vicinity of waterworks are located in the vicinity of subway(s)/underpass(es) in the presence of water mains that may flood the tunnel or subway in case of water mains burst; and
- 35. If affirmative, carry out an assessment of the impact of water mains burst on the nearby subway(s)/underpass(es) and submit to HyD and WSD for approval before commencement of the works, including the proposed precautionary or mitigating measures to protect the affected water mains/underpass(es)/subway(s) and the public using the facilities.

Flow Chart on Procedures for Safe Working Near Water Mains

Step 1: Circulate Layout Plans to WSD

Circulate layout plans with relevant details to WSD to request indication of the existing pipeline alignment near the work, before commencing any excavation.

NO

Step 2: Check Pipeline Alignment

Check the marked-up plans or M.R.P. returned from WSD to see if any existing water main may be affected?

Legend:
M.R.P. - Mains Record Plans

YES/Uncertain

Step 3: Make Use of Pipe Detector

to ascertain the approximate alignments & depths of water mains near the work, before digging trial holes.

<u>'</u>

Step 4: Hand-dug Trial Holes

Dig trial holes by hand tools to ascertain the exact positions & depths of water mains, before using mechanical plant for excavation.

NO

Any WSD installation affected by the work?

YES

Step 5: Consult WSD Staff

Contact the relevant Regional
Inspector/(Inspection) of WSD for
assistance, whenever there are problems in
locating or protecting existing water mains.

Contact Telephone Numbers.

Contact telephone numbers of WSD's Regional Inspector/(Inspection) during office hours are as follows:

Region

Hong Kong & Outlying Islands 2880 2536 Kowloon Region 2360 6544

New Territories West Region -2399 4347

New Territories EastRegion - 2152 5755

Step 6: Execute the Work Safely

by operating the heavy mechanical plant carefully, taking all necessary precautions avoiding malpractices, implementing the formulated protective measures strictly and providing adequate site supervision.

Step 7: Backfilling of Pipe Trenches

Notify WSD staff before backfilling, and backfill with suitable materials in layers with adequate compaction. Report Emergency Incident

In case that water main burst or leak is discovered, please report to WSD immediately.

Customer Telephone
Enquiry Centre
24 hr. hotline
2824 5000



香港中華煤氣有限公司 The Hong Kong and China Gas Company Limited





TALEN! M & E ENGINEERS LTC. SEEN ACTION DATE

CIRC

03 August 2021

Your Ref: 202121/U/52787 Our Ref.: UNE2021/02097/N

Talent Mechanical & Electrical Engineers Ltd. Unit 203, 2/F, Dominion Centre 43-59 Queen's Road East Wanchai Hong Kong

Attn.: Mr. WC Chow

Dear Sirs

Re: Proposed Eldering Home in Former Wa Fung School, Lam Hau, Yuen

We refer to your letter dated 21 July 2021 and write to advise that as far as our records show, there is no gas pipe within this site. However, there is the possibility that some gas pipes, particularly those laid long time ago or laid by other Registered Gas Contractors, may not appear in our records. In the case of some unknown pipes being exposed during your construction work or for the matters related to existing pipeline, you may contact Mr. Daniel Huang on telephone no. 2765 5610 or Mr Au Chi Yu on 2963 1811 to arrange for a joint site inspection regarding the pipe location.

If your work involves construction of new manholes or performing operation in existing manholes, we recommend sealing off all the duct openings in new/existing manholes, to avoid accumulation of hazardous gas in manholes, which might create a dangerous explosive environment.

Yours faithfully

ROEric F Tsang

Senior System Development Manager

ET/une

Encl Get All Safe Leaflet

Avoiding Danger from underground Gas Pipes and Electricity Cables Leaflet



[此乃中文譯本,內容以英文本為準]

		•		來函編號: 本函編號:
	٠.			
华生八州	,		•	

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查的煤氣管道

茲收到貴公司於____年__月__日發出的函件,現通知貴公司,根據現有的記錄顯示,並無地下媒氣管道安裝於上址。但是,上址仍可能有其他氣體管道存在而本公司並無記錄,尤其是在很久以前已鋪設或由其他的註冊氣體工程承辦商鋪設的氣體管道。

如貴公司的工程包括新建沙井或於現有沙井內進行,本公司建議將沙井內所有導管接口密封,避免積聚危險氣體而可能引致爆炸。

實公司如於建築工程進行期間發現來歷不明的管道或關於現有喉管的事宜·請致電 27655610 通知黃定國先生 或 29631811 聯絡區志裕先生安排工地祝察·

高級系統發展經理

曾帆 謹啟(日期)

General Requirements of Construction Works Adjacent to the Existing Gas Station (GS)

- 1. Contact HKCG at least one month in advance for site inspection before commencement of construction work adjacent to the GS.
- 2. Should any vibration is induced by the construction works, the vibration force acting on the gas facilities inside GS should not be more than 13mm/s PPV and 0.1mm vibrational amplitude.
- 3. The station access shall be maintained at all time.
- 4. The site should be kept reasonably level, adequately drained and free from flooding, landslip and subsidence.
- 5. The contractor should keep clear of the existing drainage system for preventing the station from flooding throughout the construction period.
- 6. Minimum clearance from inlet and outlet gas pipeline of GS shall be 2.5 metres and the span of exposed pipe section should not be longer than 8 metres and 2.2 metres for steel and D.I. gas pipes respectively.
- 7. Minimum clearance from the station boundary shall be 1.0 metre from the toe wall of palisade fence and the fence should never be used as a path or a conductor for welding process.
- 8. Operating range of any tower crane or lifting appliances should be outside GS. Risk assessment should be conducted so that the gas facilities inside GS will not be affected even in case the worst of tower crane / high-rise scaffolding collapse especially during strong wind season.
- 9. Should there be settlement expected to be caused by the work, the predicted settlement contour should be forwarded to HKCG for assessment of the impact.
- 10. Vibration monitoring records should be forwarded to HKCG for reference.
- 11. Excavation running close to the GS should be discussed with HKCG in advance.
- 12. In case of emergency, contact HKCG at 2880 6999 which is manned 24 hours.

Version 1: 2019/8/14

For Reference Only

General Requirements For Construction Work In The Vicinity Of Gas Main

- 1. Notification of work should be circulated as stipulated in the Excavation Permit issued by Highways. The same procedure should also be followed for construction site other than Highways' area.
- Contact HKCG at least 3 days in advance for excavation adjacent to gas pipe. Site meeting to be arranged whenever required. HKCG could be contacted via 29631811 or 28806999 in case of emergency.
- 3. When excavation is to be carried out adjacent to a gas main, the exact alignment and profile must be ascertained by a series of hand-dug trial holes.
- 4. BORING AND DRILLING IN THE VICINITY OF GAS MAIN IS STRICTLY PROHIBITED. HKCG must be consulted first should this work be required.
- 5. No excavator is allowed for excavation at 1 metre around the gas pipe.
- 6. No naked flame is allowed adjacent to the gas pipe.
- · 7. Do not encase, even temporarily, part or all of our gas pipes in any form of concrete structure.
 - 8. To avoid the risk of gas accumulation leading to any tragedy, no gas pipe is allowed being enclosed in confined space such as long decked over trench.
 - In case the proposed deck of trench will cover any gas pipe, it should be considered to adjust the trench alignment and/or the working method at the planning stage. Should any gas pipe required to be diverted, the request should be made to HKCG and the diversion should be completed before the trench is decked.
 - 8.2 If inevitably any gas pipe to be left in the decked trench, prior agreement should be sought from HKCG. Adequate protection measure such as partition should be built to separate the gas pipe from the confined space under deck.
- 9. No machinery should sit directly above our metal iron gas pipes.
- 10. The velocity and amplitude of vibration acting on the gas pipe by the work must not exceed 25mm/s peak particle velocity and 0.2mm respectively.
- 11. The velocity and amplitude of vibration acting on the gas governor by the work must not exceed 13mm/s peak particle velocity and 0.1mm respectively.
- 12. Vibration monitoring records should be forwarded to HKCG for reference.
- 13. Excavation running close and parallel to the gas pipe should be avoided. Should such excavation be required, discussion/agreement must be sought from HKCG. Any mechanical joint to be exposed, the working party shall inform HKCG in advance and make provision to HKCG for leak detection and bolts replacement where necessary.
- Suspension of gas pipe to be agreed with HKCG.
- 15. The gas pipe would normally have a cover of 450mm and 900mm in footpath and carriageway respectively. However, there are cases where gas mains have cover less than the before stated figures. Steel protection plates would normally be laid on top of shallow cover pipe. Due care should be given in subsequent excavation with the presence of steel plate.
- 16. Report any damage, even superficial, to HKCG for remedial action.

Page 1 of 2

For Reference Only

- 17. Access to HKCG's installations should be maintained at all times for regular inspection and emergency repair.
- 18. Sufficient clearance to be maintained for both safety and maintenance purpose. Normally, 600mm and 300mm clearance is required for steel and all other gas pipe respectively.
- 19. No exposed PE gas pipe under steel deck is allowed as welding slag from the jointing of steel deck may damage the gas pipe underneath unless proper protection agreed by HKCG. In other occasion, exposure of PE pipes should be avoided as far as practicable. Where exposure of PE pipes is inevitable, fire resistance protection wrapping of the exposed PE pipes should be installed and agreed with HKCG prior to application.
- 20. In case of emergency, contact HKCG at 28806999 which is manned 24 hours. If a gas leak is suspected, immediately stop work and evacuate the site personnel from the trenches. It should be noted that gas might travel through underground drains or conduits to other areas of the site. Evacuate the personnel from these areas if this is suspected.
- 21. HKCG should be consulted prior to any cutting or removal of a decommissioned gas pipe. As there may be residue gas inside a decommissioned gas pipe, cutting should only by employed by mechanical cutter or hack saw. In all circumstances, oxy-acetylene cutting SHOULD NOT be employed for cutting a decommissioned gas pipe.
- 22. Should there be settlement expected to be caused by the work, the predicted settlement contour should be forwarded to HKCG for assessment of the impact.
- 23. For plantation work with tree guard installation, the exact location and depth of the gas pipe should be confirmed by hand-dug trial holes prior to the driven of the tree guard into the ground to avoid damage of gas pipe underneath.
- 24. Due care should be given to the ancillary equipment attached to the gas main. Cathodic protection is installed for corrosion-resistant purpose and it has some cables linking from the gas pipe to the anodes and connected in a junction box placed in a pit. The anodes are normally installed at 1m away from the pipe whilst the anodes junction boxes would be installed at footpath at a distance from those gas main laid under carriageway.
- 25. The Code of Practice "Avoiding danger from gas pipes" has been prepared by the Gas Authority and approved and brought into effect in accordance with the provisions of section 9 of the Gas Safety Ordinance Cap 51 (the Ordinance). Its purpose is to provide practical guidance in respect of the requirements of the Ordinance and the Gas Safety (Gas Supply) Regulations (the regulations) concerning the avoidance of damage to gas pipes. These requirements are more specifically defined in regulation 23A of the regulations as follows-

"23A. Works in the vicinity of gas pipes

- No person shall carry out, or permit to be carried out, any works in the vicinity of a gas pipe unless
 he or the person carrying out the works has, before commencing the works, taken all reasonable
 steps to ascertain the location and position of the gas pipe.
- 2) A person who carries out, or who permits to be carried, any works in the vicinity of a gas pipes shall ensure that all reasonable measures are taken to protect the gas pipe from damage arising out of the works that would be likely to prejudice safety."



保護地下煤氣設施

- 1. 確保已取得煤氣公司圖則以找出煤氣管之大約位置。
- 2. 使用喉管探測器及手掘探孔確定煤氣管正確位置。
- 3. 切勿在煤氣管附近操作重型機械。
- 4. 小心西粉豎管及陰極保護裝置之電線。
- 在喉管附近切勿使用明火。 對外露喉管提供足夠支撑。 盡量避免外露聚乙烯喉管。
- 6. 如有需要,請與煤氣公司聯絡,召開工地會議。
 - ◆ 電話: 2963-1811

損毀氣體喉管可導致煤氣洩漏,危害施工者本身安全 及公眾安全。

根據氣體安全規例規定在氣體喉管附近進行工程的人士須確保:

- ◆採取合理步驟以確定氣體喉管所在位置;及
- ◆ 採取合理措施以保護氣體喉管不受損壞。
- ◆ 抵觸法例最高可被罰款200,000元及監禁12個月。

緊急事故時:

- ◆ 停止在嗅到煤氣味的位置及附近施工。
- ◆ 熄滅所有火種。
- ◆ 離開漏氣地點。
- ◆ 在安全地點致電 999 報警或 2880-6999 通知煤氣公司。

GET-ALL-SAFE (Text-Edition) - V20201105.DOCX

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Talent Mechanical & Electrical Engineers Ltd.

Unit 203 2/F Dominion Centre 43 - 59 Queen's Road East Wanchai Hong Kong Your ref: 202121/U/52788

Our ref: HKT-20210729-0019-R-HKT

Our tel: 2883 9969

Our fax: 2991 4702

Date: 29-Jul-2021

WITHOUT PREJUDICE

Dear Mr WC Chow

Enquiry of Uderground Utility Services
Proposed Eldering Home in Former Wa Fung School, Lam Hau

Thank you for your letter and enclosures of 21-Jul-2021

We enclose a set of plan(s) indicating the approximate position of our existing or proposed underground plant in the area of your proposed excavations. The information contained in the plan(s) can only be used in conjunction with the proposed work and must not be disclosed to other third parties.

For avoidance of doubt, the information in this letter or in any of its attachment shall not prejudice or compromise our right to sue you for any loss or damage caused to our plant(s), nor shall it alter your duty of care to exploit adequate measures to avoid damaging our plant(s).

Please be reminded that the information on the plan(s) could be significantly different from the actual situation in terms of both depth and alignment due to various reasons. You are expected to follow the attached Guidelines for Excavation and Related Work whenever your proposed work is conducted on the site. In particular, we expect utmost caution on your side when excavating in the area and, to that end, you should locate our plant(s) by hand excavation.

You are also hereby put on notice that any damage to our telecommunications cable could interrupt telephone services, mobile-phone services, internet services, data services, 999 or emergency help line services, international telephone services, TV services, stock market operation, medical services and banking services in many areas affecting many people. It is also a threat to public safety. In the event that we suffer any losses, costs or damages as a result of your operations, you will be held liable to indemnify us for all such losses, costs and damages arising from your actions. Vandalizing telecommunications facility is a serious crime punishable by fine and imprisonment. In the interest of the public, we will not hesitate to report all cases of damage to our plant to the relevant authority including the Police and will endeavor to assist the authority in crime detection, apprehension of offenders and prosecution.

In order to draw your workers' attention to the existence of our underground plant nearby, our Plant Protection Officer may post or otherwise display a warning poster of A4 size in the vicinity of your construction site. Please however note that your duty of care corresponding to our underground plant(s) is independent of whether the poster is displayed or seen.

Please convey all the information regarding our plant(s) to your workers, including your sub-contractors. Please complete the attached form to inform us of the details of your representative on the site on or before 12-Aug-2021. You are also advised to notify us of the actual date of commencement of work in your site with at least 3 days' notice in writing to NG CHI SHING. For general inquiries about plant protection, please contact our Mr NG CHI SHING (Fax No. 24412461) on 24410166.

Yours sincerely, Chan, Ethan YC

Enc. HKT-20210729-0019-R-HKT-01.pdf

84160/122013 CCC918

HKT Limited
PO Box 9896 GPO Hong Kong T +852 2888 2888 F +852 2877 887
www.hkt.com

HKT Limited is a company incorporated in the Cayman Islands with limited liability



a PCCW Group member



來函編號:

本函編號:

電話號碼:

傳真號碼:

日期:

WITHOUT PREJUDICE

致:

多謝閣下於 月 日的來函及附件。

現隨函附上貴公司的施工工地及挖掘工程範圍附近的電訊設施圖則乙份,提供了本公司現有及擬鋪設之地下設施 的大概位置概況。這些資料只供此項工程參考之用,不可向其他人士透露或作其他用途。

為免生疑問,在此函及附件上所提供的資料,不應改變貴公司履行應有責任去採取適當措施去避免損毁本公司的設施,也不應損害本公司固有法律權益或構成任何妥協因貴公司的工程而引致任何損失或損毁而提出之訴訟。

請注意,本公司所提供設施圖則上所載資料僅作參考,在現實環境中,其標示大概的位置及深度有可能因不同原因而出現極大差異,期望貴公司在現場施工時,遵從隨函附上之挖掘及其相關工程之工作指引。本公司建議在挖掘範圍內,應特別小心謹慎,在進行挖掘工程時,務請以人手挖掘,確保找出本公司現有設施的正確位置。

在此嚴正聲明,本公司的網絡覆蓋全球,任何電訊電纜一旦遭受破壞,會引致電訊服務中斷,其影響包括:警方999 熱線、緊急求救熱線、醫療服務、電話及無線電話、長途電話、互聯網、寬頻電視、股票市場及銀行服務等。將會對市民構成極大的不便甚至有機會威脅公眾安全等嚴重後果。如因有關工程而導致本公司蒙受任何損毀或遭受索價,貴公司必需負責向本公司賠償因該事件所引致的一切損失。蓄意破壞電訊設施乃嚴重刑事罪行,一經定罪可被罰款及監禁。為保障公眾利益,本公司將適時協助當局(包括警方),並全力配合執法部門對違者進行有關的刑事調查、逮捕及起訴。

為了加強貴公司工人對本公司設施的警覺性,本公司之網絡保護主任可能會在貴工地附近貼上或展示有關「小心掘地」的海報,務使工人注意到工地附近埋有本公司的地下設施,提醒在挖掘時,必須小心。重申無論有否張貼或展示警告性的海報,貴公司依然有責任履行相應措施去保護本公司的地下設施。

請將有關訊息傳達予所需人仕,包括主管、工地人員和承建商及其僱員等。請在傳真回條上填上聯絡人資料,並在()前,傳真給本公司。貴公司必需要在工程實際動工日期前不少於3個工作日,以書面通知()。

如有任何疑問或查詢有關保護設施事項,請致電

與

先生聯絡。

附件:

84160/122013 CCC918

HKT LimitedPO Box 9896 GPO Hong Kong T +852 2888 2888 F +852 2877 8877
www.hkt.com

a **PCCW** Group member



Return Slip By Fax

Construction Site At: Enquiry of Uderground Utility Services Proposed Eldering Home in Former Wa Fung School, Lam Hau

Date	:	
From	:	
Name of Company	:	
Telephone No.	:	
Fax No.	:	
		r:Mr NG CHI SHING (Fax No. 24412461)
Please see the details of the	site rep	presentative.
Name in Block Letters		:
Name of Company		÷
Position		:
Contact Telephone No.		÷
Fax No.		;



傳真回條

施工地盤	:									
日期	:						<u> </u>			
寄件人	:									
公司名稱	:							<u>.</u>		
電話號碼	:		<u> </u>						-	
傳 真號 碼	:					<u> </u>			-	
致: 電訊盈和	斗 - F CM	ASC 經理		- 	- -		傳真號		. 	
電話號码										
電話號码請參閱印	馬:									
	馬 : 鈴絡人賞	資料 。							_	
請參閱印	馬 :	資料 。							-	
請參閱耶聯絡人始	馬 :	資料 。 : _							_	
請參閱耶聯絡人始公司名稱	馬:	S米)。 : -							- - -	



Guidelines for Excavations and Related Work

You are reminded to adopt whatever measures necessary (including but without limitation the following measures) to avoid any damage to our telecommunications plant at all times when you are carrying out your works. Please note that these measures are by no means exhaustive. You are required to implement and procure your personnel to implement any effective measures on-site as appropriate. You acknowledge that any interruption or damage to our plant will substantially affect our services provide to our customers. We shall hold you liable for any loss or damages whatsoever and however incurred to our plant as a result of your operations or works carried out. For any queries, please contact our Operation and Maintenance Control (OMC) at 2888 9889, or directly to our Plant Protection Officer as appropriate.

- It is of paramount importance that you have a good understanding of our plant at or near the site. Please make sure that you make due reference to the plans obtained from us indicating the approximate locations of our existing or proposed underground plant in the areas of your proposed excavations (see attached). From time to time, you should liaise with our OMC about the current marked up plans as appropriate in the process of your excavation.
- Please note that the depth and alignment of the plant may vary for various reasons, for instance, roadworks projects such as road widening or change of plant locations by other parties without our consent. Our underground ducts and cables may be found at a depth of some 4 metres (or over). Our network provides vital communications across the world and you acknowledge that any interruption or damage will affect our services in all aspects.
- It is of paramount importance that you locate our plant before excavations. Please make sure that you and your workers locate our plant before excavations. A non-destructive locator has to be used to locating the plant positions in conjunction with the marked-up plans and hand-dug trial holes. You are required to expose and support our plant before excavations. If any ducts or cables cannot be found as those shown in the marked-up plans, you should not proceed with your excavations (eg sheet piling works) but to contact our OMC or Plant Protection Officer as soon as possible.
- It is of paramount importance for you to ensure that your workers and personnel follow all procedures and good practices. You should make sure that all necessary information including marked-up plans and working instructions are communicated and passed to them in a timely manner. They have to fully take care of our plant including but not limited to providing adequate support and display of warning posters on-site during excavation. Please refer to the typical method of our plant support in Drawings EX UG 167, 168 and 169 as attached. In any circumstances, you should not move and do anything to our plant without obtaining our consent in advance. Please contact OMC or Plant Protection Officer in this regard in all cases.
- It is of paramount importance to ensure all your site people (e.g. supervisors, workers etc) are communicated and provided with adequate information about our plant and necessary precautionary measures are taken. Please make sure that they are kept informed at all times and any updated information is provided to them during your daily or regular meetings.

Please do not hesitate to call us if you have any queries. Your help would be very much appreciated.

In case of any inconsistency between the English version and the Chinese version, the English version shall prevail.



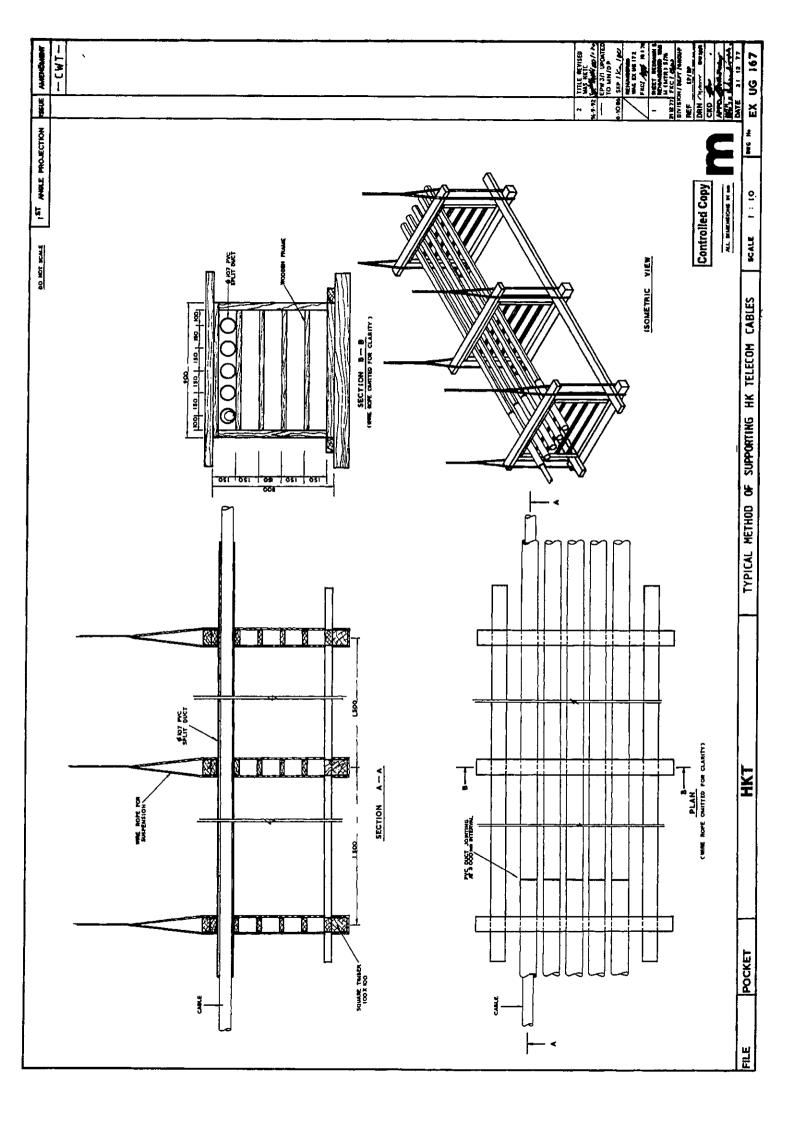
挖掘 及其相關工程之工作指引

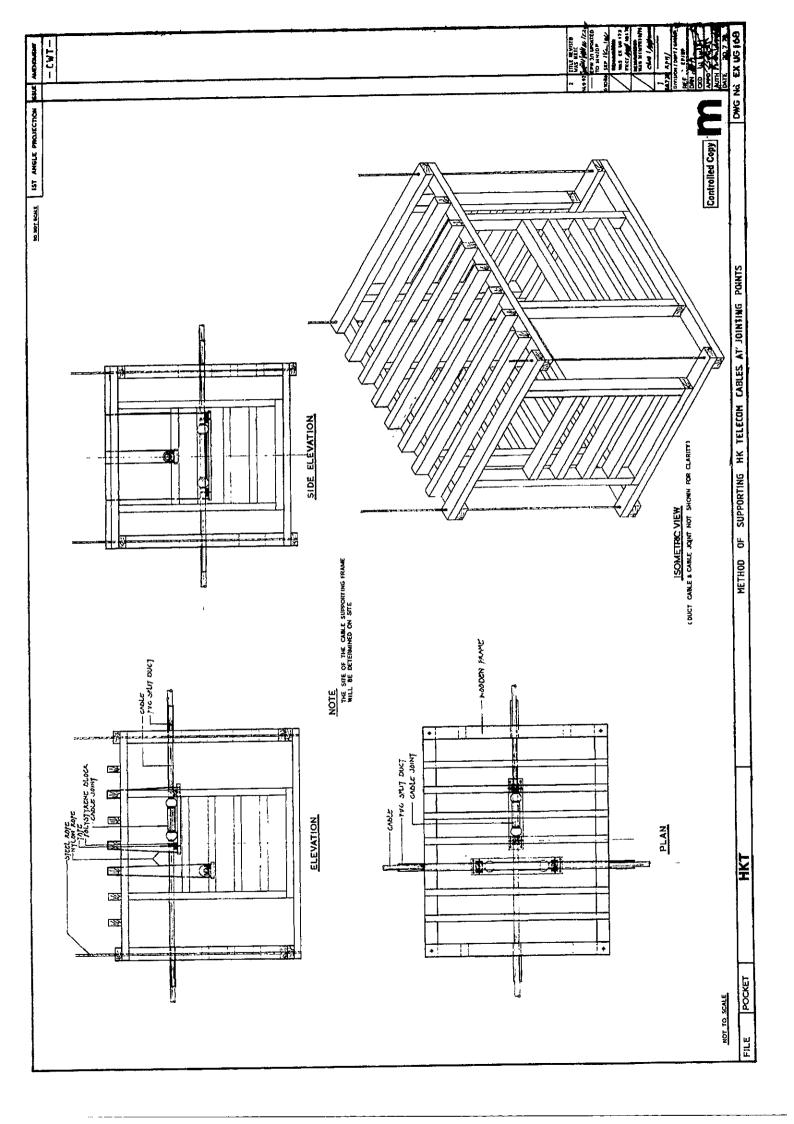
當施工期間,閣下必須採取一切恰當的預防措施〔包括但不限於下列所述措施〕,以防止本公司的通訊網絡受破壞。請注意下列措施並非詳盡無遺,閣下應該明白到任何干擾或破壞,都會影響本公司的服務質素。倘若本公司的網絡因閣下之工程而引致任何損毀,閣下須賠償本公司的一切損失。如有任何疑問,請致電 2888 9889 與本公司户外控制及維修中心聯絡,或直接聯絡我們的網絡保護主任。

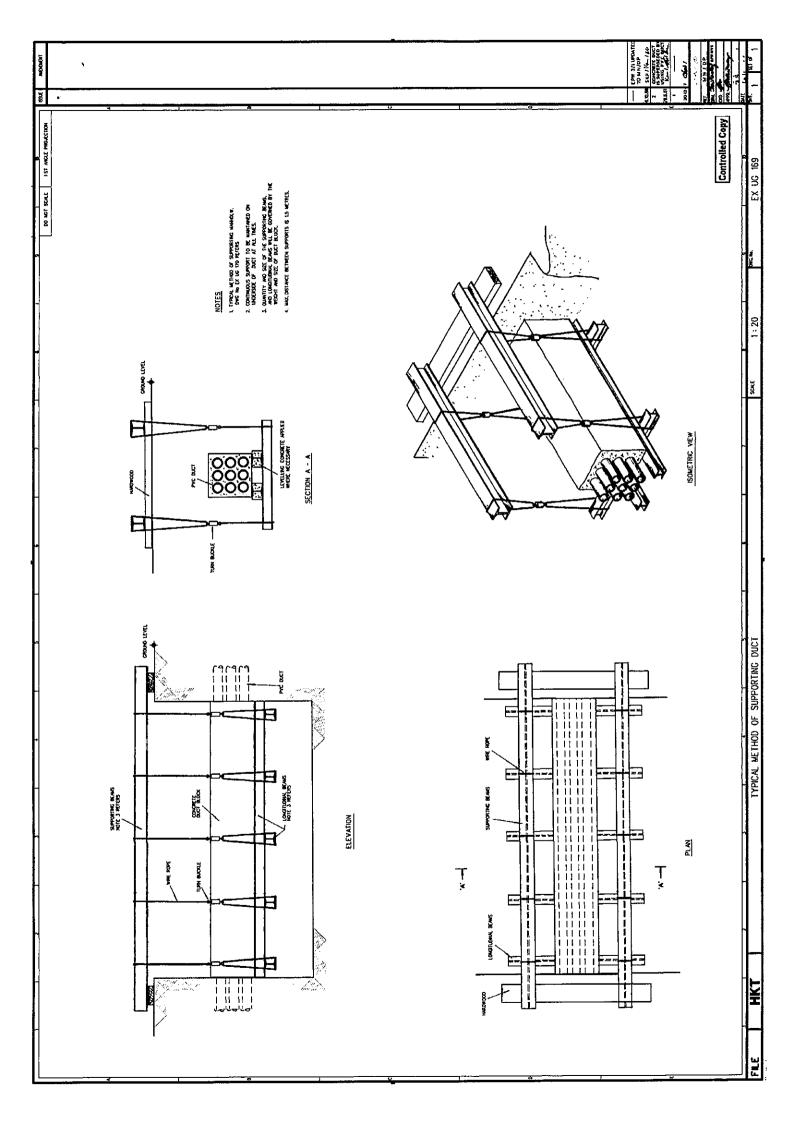
- 閣下必須清楚了解工地及其相關範圍埋有本公司的地下設施。在施工前,閣下必須要向本公司索取最新地下設施圖則,此圖則提供本公司現有或擬鋪設的地下設施大概位置〔見附件〕。而在工程進行期間,閣下應該不時與本公司的户外控制及維修中心保持緊密聯絡,方便掌握地下設施的最新情况。
- 閣下必須明白本公司地下設施的埋藏深度和位置,會受到不同因素影响而與紀錄有所差異。例如, 道路拓寬工程或第三者在沒有得到本公司同意之下,而擅自更改設施的位置。我們的地下管道和電 纜,埋藏深度有可能達到四米或以上。閣下亦應明白本公司的通訊網絡,覆蓋全球,任何中斷或損 壞,將造成無可估計的影響。
- 閣下必須掌握本公司地下設施的正確位置。在挖掘工程展開前,確保工作人員先行根據圖則,結合無破壞性地下管綫定位儀和以人手挖探孔方式以確定本公司地下設施的正確位置,當埋藏於地下設施外露時,應加以承托及支撐。如果在現場無法找到圖則上標示的任何管道或電纜,切勿強行進行任何的鑽挖工程〔例如,打鋼板椿工程等〕,並盡快聯絡本公司的户外控制及維修中心或網絡保護主任要求提供協助。
- 閣下必須確保你本人以及工作人員嚴格依循所有正確挖掘程序和方法。在施工過程中,閣下必須確保所有相關資料,包括地下設施圖則和工作指引,及時發放給有關工作人員。工作人員必須小心保護本公司的設施,包括:在工地範圍內張貼警告性海報,和對設施進行適當支撐和保護等。閣下及閣下之工作人員可以參考附件 EX UG 167, 168 及 169 所建議的保護方法。在任何情況下,未獲得本公司的同意,不得移動本公司任何設施。如有需要,請聯絡我們的户外控制及維修中心或網絡保護主任。
- 閣下必須確保所有工地人員,包括主管、工人等,在施工前均已得到適當訊息,並依程序採取相應安全措施去保護我們的設備。請在日常或定期會議上,發佈本公司最新的地下設備圖則或資料與有關工作的人仕。

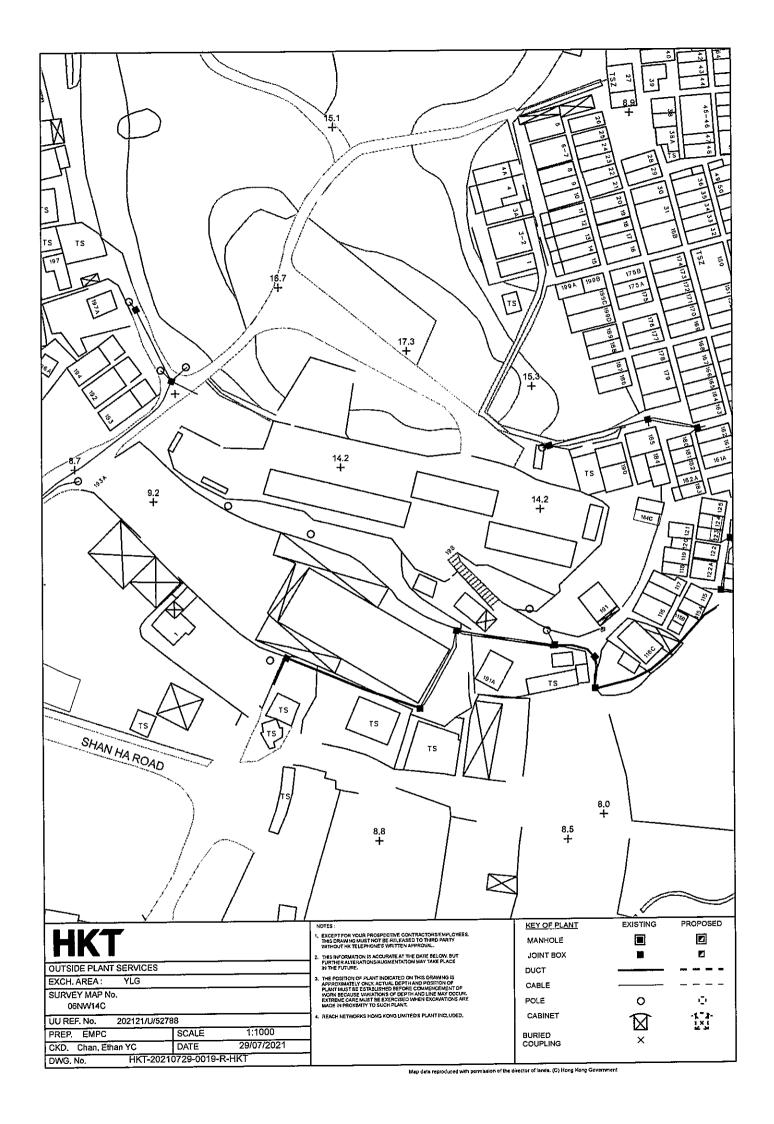
如有任何疑問,請致電給我們,本公司非常感激閣下的協助。

中、英文版本内容如有不符,概以英文版本為準。









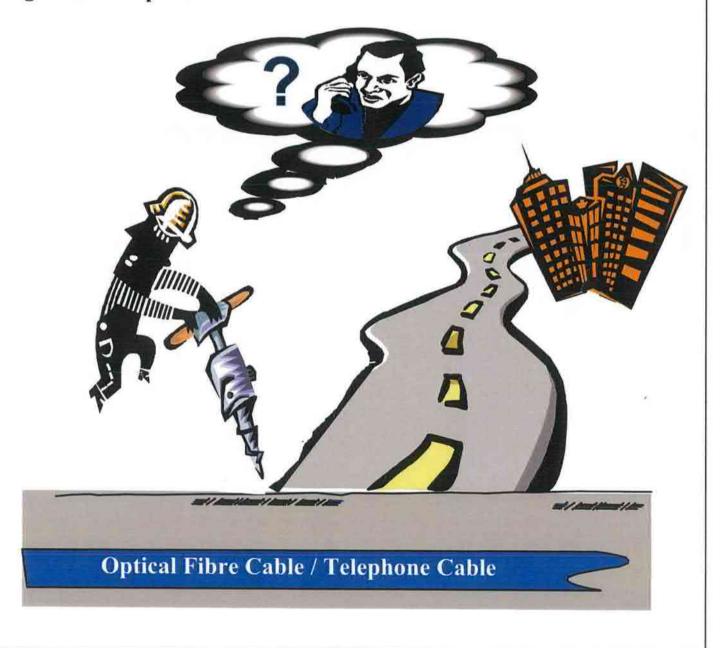


Please call Cable Maintenance Centre before you dig

We are always ready to help you

Day-time Telephone: 2888 9889

Night-time Telephone: 109





進行*挖掘工程前*

請先致電電纜保養中心

我們樂意為你提供協助

日間電話: 2888 9889

晚間電話:109



3 D JUL 2021





Our ref.: 202121/U/52789

21 July 2021

Hong Kong Broadband Network Limited 13-16/F, Trans Asia Centre 18 Kin Hong Street Kwai Chung, N.T. BY FAX & POST

DECELVED

1 2 3 UL 2021

BY: HHLL

Dear Sirs

Enquiry of Underground Utility Services Proposed Eldering Home in Former Wa Fung School, Lam Hau

We are the M&E Consultant for the captioned project, and would like to seek for your advice on the present arrangement and diversion requirement (if any) of the existing service in the vicinity of the above site.

A site location plan is enclosed for your easy reference.

We will appreciate if you could reply us by 30 July 2021. Should you require any further information, please feel free to contact the undersigned or our Mr. Patrick Chu at 2838 9133 (Ext. 142).

Yours faithfully Talent Mechanical & Electrical Engineers Ltd.



WCC/FC/JL/wi

Encl.

c.c. AD+RG (w/encl. & by email only)



FRIENDLY REMINDER:

In view of our rapid network expansion, you must obtain our update utilities records not more than 3 months before the actual start date of your excavation work.

Mr. Eugene Chung





Unit 203, 2/F, Dominion Centre; 43-59 Queen's Road East, Wanchai, Hong Kong 香港遊仔皇后大道東 43-59 號東美中心 2 樓 203 室 c: +852 2838 9133 (: +852 2836 0750

e-mail: info@talentme.com web-site: www.talentme.com

INLENT M & E ENGINEERS L'

KDC

SEEN ACTION DA



敬啟者:

保護香港寬頻地下設施

在 貴司的施工工地及其挖掘工程範圍附近,有可能埋藏了本公司(HKBN)及香港寬頻集團轄下其他公司(包括前新世界電訊(NWT)及前滙港電訊(WTT)) (以下統稱「本集團」)之地下設施,包括地下管道和電訊光纖電纜。

電訊光纖電纜一旦受到破壞,會引致電訊服務中斷,其影響範圍十分廣泛,將會造成市民不便及威脅公眾安全。而且,如因有關工程而導致本集團蒙受任何損毀或索償。 黃司須負責賠償因該事件所引致的一切損失。

請責司在準備展開挖掘工程前致電 3999 3888 與本公司聯絡,以便找出本集團現有設施的正確位置。當進行挖掘工程期間,應特別謹慎:並需用人手挖掘試孔。 責司必須採取一切預防措施,以防止破壞本集團的通訊網絡。請注意在工地內, 費司及責司之工作人員必須執行一切有效預防措施。 貴司必須確保所有工地人 員,包括主管、工人等,均已得到適當訊息,和經已採取相應安全措施去保護本 集團的設備。 貴司應該明白到任何干擾或破壞,都會影響本集團的服務。倘若 本集團的網絡因閣下之工程而引致任何損毀,閣下須賠償本集團的一切損失。

貴司的合作和理解,本公司深感謝意。如有任何疑問,請致電 24 小時熱線 3999 3888 與本公司網絡控制中心聯絡,我們會盡快提供協助。

2000 此致

香港寬頻網絡有限公司

2020年1月22日

· 原数数字 [12] (文)





HGC Global Communications Limited 環球全域電訊有限公司 17/F, Hutchison Telecom Tower, 99 Cheung Fai Road, Tsing Yi, Hong Kong www.hgc.com.hk

Date

: 28 July 2021

Our Ref

: HGC-NMP-20210728-0007

Your Ref : 202121/U/52790

Talent Mechanical & Electrical Engineers Ltd.

Unit 203,2/F., Dominion Centre, 43-59 Queen's Road East, Wanchai, Hong Kong.

Attn: W.C.Chow

Dear W.C.Chow,

RE: Enquiry of Underground Utility Services Proposed Eldering Home in Former Wa Fung School, Lam Hau

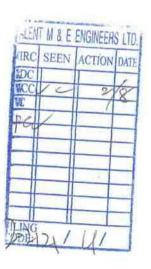
We refer to the letter from Talent Mechanical & Electrical Engineers Ltd. and enclosure of 21 Jul 2021.

We would like to inform you that we do not have any underground plant in the vicinity of your proposed work at present.

For further information, please contact our Patrick Cheng on telephone no. 21283594 or fax no. 21229403.

Yours sincerely, HGC Global Communications Limited

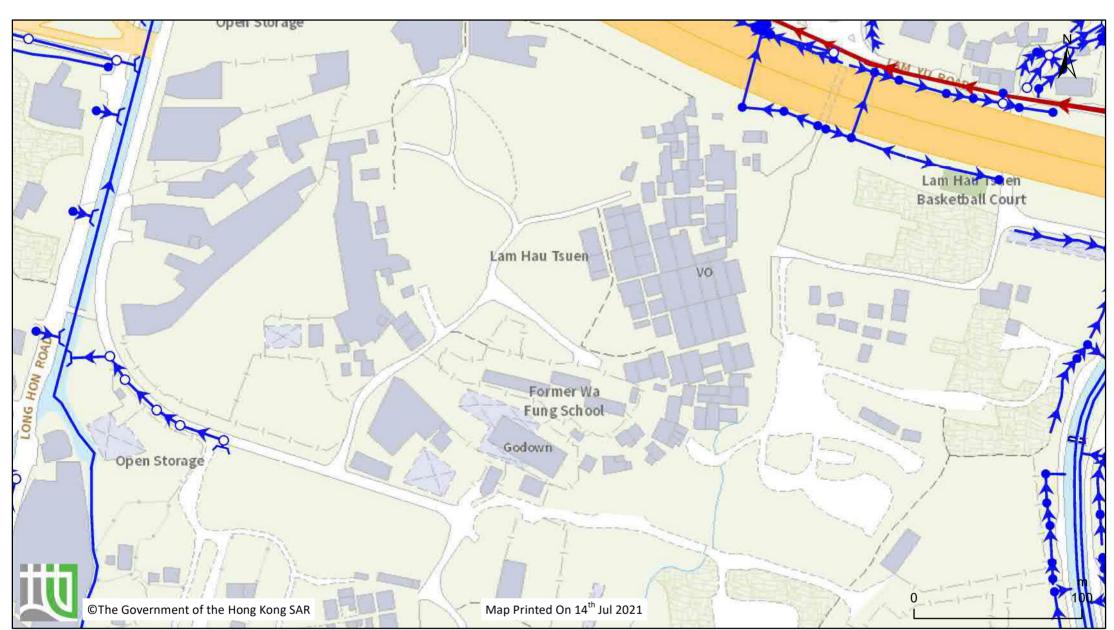
This is a computer-generated document. No signature is required. SC/PC/GW







Go to map: https://www.map.gov.hk/gm/geo:22.4348,114.0176?z=2257



Powered by GeoInfo Map: https://www.map.gov.hk

Don't care

Appendix C

Electrical Loading Estimation

Electrical Loading Estimation				10-0ct
Electrical Bouning Estamation				10-001
(A) General Lighting & Power				
<u>Item</u>	<u>Load factor</u> (kVA/m²)	Quantity	Diversity	Sub-Total Loadin (kVA)
1. Eldering Home (Accomodation)	0.03	650 m^2	1.00	19.5
2. Office	0.07	50 m^2	1.00	3.5
3. Functional area	0.15	250 m^3	1.00	37.5
	Sub-total ((kVA):		60.5
(B) Public Services				
<u>Item</u>	<u>Unit Loading</u> (kVA)	Quantity	Diversity	Sub-Total Loading (kVA)
1. General lighting and power	20.0	1 lot	0.80	16.0
2. Kitchen Equipment (Electrical)	150.0	1 lot	0.80	120.0
3. Laundry Equipment (Electrical)	50.0	1 lot	0.80	40.0
4. Electric Water Heater (instantaneous type)	18.0	25 nos.	0.80	360.0
5. Radiator (bathroom)	2.0	25 nos.	0.80	40.0
6. HVAC System (Split / VRV)	100.0	1 lot	0.80	80.0
7. Water Pump Sets (Fresh & Flush)	30.0	1 lot	0.50	15.0
B. F.S Pump Set (Hose reel)	10.0	1 lot	0.30	3.0
9. Sprinkler Pump Set	30.0	1 lot	0.30	9.0
10. Sewerge treatment plant	30.0	1 lot	0.50	15.0
	Sub-total (kVA):		698.0
Total Loading for (A) + (B) 758.5 kVA	1149.2 A			

Appendix D Estimation of Water Tank Capacity

Elderly Home in Former Wa Fung School

Estimation of Water Storage Capacity

A) Fresh Water

Total no. of bed	100 beds	
Storage criteria *	25 Liter/bed	
Storage Tank Capacity	2500 Liter	

^{*} refer to WSD TR table 6.2.5.6.1 - Boarding Houses and Staff Quarters.

Total no. of seat (dinning area)	90 seats
Storage criteria *	25 Liter/seat
Storage Tank Capacity	2250 Liter

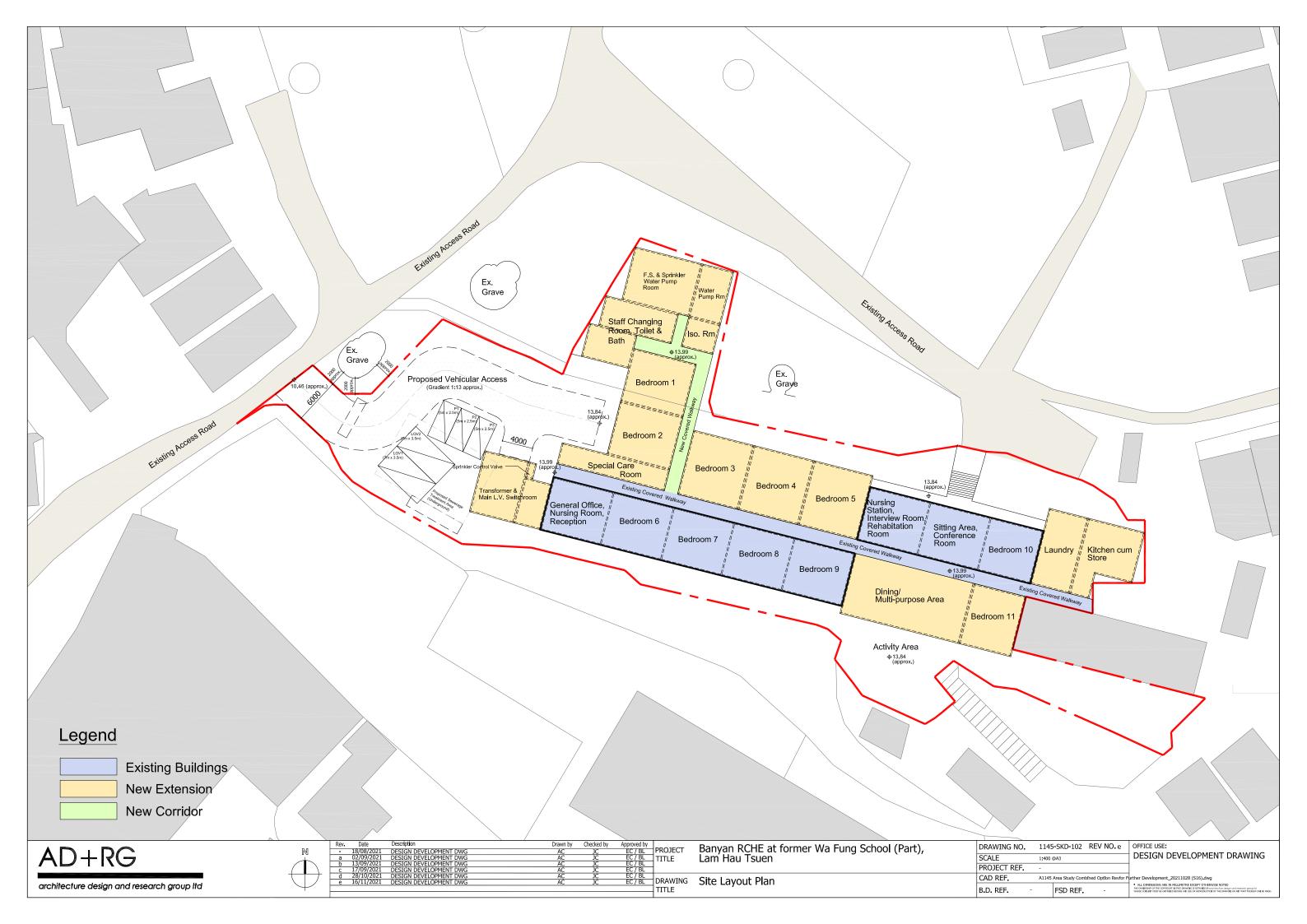
^{*} refer to WSD TR table 6.2.5.6.1 - Restaurants.

Ttoal Fresh Water Storage 4750 Liter

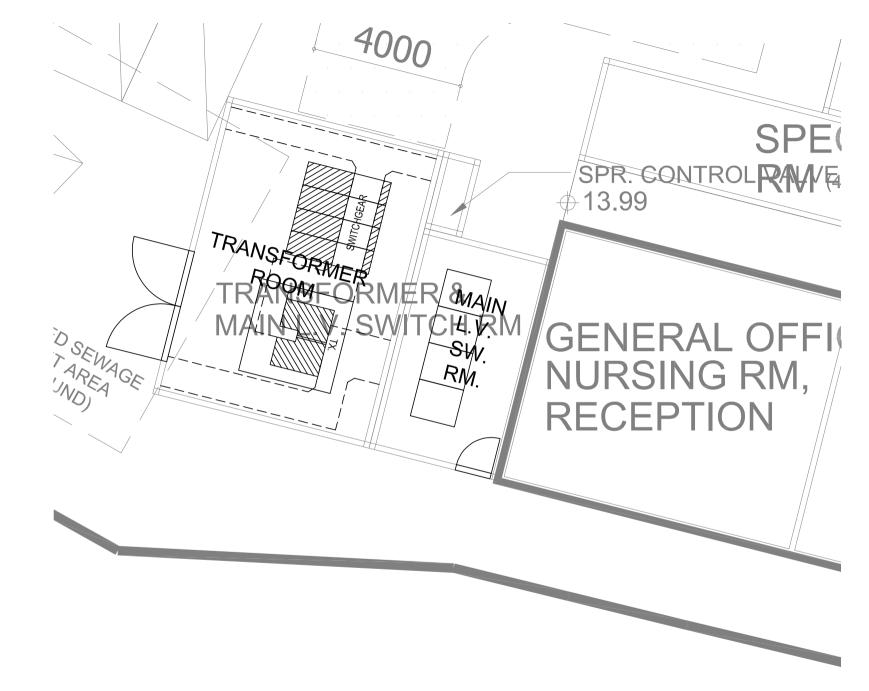
B) Flushing Water

Total flushing points	21 points
Storage criteria	40 Liter/point
Storage Tank Capacity	840 Liter

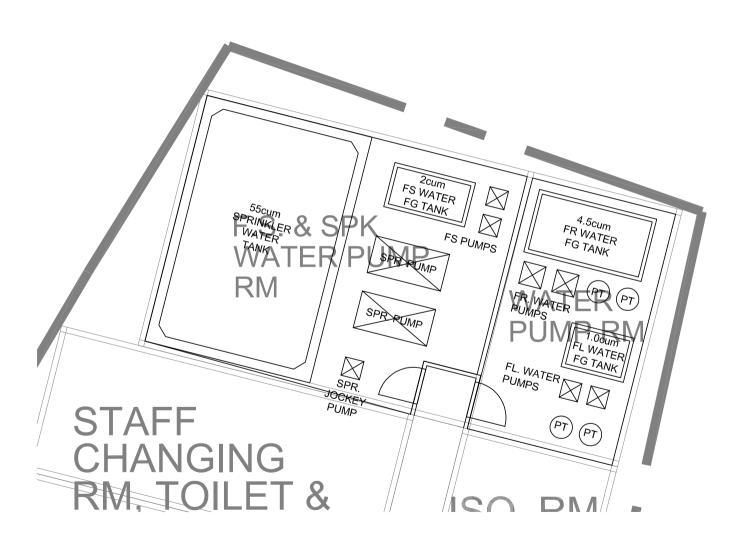
Appendix D Preliminary Planning Layout



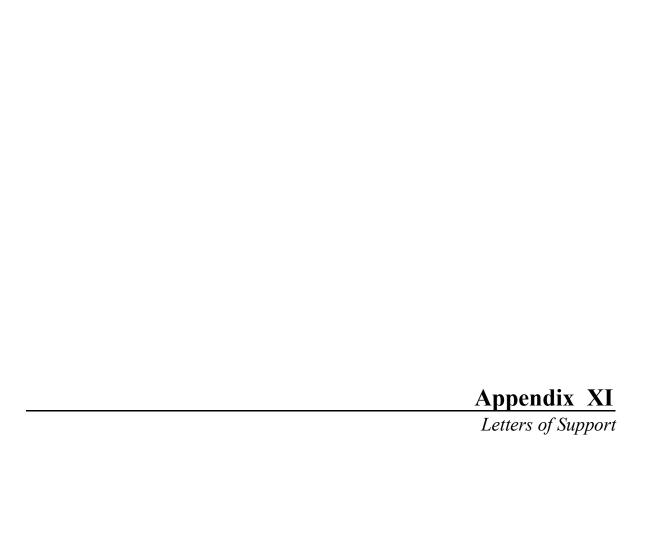
Appendix E M&E Plant Room Mark-up



Mark-up of Transformer Room and Main L.V. Switch Room



Mark-up of FS & Sprinkler Water Pump Room and Water Pump Room



張養主席 格光社 九龍黄大仙 竹園南邨 榮園樓110號地下

新客之朗山屬村

聶主奉:

有関在之朝華封小學舊址樂建安老院

你好!

就上述議題,我們經兩輪面對面計論及諮詢,並收集村民對上述事宜的意思管沒有收到反對聲音.故此聶主席 閣下可以按此議程開展跟進工作!

如有任何查詢可直接與我們聯絡。

於身體健康,工作順利 瑟志明 發水水 遊叶 活致光 張志明 張木林 張國才,張致谐 山廣村村代表謹上

2020年五月十八日

榕光社 主席 聶揚聲先生

聶揚聲先生:

有關「榕光社」申請華封學校興建老人院事宜

就上述標題事宜,本村於2020年7月12日舉行全村會議討論相關議題,當天出席村民共四十人。經商議後,本村以村民簽署表決方式,得出結果是大多數村民支持及少數村民反對。村代表聽取民意後,決定支持 貴社申請華封學校興建老人院。

現隨函附上本村於7月12日舉行會議的表決名單供參閱。希望 貴社能盡早展開申請程序及有關工程。

屏山鄉欖口村村代表

读解陶

張錦福

奠稿能

莫福能

经

張家應

地址:元朗屏山鄉欖口村 155 號

電話:

Mu.

2020年7月16日

附件: 出席名單、表決名單及會議紀錄副本



欖口村全村會議

日 期: 2020年7月12日(星期日)

時 間: 下午 4 時正 地 點: 欖口村大地塘

會議主持: 莫福能記 錄: 張錦福

議 程:

商討「榕光社」使用華封學校興建老人院事宜

出席人士:海郊间等家人展英福船

榕光社

Banyan Services Association

COAL

傳真訊息

致	張錦福村長	日期	8-7-2020
傳 真		電話	
由	梁兆安	電話	
關於	元朗安老院備忘		
頁 數	包括本頁共3頁		

內容:	遊成者歌妈
遙開棋	莫火桂莫忘岛此意移
基础型 2年代书》	张杰南 张家邦 黄杨舲
是有等	文档书习控表法外面
我治費	最后表现的是华茂
强强人	芝四林 李特母妹
当日茶	後数後 谁似昌
次(为()	IN TO THE CONTRACT

2020年7月12日(墨姆田)出席者提出

榕光社

Banyan Services Association



九龍黃大仙竹園南邨榮園樓地下 110 號 Unit 110, G/F, Wing Yuen House, Chuk Yuen South Estate, Wong Tai Sin, Kowloon

電話: 2763 9944 傳真: 2763 9934

傳真訊息

致	張錦福村長	日期	8-7-2020
傳 真		電話	
由	梁兆安	電話	
關於	元朗安老院備忘		
頁 數	包括本頁共3頁		

內容:	爱对着	
器	新權文法福	
23	免涉 交紹序	
裁	张金 刘建英	
文东	the state of the s	
創稿	1 <u>160</u>	
石板	是果了	
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2020年7月12日(星期日)出席者、提出





通告

欖口村謹定於 2020 年7 月 12 日(星期日)下午 4 時 正於本村大地塘召開全村 會議,商討「榕光社」使用 會議學校與建老人院事宜, 華封學校與建老人院事宜, 不論贊成與否,歡迎村民踴 躍出席,提出寶貴意見。

> 欖口村村代表 示 2020年7月4日



VISION PLANNING CONSULTANTS LTD. 弘域城市規劃顧問有限公司

Our Ref: YL-LH/PA/GCSE/21-05 Your Ref: TPB/A/YL-TYST/1132

Date: 26 November, 2021

By Hand and Email (tpbpd@pland.gov.hk)

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

Dear Sirs,

Proposed Temporary 'Social Welfare Facility' (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) and Adjoining Government Land for a Period of 10 Years in "V" Zone, Lam Hau Tsuen, Yuen Long, and Proposed Excavation of Land in Association with the Proposed RCHE – Clarification

The Applicant would like to clarify that:

1. the estimated volume of soil to be excavated in the proposed sewage disposal arrangement Option 1 and Option 2 will be around 105m³ and around 877.5m³ respectively; and

2. "Private Open Space" mentioned in Table 2 should read as greenery area (A revised pages 8 and 15 of the Application Form are now attached to replace the original ones).

Please also find attached the revised Figure 4a – Site Layout Plan, Figure 6a – Landscape Proposal and Figure 7a – Site Formation Plan to replace the ones in the planning statement.

Should you have any queries with regards to the above, please do not hesitate to contact our Mr. Wilson WONG or the undersigned at

Thank you very much for your kind attention.

Yours faithfully, for and on behalf of

VISION PLANNING CONSULTANTS LTD.

Kim On CHAN Managing Director

TM&YLW DPO

Encl. [KC/WW]

[YL-LH/PA/GCSE/21-05] c.c Project Team

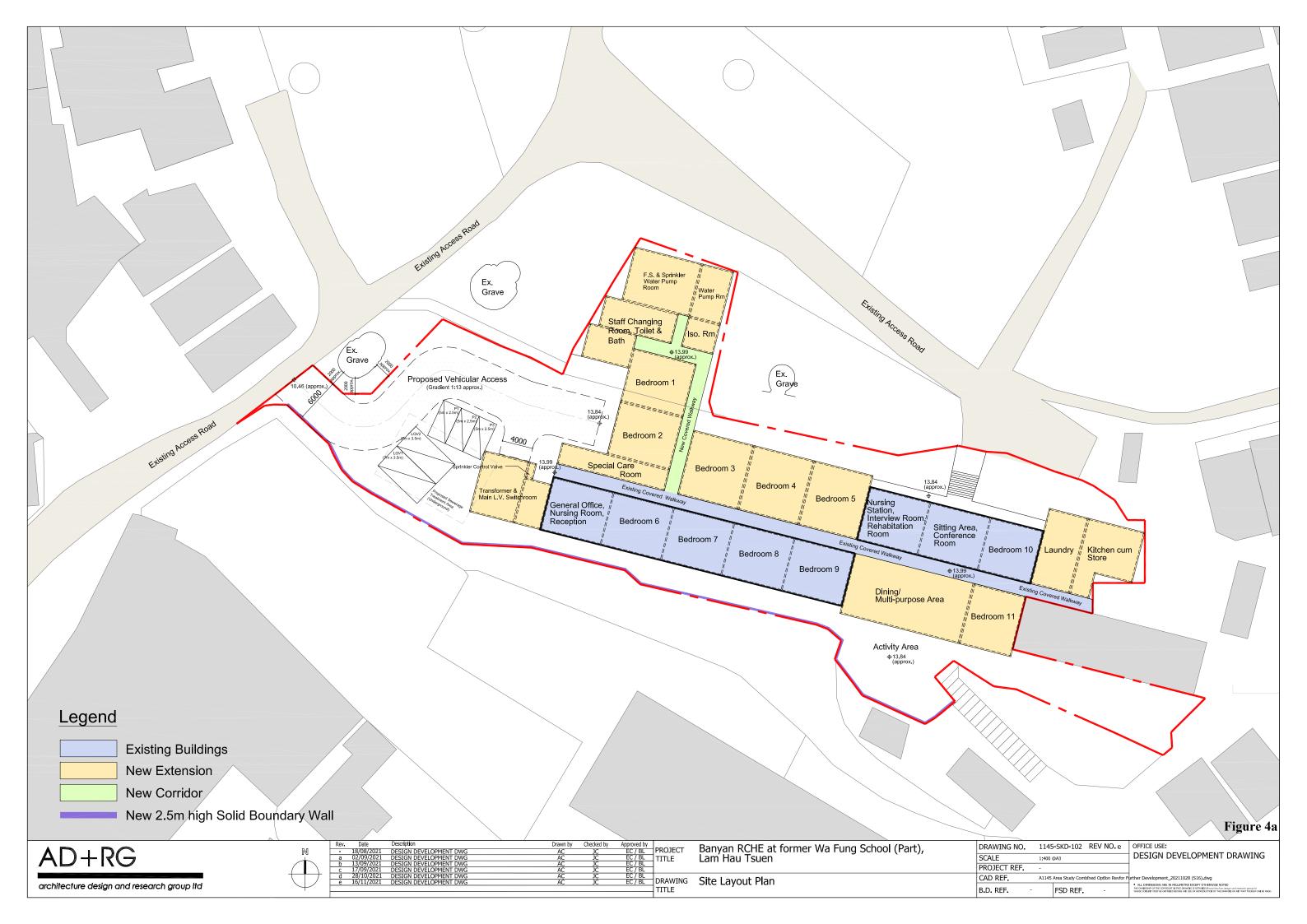
(Attn.: Ms. Ophelia WONG)

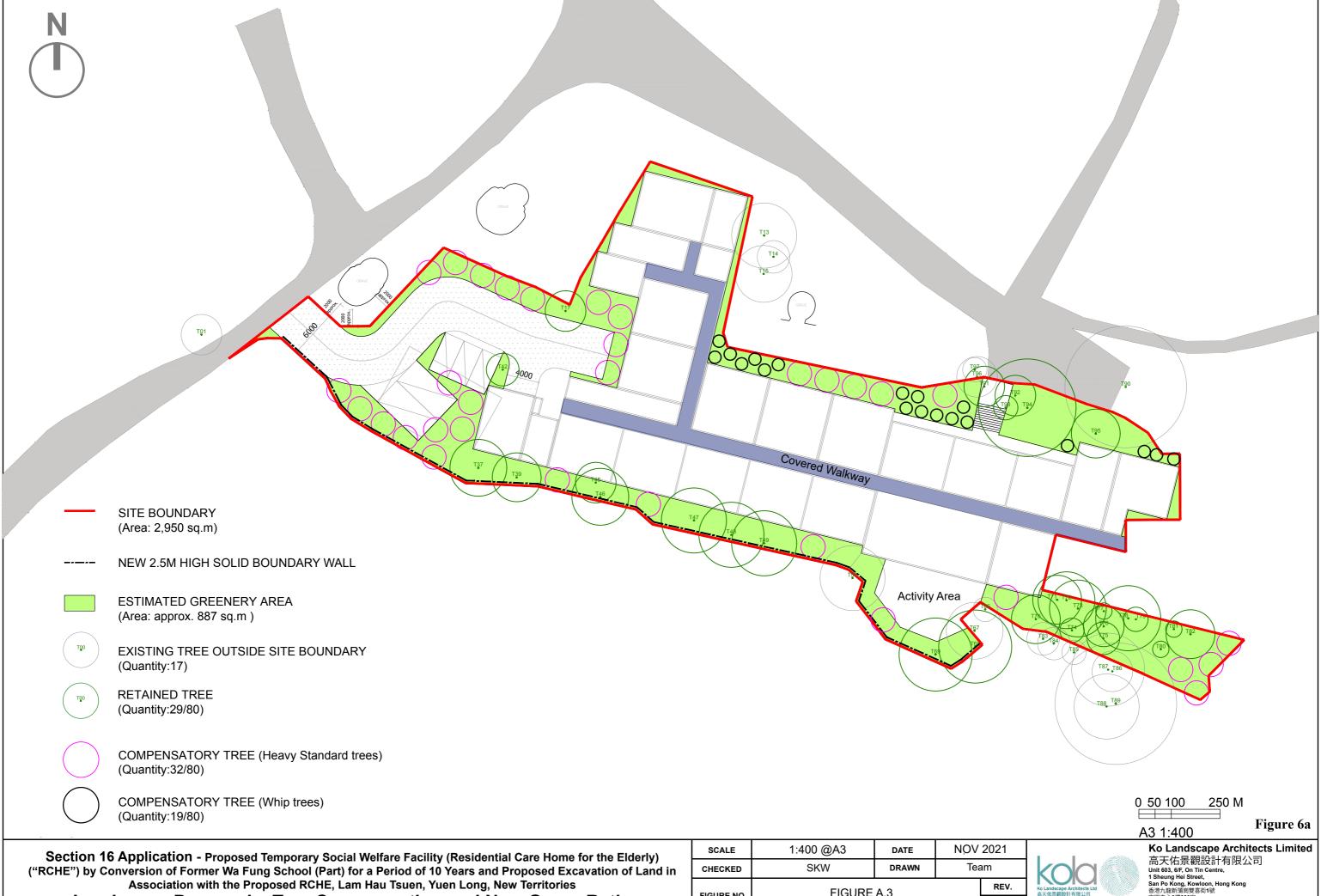
By email By email



☐ Domestic par	t 住用部分				
GFA 總樓面面積			sq. m 平方米	□About 約	
number	number of Units 單位數目				
average unit size 單位平均面積		sq. m 平方米	□About 約		
_	d number of resident		•••••		
✓ Non-domestic	e part 非住用部分		GFA 總樓面面	<u> </u>	
eating pl	ace 食肆		sq. m 平方米	□About 約	
□ hotel 酒店		sq. m 平方米	□About 約		
			(please specify the number of rooms	S	
			請註明房間數目)		
□ office 辦	公室		sq. m 平方米	□About 約	
shop and	l services 商店及服務	第行業		□About 約	
-			•		
Governm	nent, institution or co	mmunity facilities	(please specify the use(s) and	concerned land	
政府、村	幾構或社區設施		area(s)/GFA(s) 請註明用途及有關	的地面面積/總	
			樓面面積)		
\checkmark 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)		
			Residential Care Home for the	he Elderly	
			Proposed GFA: About 1,500	sq.m	
☐ Open space <i>[</i>	 木憩用地		(please specify land area(s) 請註明.	地面面積)	
private o	ppen space 私人休憩	用地	sq. m 平方米 🛚 Not 🗈	less than 不少於	
public o	pen space 公眾休憩		sq. m 平方米 🛚 Not 🗈	less than 不少於	
(c) Use(s) of differ	ent floors (if applicat	ble) 各樓層的用途 (如遊	· 新用)		
[Block number]	[Floor(s)]	, 1 13/11/4/10/ 04/4	[Proposed use(s)]		
[座數]	[層數]		[擬議用途]		
[注:数]		m		C 11	
1	1		al Welfare Facility (Residential (Care Home	
		for the Elderly) ("RCHE") and M&E		
(d) Proposed use(s)	of uncovered area (i	f any) 露天地方(倘有))的擬議用途		
		,,,	, - 31%CFAA, 13.22		
.1.) .Activity. &. 6	exercising area f	or residents;			
2) Greenery ar	-				
		nd		••••	
4) Vehicular a	ccess				

C	Building height/No. of storeys 建築物高度/層數	Domestic 住用	m 米 □ (Not more than 不多於)
			mPD 米(主水平基準上) □ (Not more than 不多於)
			Storeys(s) 層 □ (Not more than 不多於)
			(□Include 包括/□ Exclude 不包括 □ Carport 停車間 □ Basement 地庫 □ Refuge Floor 防火層 □ Podium 平台)
		Non-domestic 非住用	About 5 to 7 m 米 □ (Not more than 不多於)
			About 19 to 21mPD 米(主水平基準上) □ (Not more than 不多於)
			1 Storeys(s) 層 □ (Not more than 不多於)
			(□Include 包括/□ Exclude 不包括□ Carport 停車間□ Basement 地庫□ Refuge Floor 防火層□ Podium 平台)
		Composite 綜合用途	m 米 □ (Not more than 不多於)
			mPD 米(主水平基準上) □ (Not more than 不多於)
			Storeys(s) 層 □ (Not more than 不多於)
			(□Include 包括/□ Exclude 不包括□ Carport 停車間□ Basement 地庫□ Refuge Floor 防火層□ Podium 平台)
	Site coverage 上蓋面積		57 % ☑ About 約
` '	No. of units 單位數目		About 100 beds
	Open space 休憩用地	Private 私人	sq.m 平方米 □ Not less than 不少於
		Public 公眾	sq.m 平方米 □ Not less than 不少於

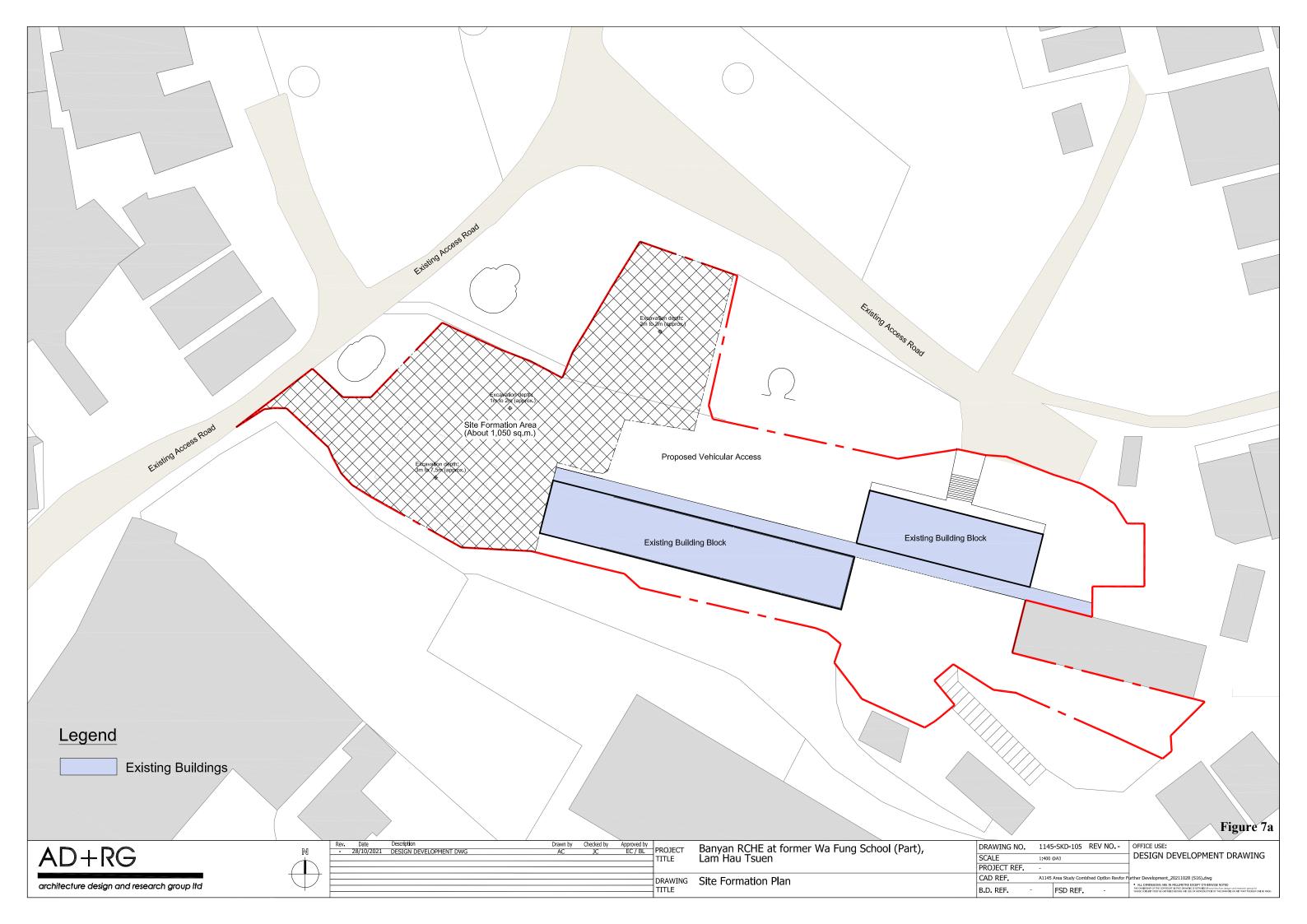




Landscape Proposal – Tree Compensation and New Green Ratio

SCALE	1:400 @A3	DATE	NOV 2021	
CHECKED	SKW DRAWN T		Tea	am
FIGURE NO.	FIGURE A.3			
FIGURE NO.	A A			Α





By Email and Hand



WISION PLANNING CONSULTANTS LTD. 弘域城市規劃顧問有限公司

Our Ref: YL-LH/PA/GCSE/21-12 Your Ref: TPB/A/YL-TYST/1132

Date: 14 March, 2022

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

Dear Sirs,

Proposed Temporary 'Social Welfare Facility' (Residential Care Home for the Elderly) ("RCHE") for a Period of 10 Years and Excavation of Land in Government Land in D.D. 120, Lam Hau Tsuen, Yuen Long, New Territories – Further Information

On behalf of the Applicant, we submit herewith for the consideration of the Town Planning Board ("TPB") a total of 8 copies of Responses-to-Comments ("R-to-C") Table dated 14/03/2022, which incorporates a preliminary drainage plan (Annex A), a revised report of Environmental Assessment (Annex B), a revised report of Traffic Impact Assessment (Annex C) and Swept Path and Queue Length analyses (Annex D) to respond to comments raised by relevant Government departments on the captioned application.

Letters, previously submitted to the Yuen Long District Officer, issued by the two villages' village representatives enclosing signatures from the villagers of Lam Hau Tsuen and Shan Ha Tsuen are attached in Annex E.

Please note that the main reasons for requesting an approval period of 10 years are:

(i) to optimize the use of proposed facilities to meet the pressing demand for RCHE in the community;

(ii) to attain the utmost cost-effectiveness of the whole development project;

(iii) upon approval of the present application, it would require at least two years to realize the project. This means that the actual operation period of the proposed RCHE will only be around 8 years or less;

(iv) the proposed approval period of 10 years is considered most appropriate to raise funds for the project taking into account the factors mentioned above; and

(v) the longer the approval period, the more the potential users that can timely benefit from the proposed social services.

Should you have any queries with regard to the above, please do not hesitate to contact our Mr. Wilson WONG or the undersigned at 2566 9988.

Thank you very much for your kind attention.

Yours faithfully for and on behalf of

VISION PLANNING CONSULTANTS LTD.

Managing Director

Encl.

[KC/WW]

[YL-LH/PA/GCSE/21-12]

TM&YLW DPO

(Attn.: Ms. Ophelia WONG)

By email By email

香港北角蜆殼街 9-23 號 秀明中心 20 樓 C 室 Unit C, 20/F, Seabright Plaza, 9-23 Shell Street, North Point, Hong Kong,

Tel: (852) 2566 9988 Fax: (852) 2566 9978

Email: vision@visionplanning.com.hk Website: www.visionplanning.com.hk



刀

Planning Application No. A/YL-TYST/1132

Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) for a Period of 10 Years and Excavation of Land in Government Land in D.D. 120, Lam Hau Tsuen, Yuen Long, New Territories (Former Wa Fung School (Part))

Response to Comments (RtC)

Issue: F1 / Issue Date: 14/03/2022

No.	Departmental Comments	Responses
A.	From: Drainage Services Department (DSD) Contact: Mr. Bill C H CHAN (Tel: 2781 4107) Received: 22/12/2021	
A1.	2. I have the following comments on the submitted drainage proposal:	
A2.	Please provide a plan showing the proposed drainage facilities within the site for our further review.	A preliminary drainage plan is attached in Annex A . Detailed drainage plans showing the on-site proposed drainage facilities will be provided at the detailed design stage. The Applicant has no objection to the imposition of an approval condition to submit an updated drainage plan to the satisfaction of DSD or the TPB, if TPB considers appropriate.
A3.	(ii) Please note that the proposed drainage facilities outside the site may have	Noted. The Applicant will further liaise with the project management team on
	interface with our project "4166CD-2 Drainage Improvement Works in Yuen	the interfacing issues in the detailed design stage.
	Long – Stage 2" (see enclosed plan). Please be reminded to liaise with our	
	project team on interfacing issues. ***********************************	

No.	Departmental Comments	Responses
A4.	(iii) The development should neither obstruct overland flow nor adversely affect existing natural streams, village drains, ditches and the adjacent areas, etc.	Noted. A proper on-site drainage system will be provided for comments taking into account these concerns at the detailed design stage.
A5.	(iv) The applicant should consult DLO/YL and seek consent from the relevant owners for any drainage works to be carried out outside his lot boundary before commencement of the drainage works.	Noted. The Applicant will consult DLO/YL and seek consent from the relevant owners for any off-site drainage works to be carried out, if required, before commencement.
В.	From: Highways Department (HyD) Contact: Mr. Ben CK CHAN (Tel: 2762 4965) Received: 22/12/2021	
B1.	(a) The proposed access arrangement should be commented by TD;	Noted.
B2.	(b) Adequate drainage measures shall be provided to prevent surface water running from the application site to the nearby public roads and drains; and	Noted. A proper drainage system will be provided at the detailed design stage.
B3.	(c) The access road connecting the application site with the existing village road branching off from Shan Ha Road is not and will not be maintained by this Office. This Office should not be responsible for maintaining any access connecting the application site with the existing village road branching off from Shan Ha Road. Presumably, the relevant departments will provide their comments to you, if any.	Noted.
C.	From: Electrical and Mechanical Services Department (EMSD)	
	Contact: Mr. Ian LEUNG (Tel: 2808 3110)	
	Received: 22/12/2021	
C1.	In the interests of public safety and ensuring the continuity of electrical supply, the parties concerned with planning, designing, organizing and supervising any activity near the underground cable or overhead line under the mentioned works should approach the electricity supplier (i.e. CLP Power) for the requisition of cable plans (and overhead line alignment drawings, where applicable) to find out whether there is any underground cable and/or overhead line within and/or in the vicinity of the concerned site. They should also be reminded to observe the Electricity Supply Lines (Protection) Regulation and the "Code of Practice on Working near Electricity Supply Lines" established under the Regulation when carrying out works in the vicinity of the electricity supply lines.	Enquiry was sent to CLP Power for the requisition of cable plans. Reply from CLP Power was received, please refer to attached CLP's reply letter at Appendix X of the Planning Statement (Pages 12 to 21 of A_YL-TYST_1132_Others_4.pdf). Both the Electricity Supply Lines (Protection) Regulation and the "Code of Practice on Working near Electricity Supply Lines" established under the Regulation will be taken into account when carrying out works in the vicinity of the subject electricity supply lines.
D.	From: Geotechnical Engineering Office, Civil Engineering and Development	
	Department (GEO, CEDD)	
	Contact: Ms. Natalie YIM (Tel: 2762 5372)	
	Received: 22/12/2021	

No.	Departmental Comments	Responses
D1.	2. It is noted that the applicant has provided preliminary contents related to geotechnical assessment/proposals in the Geotechnical Planning Review Report submitted for the planning application. Please note that the GEO shall provide comments on the geotechnical aspect of the proposed development upon receipt of the referral of geotechnical submissions from the Buildings Department.	Noted.
D2.	3. Please remind the applicant to submit plans of the proposed buildings works, as necessary, to the Buildings Department for approval as required under the provisions of the Buildings Ordinance.	Noted.
D3.	4. Please remind the applicant that the subject site is located within Scheduled Area No. 2 and may be underlain by cavernous marble. Depending on the nature of foundation of the new development proposed at the site, extensive geotechnical investigation may be required as necessary, and may require a high-level involvement of experienced geotechnical engineer(s), both in the design and supervision of geotechnical aspects of the works to be carried out on the site.	Noted.
Е.	From: Environmental Protection Department (EPD) Contact: Mr. Chris TSUI (Tel: 2835 2164)	
	Received: 28/12/2021	
E1.	Air Quality	
E2.	• Section 3.2.1, Table 3.1, Table 3.3 and Table 3.4 The consultant should note that the new AQOs will take effect on 1.1.2022 and the air quality assessment may need to make reference to the new AQOs.	Noted and revised accordingly.
E3.	• Section 3.4.3 Please clarify the meaning of "The first layer of ASRs". Otherwise, it is suggested to revise as "The representative ASRs".	Noted and revised accordingly.
E4.	• Table 3.5 and Section 3.6 Some ASRs are found to be in close proximity of the site boundary (3m from the site boundary), additional mitigation measures such as erection of higher hoarding and relocation of dusty activities away from the nearest ASRs shall be considered during construction phase. In addition, it is also recommended that electric power supply shall be provided for on-site machinery as far as practicable to minimize aerial emissions	Noted. Table 3.5 has been updated accordingly. Additional mitigation measures have been supplemented in Section 3.6.2 of the revised EA report (Annex B).

No.	De	partmental Comments	Responses
E5.	•	Section 3.5.3 The TD's Annual Traffic Census 2019 is not up-to-date. The consultant should refer to the latest TD traffic census for the road type of the Yuen Long Highway. Please also justify why Shan Ha Road and other local access roads can be assumed as Local distributors.	Noted. According to latest TD's Annual Traffic Census 2020, Yuen Long Highway is classified as Expressway. Shan Ha Road is classified as a feeder road based on the reply by TD on 24/1/2022 (Annex B). Since the local access road is not under TD's purview, we consider the local
			access road should also be classified as feeder road based on our understanding.
E6.	•	Section 3.5.4	Noted and revised accordingly
20.		Should read: "As there is no air sensitive <u>user <u>use</u> of the proposed temporary RCHE will be located within the buffer <u>distances</u> <u>zone</u>"</u>	
E7.	•	Section 3.5.6	Noted.
	•	The consultant should be reminded that it should be the responsibility of the applicant and their consultants to ensure the validity of the chimney data by their own site surveys. Should the information of industrial chimneys be subsequently found to be incorrect, the assessment result as presented in the planning application would be invalidated.	
E8.	•	Section 3.5.7 – B. Cooking Fume/odour from the kitchen The applicant should observe and follow the guidelines recommended by EPD's Control of Oily Fume and Cooking Odour from Restaurants and Food Business to avoid causing odour impact. (https://www.epd.gov.hk/epd/sites/default/files/epd/english/environmentinhk/air/guide_ref/files/pamphlet_oilfume_eng.pdf). In particular, the applicant should position the exhaust vent of the kitchen away from nearby village houses as far as possible to avoid causing any odour impact.	Noted. Section 3.5.7 has been revised accordingly.
E9.	W	aste assessment	
E10.		 The consultant should include the site appraisal findings in the EA report to address and confirm whether there is any potential land contamination issue at the Project site. 	Noted. The evaluation of potential land contamination issue at the Project Site via site appraisal findings has been supplemented in Section 7 of the revised EA report (Annex B).
E11.	Sp	ecific ecific	Noted and revised accordingly.
		• Section 6.4.1 – 3 rd bullet Please revise "General refuse" as "Chemical waste"	
E12.		mments from Water Quality and Noise perspectives will be provided once ailable.	Noted.

No.	Departmental Comments	Responses
F.	From: Transport Department (TD) Contact: Miss Grace FOK (Tel: 2399 2565) Received: 28/12/2021	
F1.	We refer to your above memo and have the following comments on the traffic impact assessment of the above planning application.	
F2.	(a) The applicant should provide calculations demonstrating how the parking provision is determined;	The proposed parking provision has made reference to a similar type development with similar characteristics and locality (i.e. RCHE at New Territories) as shown below.
		Approved Residential Care Home for the Elderly (RCHE), Hung Shui Kiu Development (300 beds) (Application No. A/YL- TYST/870)
		Car Parking Space / Taxi Drop off Space 4 3 L/UL Bay for LGV / 2 Pick up/Drop off Bay for Light Bus
		The proposed provision has been confirmed by the future operator and will be sufficient to meet its operation needs.
F3.	(b) Since the site is remote, the applicant should clarify whether they would provide shuttle service;	No shuttle service will be provided for visitors. Please note that the development intention of this project aims to provide residential care timely for those solitary elderlies and as the first priority to meet community needs. As such, the expected visitors for this type of RCHE are low.
		However, it is expected that on-site vehicular traffic flows will be around twice a day.
F4.	(c) The applicant should provide swept paths analysis to demonstrate that emergency vehicles could go into/from the proposed development from Shan Ha Road;	Noted. The swept path analysis drawings (Figures SP1 and SP2 (Annex D)) have demonstrated that adequate manoeuvring spaces for a 7m long Light Fire Appliance to/from the proposed development site via Shan Ha Road are provided.
F5.	(d) The applicant should provide the ingress and egress routes of the proposed development;	Noted. Please refer to Figure 3.1 (Annex C) showing the ingress and egress routes of the proposed development traffic.
F6.	(e) Since visitors and the elderly would probably travel between Yuen Long Town Centre and the proposed development, the applicant should clarify why the AOI did not include the traffic network of the aforesaid traffic;	Noted. The AOI has been revised accordingly. J5 (Castle Peak Road-Ping Shan/Long Tin Road) and J6 (Shui Pin Wai Interchange) which connect to Yuen Long Town Centre have been included.

No.	Departmental Comments	Responses						
77.	(f) The applicant should demonstrate the GMB no. 604 has capacity to fulfil the	Noted. An additional GMB utilization survey was conducted on 11 January 2022						
	transport need of the proposed development. In addition since the GMB service	(under normal school traffic condition without zoom classes and without wo						
	at Shan Ha Road could not accommodate wheelchairs presently, the applicant should clarify how to consider this in the trip generation;							
	should clarify how to consider this in the trip generation,		Vuen I o	ng Station Boun	d			
			Frequency	Capacity	Demand	Occupancy		
		Hour	(veh/hr)	(pax/hr)	(pax/hr)	%		
		10:00-11:00	6	198	49	25%		
		11:00-12:00	4	134	30	22%		
		12:00-13:00	6	185	62	34%		
	13:00-14:00	3	86	62	72%			
		14:00-15:00	6	166 Ta Tsuen Bound	76	46%		
			Frequency	Capacity	Demand	Occupancy		
		Hour	(veh/hr)	(pax/hr)	(pax/hr)	%		
		10:00-11:00	6	166	40	24%		
		11:00-12:00	4	134	29	22%		
		12:00-13:00	7	220	70	32%		
		13:00-14:00	3	86	46	53%		
		The survey results h	e demonstrat	ed that GMB	No. 604 has	40% adequate capa		
		According to our intrips are estimated a	n-house trip rate		Worst Peak	Hour		
				Attra	ction	Generation		
		Yuen Yuen Home for the Aged (56	Pedestrian Trip (ped/hr)		2	2		
		beds)	Pedestrian Trip Rate (ped/hr/bed	(s)	0.04			
		Proposed RCHE (100 beds)	Pedestrian Trip (ped/hr)	S 4	l	4		
		The prime objective those solitary elderlare expected to be 1	e of this RCHE	unity. The am	nount of visite	ors for this R		

No.	Departmental Comments	Responses							
		It is assumed that 100% of visitors will be travelled by GMB GMB No. 604 occupancy in 2027 reference and desig summarised below.						_	
		Worst Peak		2027 Referer	nce		2027 Desig	n	
		Hour (13:00-14:00)	Demand (pax/hr)	Capacity (pax/hr)	Occupancy %	Demand (pax/hr)	Capacity (pax/hr)	Occupancy %	
		Yuen Long Station Bound	64 ⁽¹⁾	86	74%	68	86	79%	
		Shan Ha Tsuen Bound	47 ⁽¹⁾	86	55%	51	86	59%	
		Note: (1) Adopted projection of the 20:).48% p.a. (from	TPEDM) fro	m 2022 to 202	7 for the	
		For visitors wi			•	d travel to	and from t	he proposed	
		RCHE using '	Diamond	Cab' Taxi	services.				
F8.	(g) The applicant should specify the exact traffic survey date and clarify whether	The vehicular		•		•			
	the survey was carried out under normal traffic condition;	school traffic							
		arrangement)	_					•	
		An updated ve							
		12 January 20							
		and without w 15:00) for the			-	iring the c	ott-peak pe	riod (10:00-	
	<u>I</u>	15:00) for the	on-peak t	raffic asses	smem.				

No.	Departmental Comments	Responses					
F9.	(h) The applicant should provide existing traffic queue survey and the traffic queue should be measured according to TPDM volume 8 chapter 7.4. In presenting the traffic queue, please draw the queue on layout plans and provide the queue length at every 15min interval;	(under normal school traffic condition without zoom classes and without work					
		Junction No.	Queue No.	Location		Average Queue Length (m)	Available Queuing Length (m)
			Q1	Shan Ha Ro		0	170
		J2	Q2	Tong Yan San Tsuen		48	60
			Q3	Shan Ha Ro		0	>300
		J3	Q4	Slip Road from Sha		0	70
		J4	Q5	Slip Road from Sha	n Ha Road NB	5	170
F10.	to make reference to this station for predicting the traffic of the local roads. As such, the applicant should use other way to estimate the traffic. In addition, the applicant should clarify why they did not carry out traffic survey during the concerned hours; (j) The applicant should seek Planning Department's advice on the planning assumption and provide the written record from Planning Department for our	conducted on 12 January 2022 (under normal school traffic condition without zoom classes and without work from home arrangement) during the off-peak period (10:00-15:00). The conversion of AM and PM peak periods to off-peak period has been replaced by the actual surveyed off-peak flows as shown in Figure 3.2 (Annex C). Noted. The written reply from PlanD is attached in Appendix B of the revised					
F12.	review; (k) The applicant should provide pedestrian traffic assessment for the proposed development, especially how the need of wheel chair persons could be addressed;						vithout work
					2022 Existing	2	
		Loca		Peak Flow (ped/15mins)	Flow Rate (ped/min/m)	I	.OS
		Site Acce Footp	oath	6	0.4		A
		Note: The clea	ar tootpath w	vidth = 1.5m actual width –	U.5m dead width = 1i	m.	

No.	Departmental Comments	Responses						
		According to our in-house trip rate of a similar size of RCHE, the pedestrian						
		trips are estimated	below.					
						Worst Peak	Hour	
					Att	raction	Genera	tion
		Yuen Yuen Home for the Aged (56	(ped/r	nr)		2	2	
		beds)	Pedestriar Rate (ped/h	nr/beds)		0.04	0.04	
		Proposed RCHE (100 beds)	Pedestrian (ped/h			4	4	
		generate/attract a conservative asses The pedestrian summarised below	assessment i		•	ce and desig	•	
		Location	Flow (ped/15mins)	Flow Rate (ped/ min/m)	LOS	Flow (ped/15mins)	Flow Rate (ped/ min/m)	LOS
		Site Access Road Footpath ⁽¹⁾	6 ⁽²⁾	0.4	A	8	0.53	A
		projection of	inual growth rate of the 2027 reference	of +0.48% p.a pedestrian flo	ı. (from TI ow	PEDM) from 2022 t		
		The results of the footpath will open						
		For visitors with v RCHE by using 'l				travel to and f	from the p	roposed

No.	Departmental Comments	Responses				
F13.	(l) The applicant should provide the details of the reference project for working out the estimated vehicular trips of the development. In addition, due consideration should be given to the location of the proposed development which is far from the town centre;	The estimated vehicular trips of the proposed development are extracted the trip rate result of a similar type of RCHE development within the si locality (i.e. Hong Shui Garden of Aged Company Limited, Tuen Mun) as s below.				he similar
		Reference Site	AM	I Peak	PM	Peak
			Att	Gen	Att	Gen
		Hong Shui Garden of Aged Company (pcu/hr)	ns 6	6	5	5
		Limited, Tuen Mun Trip Rates (138 beds) (pcu/hr/beds)	0.0435	0.0435	0.0362	0.0362
F14.	(m) The applicant should provide a table with reason describing the site factors adopted in the junction calculations;	No site factors have adopted in the pri	ority junction	on calculat	ions.	
F15.	(n) Planning Department shall check with the lands authority on the land status of	Noted.				
E1.6	the access road/path/track/ run-in/out leading to the site from Shan Ha Road;	N-4-1				
F16.		Noted.				
	responsibilities of the access road/path/track. Please consult the relevant					
E17	management and maintenance authorities accordingly; and (p) The applicant is reminded that sufficient space should be provided within the	Noted.				
1.17.	application site for manoeuvring of vehicles. In addition, no parking, queueing	Noted.				
	and reverse movement of vehicles on public road are allowed.					
G.	From: Environmental Protection Department (EPD)					
0.	Contact: Mr. Chris TSUI (Tel: 2835 2164)					
	Received: 31/12/2021					
G1.	Water Quality					
	Environmental Assessment					
G2.	 S.5.7.3 – Please review whether relevant mitigation measures in ProPECC PN 1/94 have been included, e.g. wheel washing, etc. 	Noted and relevant mitigation measure S.5.7.3.	es have been	n suppleme	ented acco	rdingly in
G3.	• S.5.7.4 – Please elaborate on where there would any measures to address	Noted. Mitigation measures for d	ealing with	n oil spil	lage aris	ing from
	adverse water quality impact from spillage of oil, etc.	construction activities have been supp				
G4.	• It is noted that the proponent proposed to tanker away sewage for off-site	Noted.				
	treatment. Comment from DSD shall be sought to confirm feasibility of the					
	arrangement.					

No.	Departmental Comments	Responses
G5.	• It is noted that the ADWF of the development would be 33m³/d and the sewage generated on site would be collected by tankers and delivered to nearby STWs daily. Please review and confirm whether such tanker	Noted. The arrangement of handling on-site sewage is considered feasible and implementable.
	arrangement would be feasible and implementable. Please consider measures to prevent overflow of raw sewage from the cesspool, e.g. level sensors, management plan, etc.	The measures to prevent overflow of raw sewage from the cesspool have been supplemented accordingly in S.3.5.7.
G6.	Sewerage Impact Assessment	No waste water will be generated during operation phase.
	• S.4.1.1 – It is noted that there would be deodorization unit to be provided	
	for the cesspool, would there be waste water generated during operation? If	
	so, please review whether such waste water shall also be considered.	
G7.	Comments from Noise perspectives will be provided once available.	Noted.
Н.	From: Environmental Protection Department (EPD)	
	Contact: Mr. Chris TSUI (Tel: 2835 2164)	
***	Received: 18/1/2022	
H1.	Noise	
H2.	Since this EA Report is intended for preliminary support to sw.16 application, we	Noted.
	would not go into the technical details of the EA Report. Nevertheless, we have some observations on the EA report as detailed below. The applicant should follow up and	
	refine their future NIA submission:	
Н3.	S.4.2.4 – Please document TD's agreement on the traffic forecast data in the NIA	Noted. TD's endorsement letter will be provided once available.
115.	report once available. In case TD has no comment on the methodology for traffic	Two days and the second
	forecast only, the consultant should provide written confirmation from the respective	
	competent party (e.g. traffic consultant) that TD's endorsed methodology has been	
	strictly adopted in preparing the traffic forecast data, and hence the validity of traffic	
	data can be confirmed.	
I.	From: Social Welfare Department (SWD)	
	Contact: Mr. CHU Lap Yin, Kevin (Tel: 3791 2806)	
**	Received: 24/1/2022	
I1.	Service perspective	
I2.	1. The Applicant please confirm if the proposed RCHE would be operated on self-financing or private mode.	The proposed RCHE would be operated on a self-financing basis.
I3.	2. While the proposed temporary RCHE is intended to be run for 10 years, the Applicant please take note of the need to formulate decanting plan for the elderly residents when the service is to be suspended upon the expiry of the 10-year period.	Noted. The Applicant will make timely arrangements to decant the elderly into the Applicant's own RCHEs or nearby RCHEs. The Applicant will liaise closely with the Social Welfare Department about this decanting arrangement at least three years before the expiry of the approval time limit under application.

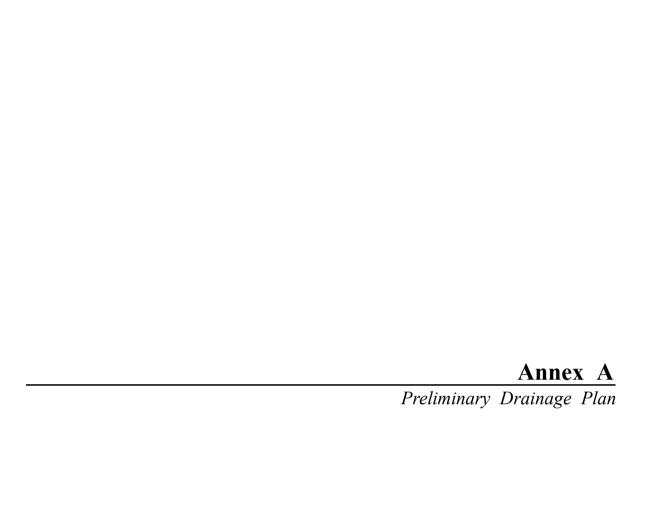
No.	Departmental Comments	Responses
I4.	3. According to the planning parameters in the present application, the proposed RCHE will occupy about 1,500 sqm GFA and will provide approximately 100 number of beds. In this light, the Applicant should ensure the area of floor space to be provided for each resident should be in full compliance of the statutory and licensing requirement as stated in Cap 459 and CoP.	The proposed RCHE will comply with the licensing requirements stipulated in the Residential Care Homes (Elderly Persons) Ordinance, Cap. 459, its subsidiary legislation and the latest version of the Code of Practice for Residential (Elderly Persons).
I5.	4. Applicant should especially take note of the proposed upward adjustment of the statutory minimum area of floor space per resident for different care level of RCHEs as recommended by the Working Group on the Review of Ordinances and CoP in its report submitted in May 2019 that the proposed statutory minimum floor space per resident for the "High Care Level Homes" will be increased from 6.5 sqm to 9.5 sqm, whereas the proposed statutory minimum floor space per resident for the "Medium and Low Care Level Homes" will be enhanced from 6.5 sqm to 8 sqm.	(see Response to Comment 3 from SWD (No. I4 of RtC))
I6.	Licensing Perspective	
I7.	1. The applicant is reminded that, for a RCHE licence to be issued, the intended RCHE has to comply with the licensing requirements as stipulated in the Residential Care Homes (Elderly Persons) Ordinance, Cap.459, its subsidiary legislation and the latest version of Code of Practice for Residential Care Homes (Elderly Persons).	(see Response to Comment 3 from SWD (No. I4 of RtC))
I8.	2. The applicant's special attention is drawn to the following:	
I9.	A. The premises shall be constructed and maintained in accordance with the provisions of Buildings Ordinance & Allied Regulations and Code of Practice for Fire Safety in Building 2011 issued by Buildings Department.	Noted.
I10.	B. Demonstration on compliance of the design requirements in respect of the provisions of the facilities for persons with a disability for the RCHE in accordance with "Design Manual: Barrier Free Access 2008".	Noted.
I11.	C. The provision of adequate natural lighting and natural ventilation to the habitable area, office and kitchen in compliance with Building (Planning) Regulation 30 & 31.	Noted.
I12.	D. No part of the area used for habitation shall be more than 9 m measured within the habitable area from a prescribed window as stipulated in Building (Planning) Regulation 32.	Noted.
I13.	E. The provision of adequate natural lighting and natural ventilation to the toilets, pantries (if any) in compliance with Building (Planning) Regulation 36.	Noted.

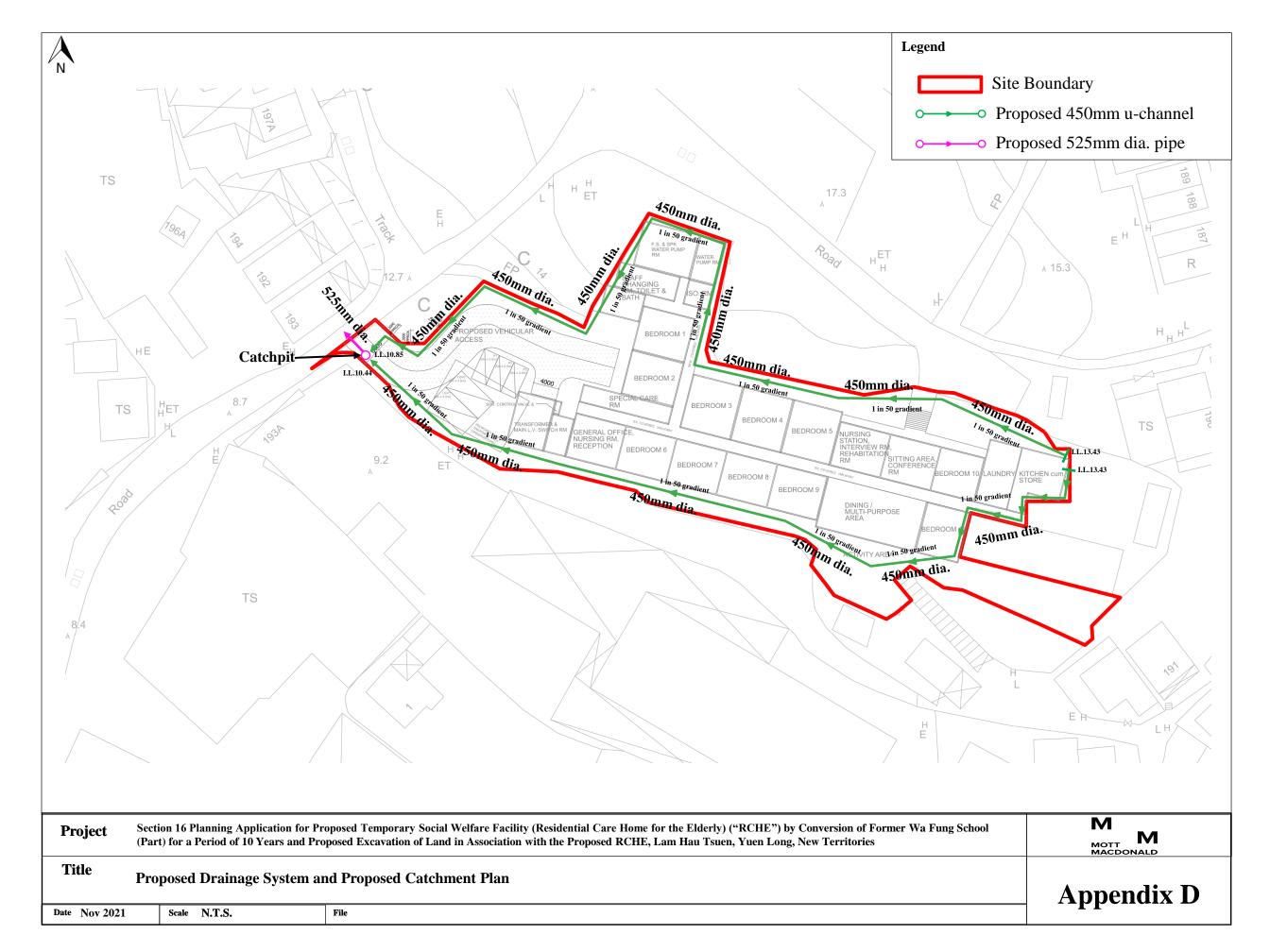
No.	Departmental Comments	Responses
I14.	F. The clear width of the door opening for each dormitory and the toilet should have a width not less than 800mm. The door should also be readily opened from inside without the use of a key.	Noted.
I15.	G. The ceiling (the ceiling structure or suspended false ceiling) of the RCHE must be situated at a height not less than 2.5m measuring vertically from the floor or not less than 2.3m measuring vertically from the floor to the underside of any beam.	Noted.
I16.	H. The dead-end travel distance in every part of the proposed RCHE should not be more than 12m to the protected exit or to a point, from which travel in different directions to 2 or more protected exits is available.	Noted.
I17.	I. Height of any light weight partitions should not obstructing the natural lighting and ventilation to the beds not along the windows.	Noted.
I18.	J. A designated isolation room shall be provided for every 50 beds.	Noted.
I19.	K. The captioned premises should be of free of unauthorized building works.	Noted.
I20.	L. The provision of sanitary fitments should be complied with the requirements as stipulated under Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations.	Noted.
I21.	M. Any building works which fall within Minor Work under Building (Minor Works) Regulation (B(MW)R), should fully comply with the requirements of the regulation. Details of the MWCS can be found at the Buildings Department website (www.bd.gov.hk).	Noted.
I22.	3. Detailed comments can only be formulated at the licence application submission stage.	Noted.
I23.	<u>District perspective</u>	
I24.	1. The applicant should take note of the need to formulate decanting plan for the elderly residents when the service is to be suspended upon the expiry of the 10-year period as the proposed temporary RCHE is intended to be run for 10 years.	Noted. The Applicant will make timely arrangements to decant the elderly into the Applicant's own RCHEs or nearby RCHEs. The Applicant will liaise closely with the Social Welfare Department about this decanting arrangement at least three years before the expiry of the approval time limit under application.

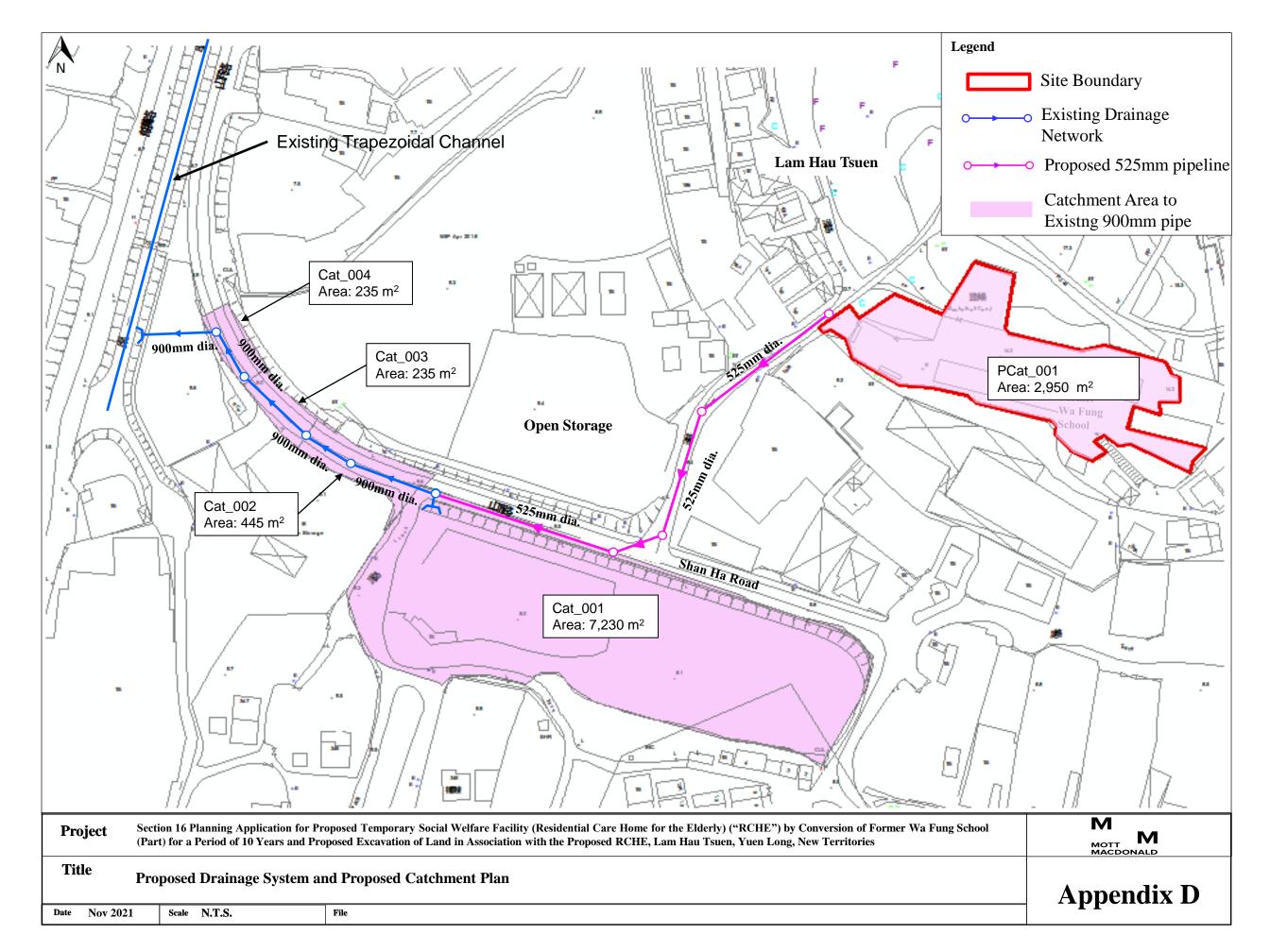
No.	Public Comments	Responses
5-1	Contact: 張家有	
	Dated: 6/12/2021	

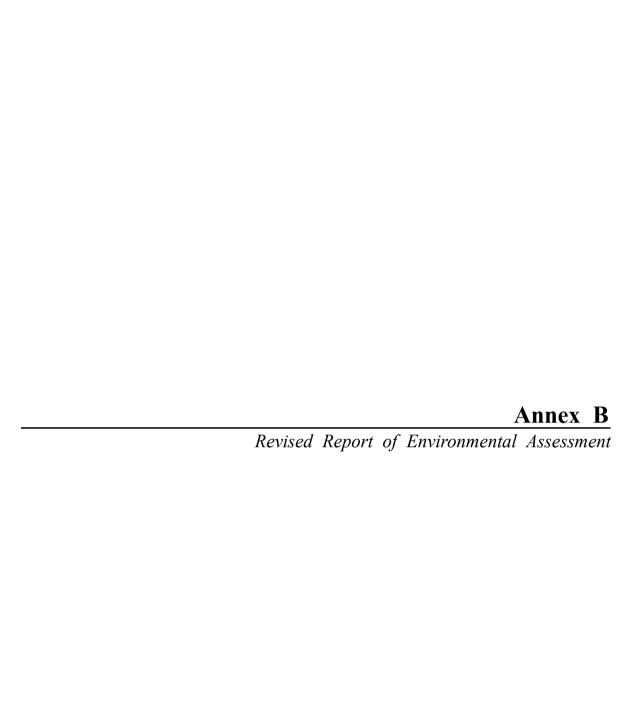
No.	Public Comments	Responses
a.	上述標題地段屬本村鄉村式發展用地,是所有村民世代相傳的重要福祉是全村命脈所在,本村人口不斷增加,很多村民家庭仍擠迫住在一起,空間狹小,爭吵時常發生,家庭成員們感情亦因此而僵化,水火不容,所以我們對住屋需求日趨越烈,很想有個屬於自己嘅理想之家,政府亦明白居住問題的嚴重性,實行填海、收地及各種不同政策,增加土地以增加房屋供應,緩解市民對住屋需求,而鄉議局在丁屋政策司法復核案中獲得勝訴,我們在鄉村式發展用地以「換地」及「協約式」可申領官地建屋,是合法合憲,是我們合法傳統權益,受基本法保護,不容忽視,亦不容踐踏,是我們之福,而上述標題地段正好是我們傳宗接代,延綿子孫,申建理想安樂窩的最佳地方,不容被破壞及佔領,加上當有疫情來臨時,老人院是最高危處所,而院內長者更是最高危一族,相互傳播力強,擴散亦很快,嚴重威脅村民生命安全,故老人院不應在村內存在,敬請貴會拒絕榕光社老人院申請,讓我們申建安樂窩,傳承後代,功德無量。謝謝	擬議發展用途僅屬臨時性質,應對社會需求,絕對不會影響該地帶的原有長遠規劃意途。該申請項目也得到眾多山廈村及欖口村居民的支持(請參考 Appendix XI - A_YL-TYST_1132_Others 5.pdf 内的山廈村村代表及欖口村村代表的支持信)。近期申請人亦收到該兩村村代表和 210 多名村民的支持(請參考 Annex E)。
5-2	Contact: 文流芳 Dated: 17/12/2021	
a. 5-3	我們曾於二零二零年七月十二日,在本村就上述標題舉行會議,並即時否決護理安老院申請,而標題位處鄉村式發展用地,對本村及村民日後發展至為重要,更是村民重要福祉,而興建南繞道時,政府已徵收本村部份發展式用地,到現在仍未補回,加上元朗南發展,政府收地又重重包圍本村,根本就是寸步難移,那有土地可供使用,嚴重影響本村日後發展,長久以來各村民對住屋需求甚為渴望,因為很多村民到現在仍然沒有自己居所,子女又逐漸長大,各家庭成員更擠迫在狹小空間內,環境不佳、摩擦、口角、感情破裂等情況時有發生,為免造成嚴重事件發生,理想解決方法就是增加村民住屋需要,而標題地段正好緩解村民之困,而且鄉議局在丁屋政策司法復核案中取得勝訴,我們在鄉村發展用地以「協約式」或「換地」方式在官地上申請丁屋是合憲合法,是我們傳統權益,受基本法保護,因此護理安老院在本村沒有存在空間。又當疫情來臨時,護理安老院等院舍是高危處所,安老院內長者更是最高危羣組,隨時引發大規模傳播,迅速蔓延,容易造成大量感染及死亡,為免引發嚴重事件發生,該等院舍不適宜在村內存在。懇請各委員諒解村民苦況,否決護理安老院申請,讓我們有個「家」,安居樂業,延綿後代。謝謝!	擬議發展用途僅屬臨時性質,應對社會需求,絕對不會影響該地帶的原有長遠規劃意途。該申請項目也得到眾多山廈村及欖口村居民的支持(請參考 Appendix XI - A_YL-TYST_1132_Others 5.pdf 内的山廈村村代表及欖口村村代表的支持信)。近期申請人亦收到該兩村村代表和 210 多名村民的支持(請參考 Annex E)。
5-3	Dated: 20/12/2021	

No.	Public Comments	Responses
a.	While the proposed use of the school is laudable, however as the saying goes, 'The Devil is in the Details'	Noted.
b.	While the Applicant declares is has experience in the provision of the proposed services, it in fact has zero track record: "The main objectives of the BSA are to provide services to elderly people in need in the community. Since 2019, the Applicant has been involving in planning for RCHE services and its first licensed RCHE with a total of 38 bed spaces (including 1 isolation bed) at 1/F of Right Time Building, Playing Field Road, Mong Kok, is expected to be in operation in the 1 st Quarter of 2022."	The proposed RCHE will comply with the licensing requirements stipulated in the Residential Care Homes (Elderly Persons) Ordinance, Cap. 459, its subsidiary legislation and the latest version of the Code of Practice for Residential (Elderly Persons).
	A SMALL FACILITY IS NOT YET OPENED	
c.	Then there is the matter of extensive excavation. "The overall extent of the excavation area covers about 1,050m2". Usually when the vacant schools are converted the proposed operations utilize only the existing facilities.	The overall extent of the excavation only covers 1,050m² in extent with a depth of 1m to 7.5m required for the needs of the whole operation.
d.	"It is the intention of the Applicant to include the adjoining vacant GL, including the former school basketball court" Surely this facility should be retained and refurbished for public use? Lam Hau Tsuen has a lot of houses but no community facilities.	It is the intention of the proposed development to fully utilise the abutting under- utilised land resources to meet the needs of the community. The proposed development is a welfare facility.
e.	There is also the issue of the trees to be felled: "a total of 80 existing trees in 25 species have been identified within the Subject Site. Most of these surveyed trees are in poor to fair conditions with low to medium amenity value. A total of 51 out of 80 surveyed trees within the Subject Site are proposed to be felled." The usual derogatory description of what are clearly healthy mature trees.	A proper landscape proposal has been proposed, including compensatory tree proposals and on-site extensive landscape treatments with proper maintenance commitment.
f.	The solution to the drainage is also problematic as we are talking about a RCHE where there would be residents suffering from various chronic conditions that require frequent cleaning. But the Applicant opts for: <i>Option</i> (1) – by regular disposal to nearby Public Sewage Treatment Works via Tanker Away;	A Sewerage Impact Assessment was submitted in support of the application. The proposed development is temporary in nature. That is why Option (1) is preferred.
g.	And this leads to the most troubling aspect: "Although the present proposed RCHE is temporary in nature" Extensive and irreversible changes to the premises and environs but the Applicant	Under the Central Clearing House mechanism, the GL portion of the former Wa Fung School has been recommended by the Planning Department to be retained for "G/IC" uses in the short-term pending implementation of long-term uses. Besides, as per Paragraph 124 of the 2021 Policy Address which states: "[we]
	envisages only a temporary operation. As GIC facilities incur costs to the taxpayer, the expectation would be that facilities such as RCHE once put into place would be of a permanent nature, as unlike transitional housing, the demand is long term.	must boost the short, medium and long-term supply of residential care services through a multi-pronged approach, including [] developing welfare facilities on Government sites".
	Member should question if there is an ulterior motive to the application.	











Section 16 Planning Application for Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories

Environmental Assessment (Revision B)

January 2022

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> Section 16 Planning Application for Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories

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January 2022

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1 Introduction

1.1 General

1.1.1 Mott MacDonlad Hong Kong Limited was commissioned to provide consultancy services and conduct an Environmental Assessment ("EA") to support Section 16 Planning Application for Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed temporary RCHE, Lam Hau Tsuen, Yuen Long, New Territories.

1.2 Objectives of Report

- 1.2.1 The objectives of this EA are to:
 - Identify and describe elements of community and environment likely to be affected by the proposed temporary residential care home for the elderly;
 - Identify emission sources (including air quality, noise, water quality and waste management) and determine the significance of impacts on sensitive receivers and potential affected uses; and
 - Propose mitigation measures so as to minimize pollution, environmental disturbance and nuisance during the construction phase and operational phase of the proposed temporary residential care home for the elderly.

1.3 Structure of the Report

- 1.3.1 This EA Report contains the following sections in addition to this introduction (Section 1):
 - Section 2 Project Description;
 - Section 3 Air Quality Impact Assessment;
 - Section 4 Noise Impact Assessment;
 - Section 5 Water Quality Impact Assessment;
 - Section 6 Waste Management Implications; and
 - Section 7 Conclusions of the EA Study.

2 Project Description

2.1 Project Background

2.1.1 The Applicant intends to convert the former Wa Fung School (part) in Lam Hau Tsuen (the Site) into a temporary residential care home for the elderly ("RCHE") for a period of 10 years under Section 16 of the Town Planning Ordinance. The Application Site covers a total land area of about 2,950 m², is located in Lam Hau Tsuen surrounded by some existing village houses, open storage and vehicle repair workshops in its vicinity. It is bounded by Yuen Long Highway to its north and Shan Ha Road to its south and the site is currently with an area zoned "Village Type Development" on the Approved Tong Yan San Tsuen Outline Zoning Plan (OZP) No. S/YL-TYST/14. The location of the Site is shown in **Figure 2.1**. This report is prepared to support the present planning application.

2.2 Key Development Parameters

2.2.1 The layout plans of the proposed temporary RCHE are provided in **Appendix A** and the key development data of the proposed development are given below:

Table 2.1 Data of the proposed temporary RCHE

Items	Details
Application Site Area	About 2,950 m ²
Development	Single Storey Elderly Home (about 100 beds)

2.3 Potential Concurrent Projects

- 2.3.1 The following planned nearby developments have been identified within the surrounding Statutory Planning Areas of Tong Yan San Tsuen OZP (No. S/YL-TYST/14) and presented in **Figure 3.1**:
 - Yuen Long South Development Stage 1

Yuen Long South Development - Stage 1

The Planning Department (PlanD) and Civil Engineering and Development Department (CEDD) commenced a Planning and Engineering Review on the Revised Recommended Outline Development Plan (RODP) for Yuen Long South Development in end 2018, in response to wider public views and demand for more housing after the promulgation of the RODP in 2017. The Revised RODP was promulgated in May 2020, which will provide about 32,850 new flats with a total population of about 101,200. The development covers approximately 223.5 ha and is located to the south of Yuen Long New Town. Other than housing development within the Proposed Development Area (PDA), there are also some other supporting infrastructure works (such as public transport interchange, road construction / improvement works, main laying, partial nullah decking and reclaimed water service reservoir) outside the PDA. According to the Information Digest¹ and proposed implementation programme in the Executive Summary of Planning and Engineering Review on the RODP², the project is tentatively scheduled to commence in 2021/22 for completion in 2038.

¹ https://www.yuenlongsouth.hk/links/information_digest.pdf

² https://www.yuenlongsouth.hk/links/ES_Revised_RODP_er.pdf

3 Air Quality Impact Assessment

3.1 Introduction

3.1.1 This section presents the assessment of potential air quality impacts associated with the construction and operation phases of the proposed temporary RCHE. Dust generated from construction activities is the primary concern during the construction phase. Due to the small-scale and limited extent of construction, dust emission induced by the proposed temporary RCHE would be expected to be insignificant. Recommendations for proper mitigation measures have also been made, where necessary, to minimize the potential construction air quality impacts. During operation phase, no air pollution sources associated with the proposed temporary RCHE would be anticipated.

3.2 Environmental Legislation, Standards and Guidelines

- 3.2.1 The assessment is carried out in accordance with the relevant criteria and standards as specified in the following legislation and guidelines for evaluating air quality impacts:
 - Environmental Impact Assessment Ordinance (EIAO) (Cap. 499 S.16), EIAO-TM, Annexes 4 and 12:
 - Air Pollution Control Ordinance (APCO) (Cap. 311);
 - Air Pollution Control (Construction Dust) Regulation (Cap. 311R);
 - Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (Cap. 311Z); and
 - Hong Kong Planning Standards and Guidelines (HKPSG) (Chapter 9)

Technical Memorandum on Environmental Impact Assessment Process

The proposed temporary RCHE does not fall under the assessment criteria for an EIA assessment; however the guidelines are a useful indicator of the projects' impact and acceptability. The criteria and guidelines for evaluating air quality impacts are set out in Section 1 of Annex 4 and Annex 12 of the EIAO-TM respectively. Annex 4 stipulates the criteria for evaluating air quality impacts. This includes meeting the Air Quality Objectives (AQOs) and other standards established under the APCO. Annex 12 provides the guidelines for conducting air quality assessments under the EIA process, including determination of Air Sensitive Receivers (ASRs), assessment methodology as well as impact prediction and assessment.

Air Quality Objectives (AQO) in Air Pollution Control Ordinance (APCO)

The principal legislation for the management of air quality is the APCO. It specifies AQOs which stipulate the statutory limits of air pollutants and the maximum allowable numbers of exceedance over specific periods. The new AQOs which took effect on 1st January 2022 are listed in **Table 3.1**.

Table 3.1 Air Quality Objectives

Pollutant	Averaging Time	AQO concentration (µg/m³)	Allowable exceedances
Sulphur Dioxide (SO ₂)	10 minutes	500	3)
	24 hours	50	3)
Respirable Suspended	24 hours	100	9)
Particulates (RSP or PM ₁₀)	Annual	50	Not Applicable
	24 hours	50	18

Pollutant	Averaging Time	AQO concentration (µg/m³)	Allowable exceedances
Fine Suspended Particulates (FSP or PM _{2.5})	Annual	25	Not Applicable
Nitrogen Dioxide (NO ₂)	1 hour	200	18)
	Annual	40	Not Applicable
Ozone (O ₃)	8 hours	160	9)
Carbon Monoxide (CO)	1 hour	30,000	0)
	8 hours	10,000	0)
Lead	Annual	0.5	Not Applicable
Total Suspended Particulates (TSP)*	1 hour	500	-)

Note: * Criterion specified under EIAO-TM, not an AQO

Air Pollution Control (Construction Dust) Regulation

The Air Pollution Control (Construction Dust) Regulation enacted under the APCO defines notifiable and regulatory works activities that are subject to construction dust control, as listed below:

Notifiable Works:

- Demolition of a building
- Work carried out in any part of a tunnel that is within 100 m of any exit to the open air
- Construction of the foundation of a building
- Construction of the superstructure of a building
- Road construction work

Regulatory Works:

- Renovation carried out on the outer surface of the external wall or the upper surface of the roof of a building
- Road opening or resurfacing work
- Slope stabilisation work
- Any work involving any of the following activities:
 - Stockpiling of dusty materials
 - Loading, unloading or transfer of dusty materials
 - Transfer of dusty materials using a belt conveyor system
- Use of vehicles
- Pneumatic or power-driven drilling, cutting and polishing
- Debris handling
- Excavation or earth moving
- Concrete production
- Site clearance
- Blasting

Notifiable works require that advance notice of activities shall be given to EPD. The Air Pollution Control (Construction Dust) Regulation also requires the works contractor to ensure that both notifiable works and regulatory works are conducted in accordance with the Schedule of the Regulation, which provides dust control and suppression measures.

Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation

The Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation comes into operation on 1 June 2015. Under the Regulation, Non-road mobile machinery (NRMMs), except those exempted, are required to comply with the prescribed emission standards. From 1 September 2015, all regulated machines sold or leased for use in Hong Kong must be approved or exempted with a proper label in a prescribed format issued by EPD. Starting from 1 December 2015, only approved or exempted NRMMs with a proper label are allowed to be used in specified activities and locations including construction sites. The Contractor is required to ensure the adopted machines or non-road vehicle under the proposed temporary RCHE could meet the prescribed emission standards and requirement.

Hong Kong Planning Standards and Guidelines (HKPSG)

The HKPSG buffer distance to "open space" sites have been adopted. According to the Table 3.1 in Chapter 9 of the HKPSG, guidelines on the buffer distance for air sensitive usage on industrial and vehicular emissions in relation to different categories of roads have been recommended. The different categories of roads and the respective minimum buffer distance for open space site are given in **Table 3.2**.

Table 3.2 Guideline on Usage of Open Space Site

Pollutant Source	Parameter	Buffer Distance (m)	Permitted Uses
Road and	Type of Road		
Highways	Trunk Road and Primary Distributor (PD)	>20	Active and passive recreation uses
		3-20	Passive recreational uses
		<3	Amenity areas
	District Distributor (DD)	>10	Active and passive recreation uses
		<10	Passive recreational uses
	Local Distributor (LD)	>5	Active and passive recreation uses
		<5	Passive recreational uses
	Under Flyovers		Passive recreational uses
Industrial Area	Difference in Height between Industrial Chimney Exit and the Site		
	<20m	>200	Active and passive recreation uses
		5 – 200	Passive recreational uses
	20 – 30m	>100	Active and passive recreation uses
		5 – 100	Passive recreational uses
	30 – 40m	>50	Active and passive recreation uses
		5 – 50	Passive recreational uses
	>40m	>10	Active and passive recreation uses

3.3 Background Air Quality

3.3.1 The Site is located in Yuen Long District. Historical air quality monitoring data from EPD's Yuen Long Air Quality Monitoring Station (AQMS) have been examined. The latest 5-year

annual average concentration (Year 2016-2020) of air pollutants at Yuen Long AQMS are shown in **Table 3.3**.

Table 3.3 5-year Annual Average Concentration at Yuen Long Air Quality Monitoring Station (2016 – 2020)

	Annı	Annual Average Concentration (μg/m³)			(µg/m³)	5-year Annual Average
Pollutant	2016	2017	2018	2019	2020	Background Concentration (μg/m³)
Nitrogen Dioxide (NO ₂)	46	41	43	44	32	41
Sulphur Dioxide (SO ₂)	10	9	8	5	5	7
Respirable Suspended Particulates (RSP)	37	40	37	37	30	36
Fine Suspended Particulates (FSP)	23	22	20	20	16	20

Notes: 1) Monitoring results that exceeded new AQO criteria are shown in bold characters

3.3.2 With reference to EPD's Past Air Quality Monitoring Data, the 1-hour NO2 and 10-minute SO2 concentrations; as well as the 24-hour average RSP, FSP and SO2 concentration at Yuen Long Station are shown in **Table 3.4**.

Table 3.4 Background Concentrations for 1-hour average NO₂, 10-minute average SO₂, 24-hour average RSP, FSP and SO₂ (Year 2016 – 2020) at Yuen Long Station

	Averaging	Background Concentration (µg/m³)					
Pollutant	period	2016	2017	2018	2019	2020	
Nitrogen Dioxide (NO ₂)	19 th Maximum 1-hour	149	156	150	161	135	
Sulphur Dioxide (SO ₂)	4 th Maximum 10-minute	58	80	52	42	26	
	4 th Maximum 24-hour	17	20	16	11	10	
Respirable Suspended Particulates (RSP)	10 th Maximum 24-hour	86	87	75	83	77	
Fine Suspended Particulates (FSP)	10 th Maximum 24-hour	63	52	46	45	36	

Notes: 1) Monitoring results that exceeded new AQO criteria are shown in bold characters

3.3.3 In addition, the Environment Bureau released the report A Clean Air Plan for Hong Kong 2035 in June 2021. The report documents an air quality management system to reduce air pollution including, reducing roadside air pollution; reducing marine emissions; and emission control of power plant. It is anticipated that the future background air quality would be improving.

3.4 Air Sensitive Receivers

- 3.4.1 The study area for the air quality impact assessment shall generally be defined by a distance of 500m radius from the boundary of the Site, yet it shall be extended to include major existing and planned / committed air pollutant emission sources identified to have a bearing on the environmental acceptability of the proposed temporary RCHE.
- 3.4.2 In accordance with Annex 12 of the EIAO-TM, Air Sensitive Receivers (ASRs) include domestic premises, hotels, hostels, hospitals, clinics, nurseries, temporary housing accommodation, schools, educational institutions, offices, factories, shops, shopping centres, places of public worship, libraries, courts of law, sports stadiums or performing arts centres. Any other premises or places that, in terms of duration or number of people affected, have

similar sensitivity to the air pollutants as the abovementioned premises and places are also considered as sensitive receivers.

3.4.3 The ASRs include existing, planned / committed air quality sensitive developments and relevant uses earmarked on the latest Outline Zoning Plans (OZP), Outline Development Plan (ODP) and relevant land use plans published by Land Department. The representative ASRs around the Site has been selected as representative ASRs and summarized in **Table 3.5**. Apart from the proposed development, other planned ASRs are identified in the vicinity of Study Area. The location of the representative ASRs and the 500m boundary of the study area are shown in **Figure 3.1**.

Table 3.5 Representative ASRs Identified for Assessment

ASR ID	Description	Type of Use	Existing/ Planned	Horizontal Distance from Work Site Boundary (m)
A1	No. 191, Lam Hau Tsuen	Residential	Existing	8
A2	No. 190, Lam Hau Tsuen	Residential	Existing	16
A3	No. 1, Lam Hau Tsuen	Residential	Existing	48
A4	No. 193, Lam Hau Tsuen	Residential	Existing	5
A5	No. 2, Shan Ha Tsuen	Residential	Existing	126
A6	Proposed temporary RCHE	Residential	Planned	Within the Site

3.5 Evaluation of Environmental Impact

Construction Phase

- 3.5.1 Construction dust will be the primary concern of air quality impact during construction phase. The construction of the proposed temporary RCHE involves very small scale of demolition works, retrofit of 1-storey existing building structures of former Wa Fung School, construction of 1-storey new building structures beside the existing building structures, an activity courtyard at the south, repairing of existing walkway and utilities installation. In addition, the new building structures will be constructed by using Modular Integrated Construction (MIC) method to replace on-site construction activities with off-site industrialised prefabrication operations. Thus, the dust emission generated from these small construction works area is anticipated to be minimal.
- 3.5.2 With the implementation of the recommended dust control measures as detailed in **Section 3.6** (e.g. regular and sufficient water spraying / enclosure of dusty activities, etc.), the dust emission to nearby ASRs (including the proposed temporary RCHE) is anticipated to be insignificant.

Operation Phase

Vehicular Emission

3.5.3 Roads located around the proposed temporary RCHE are some local access roads, Shan Ha Road and Yuen Long Highway. According to The Annual Traffic Census 2020 publish by Transport Department (TD), Yuen Long Highway is identified as Expressway (EX). As confirmed with traffic consultant and TD (see **Appendix 4.3**), Shan Ha Road and local access roads at southwest and northeast are classified as feeder road. Shan Ha Road and local

access roads at southwest and northeast are assumed as Local Distributor (LD) under a conservative approach for this project.

- 3.5.4 Yuen Long Highway is located about 200m away from the proposed temporary RCHE. The minimum buffer distances as stipulated in HKPSG, which are >5m (for active and passive recreation uses) or <5m (for passive recreational uses), have been adopted in the assessment for Shan Ha Road and local access roads. The separation distances between Yuen Long Highway/ Shan Ha Road/ local access roads and the proposed temporary RCHE are shown in **Figure 3.2**. As there is no air sensitive use of the proposed temporary RCHE will be located within the buffer distances zone, the proposed temporary RCHE fully complies with the relevant buffer distance requirements recommended in HKPSG. Therefore, adverse air quality impact due to vehicular emission on the proposed temporary RCHE is not anticipated.
- 3.5.5 Due to the small-scale of the proposed temporary RCHE, additional traffic introduced by the proposed temporary RCHE is expected to be insignificant. Therefore, additional vehicular emission impact induced from the proposed temporary RCHE to the ASRs in the vicinity is not anticipated.

Industrial Emission

3.5.6 Site visit was conducted on 30 July 2021. No industrial chimney was identified within 500m radius of the Study Area. Therefore, adverse air quality impact due to industrial emission on the proposed temporary RCHE is not anticipated.

Odour Emission

3.5.7 As no existing public sewerage system is located in the vicinity of the Site, two options of sewerage arrangement have been proposed in the separate Sewerage Impact Assessment (SIA). The odour emission sources of the proposed temporary RCHE are listed below:

A. Sewage Treatment

On-site sewage treatment plant (STP)

An on-site sewage treatment plant (STP) is proposed within the proposed temporary RCHE (see **Appendix 2.1**). The potential odour nuisance to the nearby ASRs (including proposed eldering home) would result. Nonetheless, the "Guidelines for the Design of Small Sewage Treatment Plants" published by EPD will be followed to minimize the odour impacts from the on-site sewage treatment plant. In addition, the odour mitigation measures (e.g. enclosing the STP facilities with negative pressure, forced ventilation system fitted with deodourization (DO) unit will be adopted in order to protect the ASRs. The ventilation exhaust of STP is proposed directing to the south of the proposed temporary RCHE which is away from the surrounding ASRs. Hence, the potential odour nuisance to the ASRs is anticipated to be minimal; or

Deliver the sewage off-Site by tanker

Sewage generated from the proposed temporary RCHE will be stored in a storage tank within the Site. The stored sewage will be delivered off site by tanker daily. A sewage storage tank with storage volume of about 105m³ (i.e. 35m³ for storage of sewage for daily removal plus about 70m³ for emergency storage of 2 days) will be provided.

Level sensors connected with alarm signalizing system will also be installed to monitor the storage volume of sewage storage tank to avoid overflow of effluent. A warning signal will be generated automatically to alert the manager when the flow in the tank reached a pre-set level, allowing sufficient time for arranging tanker service to tank away excessive treated effluent.

In addition, the storage tank will be equipped with deodourization (DO) unit. The ventilation exhaust of the tanker is proposed directing to the south of the proposed temporary RCHE which

is away from the surrounding ASRs. Hence, the potential odour nuisance to the ASRs is not anticipated.

B. Cooking fume/odour from the kitchen

Relevant cooking fume/odour control guidelines as recommended in the Control of Oily Fume and Cooking Odour from Restaurants and Food Business should be adopted to minimize the air pollution problem. These guidelines include:

Positioning of the outlet of the exhaust system

The exhaust outlet of the kitchen is positioned to the northwest to avoid direct facing to the close ASRs. Also, the location of exhaust outlet should be set away from surrounding ASRs as far as possible to avoid causing odour nuisance.

Control of oily fume and odour emission

Oily fume and cooking odour will be emitted via exhaust outlet from the kitchen during the cooking process. Cooker hoods with grease filter will be installed to control oily fume and cooking odour emission to the surrounding. In addition, water curtain scrubber and hydrovent are provided in the ventilation system to collect and further remove the fine oil particles of the oily fume after passing through the grease filter. Therefore, adverse air quality impacts caused by the cooking process is not anticipated.

3.6 Mitigation Measures

Construction Phase

3.6.1 Relevant dust control practices as stipulated in the Air Pollution Control (Construction Dust)
Regulation are recommended to be adopted so as to minimize the construction dust impacts
of the proposed temporary RCHE. These practices include:

Good Site Management

• Good site management is important to help reduce potential air quality impact down to an acceptable level. As a general guide, the Contractor should maintain high standards of housekeeping to prevent emissions of fugitive dust. Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimise the release of visible dust emission. Any piles of materials accumulated on or around the work areas should be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimising generation of fugitive dust emissions. The material should be handled properly to prevent fugitive dust emission before cleaning.

Disturbed Parts of the Roads

- Main temporary access points should be paved with concrete, bituminous hardcore materials or metal plates and be kept clear of dusty materials; or
- Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet.

Exposed Earth

• Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seating with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies.

Loading, Unloading or Transfer of Dusty Materials

 All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.

Debris Handling

- Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides.
- Before debris is dumped into a chute, water should be sprayed onto the debris so that it remains wet when it is dumped.

Transport of Dusty Materials

 Vehicles used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards.

Wheel washing

 Vehicles used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards.

Use of vehicles

- The speed of the trucks within the site should be controlled to about 10 km/hour in order to reduce adverse dust impacts and secure the safe movement around the site.
- Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels.
- Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle.

Site hoarding

- Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4 m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit.
- Apart from dust control practices as stipulated in the Air Pollution Control (Construction Dust)
 Regulation, additional mitigation measures should be also taken as far as practicable such as erection of higher hoarding along the east and west, and carrying out dusty activities at the centre of the Project site where is away from the close ASRs (i.e. A1 and A4). Also, the electric power supply shall be provided for on-site machinery as far as practicable to minimize the aerial emissions.
- 3.6.3 With proper implementation of the recommended mitigation measures as well as the relevant control requirements stipulated in the Air Pollution Control (Construction Dust) Regulation, no adverse air quality impacts are anticipated during the construction phase.

Operation Phase

3.6.4 As there is no adverse air impact anticipated during operation phase, no specific mitigation measure is required.

4 Noise Impact Assessment

4.1 Introduction

4.1.1 This section presents the assessment of potential noise impacts associated with the construction and operation phases of the proposed temporary RCHE. Noise generated from various construction activities is the primary concern during construction phase. Road traffic noise and fixed noise sources are the major noise impacts during the operation phase. Suitable mitigation measures, where necessary, have been recommended to protect the NSRs and to ensure that the legislative criteria and guidelines can be satisfied.

4.2 Environmental Legislation, Standards and Guidelines

Construction Phase

4.2.1 Legislation, Standards, Guidelines and Criteria relevant to the consideration of construction noise impacts under this assessment include the following:

General Construction Activities during Non-Restricted Hours

ProPECC PN 2/93 provides assessment criteria as well as requirements relating to construction noise not currently controlled under the NCO. The Practice Note also provides information on noise abatement measures. Noise impacts arising from general construction activities other than percussive piling during the daytime period (0700-1900 hours on any day not being a Sunday or general holiday) would be assessed against the noise standards tabulated in **Table 4.1** below. Practicable direct mitigation measures will be evaluated and exhausted to maximise the protection of NSRs.

Table 4.1 Noise Standards for Daytime Construction Activities

Noise Sensitive Uses	0700 to 1900 hours on any day not being a Sunday or general holiday, L _{eq (30 min)} , dB(A)
Dwellings	75
School	70
School	65 during examination

Source: Practice Note for Professional Persons (ProPECC) PN 2/93 "Noise from Construction Activities - Non-

Statutory Controls" issued by EPD in 1993.

Notes: The above noise standards apply to uses, which rely on opened windows for ventilation.

The above standards shall be viewed as the maximum permissible noise levels assessed at 1 m from the

external facade.

General Construction Activities during Restricted Hours

Noise impacts arising from general construction activities (excluding percussive piling) conducted during the restricted hours (1900-0700 hours on any day and anytime on Sunday or general holiday) and percussive piling during anytime are governed by the NCO.

According to the construction programme, the proposed construction works would be carried out during non-restricted hours. In case of any construction activities during restricted hours, it is the Contractor's responsibility to ensure compliance with the NCO and the relevant Technical Memoranda. The Contractor will be required to submit CNP application to the Noise Control Authority and abide by any conditions stated in the CNP, should any be issued.

Operation Phase

Road Traffic Noise

- 4.2.2 Legislation, Standards, Guidelines and Criteria relevant to the consideration of planning against possible road traffic noise impact under this assessment include the following:
 - Chapter 9 of the Hong Kong Planning Standards and Guidelines (HKPSG)
- 4.2.3 The noise criteria for evaluating noise impact of planning development with respect to road traffic noise are based on the HKPSG. The summary of road traffic noise criteria are given in Table 4.2 below.

Table 4.2 Relevant Road Traffic Noise Standards for Planning Purposes

Uses		Road Traffic Noise Peak Hour Traffic L _{10 (1 Hour)} , dB(A)
All do	mestic premises including temporary housing accommodation, offices	70
Notes:	(i) The above standards apply to uses which rely on opened windows for	ventilation.

(iii) The above standards should be viewed as the maximum permissible noise levels assessed at the external façade.

4.2.4 According to the Table 4.3 under Chapter 9 of the HKPSG, it provides approximate separations required for achieving the noise standard for residential developments fronting various types of roads. The broad guidelines of separations required between various types of roads and residential development are extracted in **Table 4.3** below.

Table 4.3 Broad Guidelines of Separations Required between Various Types of Roads and Residential Development (Table 4.3 of HKPSG)

Road Type	Assu	Assumptions		tion to Meet L ₁₀ 70 dB(A)
	Traffic Flow (veh/hr)	Vehicular Speed (kph)	Without Screening	With Screening*
Trunk	5,000	70	Approx. 300m	Approx. 50m
Primary Distributor	3,000	50	Approx. 180m	Approx. 40m
District Distributor/ Local Distributor	2,000	50	Approx. 120m	Approx. 30m

Notes: * under or about 45° angle of view of receiver on road traffic

Fixed Noise Sources

- 4.2.5 Legislation, Standards, Guidelines and Criteria relevant to the consideration of planning against possible fixed noise impact under this assessment include the following:
 - Control Ordinance (NCO) (Cap. 400);
 - Chapter 9 of the Hong Kong Planning Standards and Guidelines (HKPSG); and
 - Technical Memorandum on Noise from Places other than Domestic Premises, Public Places or Construction Sites (IND-TM)
- 4.2.6 For fixed noise sources impact assessment, the Acceptable Noise Levels (ANLs) for the Noise Sensitive Receivers (NSRs) are based on the Area Sensitivity Rating, which is defined in the IND-TM issued under the Noise Control Ordinance (NCO). The Area Sensitivity Rating depends on the type of area and the degree of impact that Influencing Factors (IFs) have on

the NSRs and as illustrated in **Table 4.4** below. Industrial area, major road or the area within the boundary of Hong Kong International Airport shall be considered to be an IF.

Table 4.4 Area Sensitivity Rating

	Degree to which NSR is affected by IF			
Type of Area Containing NSR	Not Affected ^(c)	Indirectly Affected ^(d)	Directly Affected ^(e)	
(i) Rural area, including country parks ^(a) or village type developments	Α	В	В	
(ii) Low density residential area consisting of low-rise or isolated high-rise developments	Α	В	С	
(iii) Urban area ^(b)	В	С	С	
(iv) Area other than those above	В	В	С	

Source: IND-TM, Table 1 – Area Sensitivity Rating Definitions:

- a) "Country park" means an area that is designated as a country park pursuant to section 14 of the Country Parks Ordinance.
- b) "Urban area" means an area of high density, diverse development including a mixture of such elements as industrial activities, major trade or commercial activities and residential premises.
- c) "Not Affected" means that the NSR is at such a location that noise generated by the IF is not noticeable at the NSR.
- d) "Indirectly Affected" means that the NSR is at such a location that noise generated by the IF, whilst noticeable at the NSR, is not a dominant feature of the noise climate of the NSR.
- e) "Directly Affected" means that the NSR is at such a location that noise generated by the IF is readily noticeable at the NSR and is a dominant feature of the noise climate of the NSR.
- 4.2.7 Fixed noise impact arising from the existing fixed noise source is controlled under the NCO and shall comply with the ANLs laid down in the Table 2 of the IND-TM. For a given Area Sensitivity Rating, the ANL, in dB(A), is given by **Table 4.5** below.

Table 4.5 Acceptable Noise Level for Fixed Noise Sources

	Area Sensitivity Rating, (ANL L _{eq (30 min)} , dB(A))		
Time Period	Α	В	С
Day-time (0700 to 1900 hours)	60	GE.	70
Evening (1900 to 2300 hours)	 60	65	70
Night-time (2300 to 0700 hours)	50	55	60

Source: IND-TM, Table 2 - Acceptable Noise Levels

- Note: (i) The above standards apply to uses which rely on opened windows for ventilation.
 - (ii) The above standards should be viewed as the maximum permissible noise levels assessed at 1m from the external facade.
- 4.2.8 The proposed temporary RCHE is located in a low density sub-urban diverse development area including village houses, vehicle repair workshops and open storage area. Therefore, the type of area containing the NSRs is considered as "Area other than those above" as defined in the IND-TM. In accordance with the Annual Traffic Census 2020 published by Transport Department, Yuen Long Highway from Shap Pat Heung Interchange to Tong Yan San Tsuen Interchange with Annual Average Daily Traffic (AADT) of 82,380 which exceeds 30,000, should be considered as an IF. As the proposed NSRs are considered not affected / indirectly affected by the IF, the ASRs for the representative NSRs in this study have been classified as "B" according to **Table 4.4**. The noise criteria of the existing/ cumulative fixed noise sources (planned/ existing) are summarised in **Table 4.6**. The Area Sensitivity Rating and ANLs adopted in this EA are used for assessment purpose only, they should not bind the

Noise Control Authority's decision in determining the noise criteria based on the legislation and practices being in force, and contemporary conditions/ situations of adjoining land uses.

Table 4.6 Noise Criteria of Existing/ Cumulative Fixed Noise Sources

Area Concitivity Bating	Noise Criteria, dB(A)		
Area Sensitivity Rating	Day-time & Evening	Night-time	
В	65	55	

4.2.9 The noise criteria (ANL-5 dB(A)) of planned fixed noise sources is adopted for the surrounding NSRs and is shown in **Table 4.7** below. The assessment area for noise impact is within 300m from the boundary of the proposed temporary RCHE, as shown in **Figure 4.1**. The locations of surrounding NSRs are shown in **Figure 4.1**.

Table 4.7 Noise Criteria of Planned Fixed Noise Sources

NSR ID	Time Period	ANL - 5, dB(A)#
N1, N2, N3, N4, N5	Day-time & Evening (0700 to 2300 hours)	60
	Night-time (2300 to 0700 hours)	50

Notes:

(*) Refer to **Table 4.5** for the Area Sensitivity Rating.

4.3 Assessment Area

4.3.1 The assessment area for noise impact is within 300m radius from the boundary of the proposed temporary RCHE, as shown in **Figure 4.1**.

4.4 Construction Noise Impact Assessment

Identification of Noise Impact

4.4.1 The potential source of noise impact for construction of the proposed temporary RCHE would be the use of PME for various activities, including retrofit of existing building structures and walkway of former Wa Fung School, an activity courtyard at the south and utilities installation in the Site. PME likely to be used include hand-held breaker, concrete lorry mixer, air compressor, and generator etc. As confirmed by the Applicant, construction activities for the proposed temporary RCHE would only be carried out during non-restricted hours (0700-1900 hours) on normal working dates.

Evaluation of Noise Impact

- 4.4.2 The construction activities involve retrofit of existing building structures and walkway of former Wa Fung School, an activity courtyard at the south and utilities installation. Therefore, the number of PME is expected to be limited. Given that the small-scale and limited extent of construction, the construction noise is anticipated to be minimal.
- 4.4.3 With the implementation of recommended noise mitigation measures as detailed in below (e.g. scheduling noisy activities, use of silenced equipment / movable noise barrier, etc.), the construction noise impact to the nearby NSRs (including the proposed temporary RCHE) is anticipated to be insignificant.

Mitigation Measures

4.4.4 It is recommended that the following noise mitigation measures should be implemented to minimize the construction noise impact, e.g. "Recommended Pollution Control Clauses for

Construction Contracts" available on EPD's website³. A noise control plan should be set up to ensure regular maintenance of all plant and equipment, reduce noise generation at source, and that appropriate silencing applications are in use based upon the best reasonable practice. In addition, the new building structures will be constructed by using MIC method to replace on-site construction activities with off-site industrialised prefabrication operations. Thus, the construction noise generated from these small construction works area is anticipated to be minimal.

- 4.4.5 Typical noise mitigation measures include:
 - good site practice to limit noise emission at source;
 - scheduling of construction works outside school examination periods;
 - use of silenced equipment;
 - use of movable noise barrier;
 - use of noise enclosure/ acoustic shed;
 - reduction in the number of items of PME operation at any given time; and
 - · avoidance of works in restricted hours etc.
- 4.4.6 These mitigation measures can be enforced by specifying a construction noise control plan as part of the contract document.

4.5 Road Traffic Noise Impact Assessment

Identification of Noise Sources

4.5.1 Road traffic noise from the nearby road network is anticipated. An area within 300m from the site boundary is proposed for noise impact assessment in this study. **Figure 4.1** shows the nearby road network within the 300m Assessment Area. The adjacent road, site access roads to the northeast and west surrounding the Project site, Shan Ha Road and Yuen Long Highway, are dominant sources of road traffic noise as they are close to the proposed development.

Assessment Methodology

- 4.5.2 The peak hour road traffic noise levels at the proposed development have been predicted based on calculation method in accordance with the "Calculation of Road Traffic Noise" (CRTN) issued by the UK Department of Transport. The existing and planned roads within 300m from the project site have been included in the assessment. According to **Section 2.3**, Yuen Long South (YLS) Development Stage 1 will be completed in 2038, thus, planned roads in the approved YLS EIA report (Register No.: AEIAR-215/2017) has been considered in this study.
- 4.5.3 The proposed mitigation measures for road traffic noise which include low noise road surfacing with reference to YLS EIA report (Register No.: AEIAR-215/2017), are incorporated into this assessment. The location of proposed mitigation measures are presented in **Appendix 4.1**.
- 4.5.4 According to the latest layout, all NSRs (e.g. bedroom and general office) which rely on openable windows for ventilation at the proposed development are identified. Traffic noise assessment points to all openable windows of all the NSRs, building structures with noise screening effect, topographical contours and road segments with traffic flow data are input

https://www.epd.gov.hk/epd/english/environmentinhk/eia_planning/guide_ref/rpc_3.html

- into the traffic noise model in evaluating the potential traffic noise impacts. Traffic data included traffic flow, percentage of heavy vehicles and speeds.
- 4.5.5 During the preparation of this EA, it was identified that the operation year of the proposed eldering home would be 2024. The assessment year adopted in this EA was determined based on the maximum traffic projection within 15 years upon occupation of the proposed development (i.e. 2024 + 15 years). Therefore, the projected AM peak traffic forecast for Year 2039 traffic data were adopted in the assessment under worst-case scenario. The traffic data adopted for this study had been checked and confirmed by competent party (i.e. the Traffic Consultant, Ho Wang SPB Ltd.). The peak hour traffic flow data adopted for this study is presented in **Appendix 4.1**.

Evaluation of Noise Impact

4.5.6 In order to reduce the road traffic noise impact, mitigation measures as recommended in *"Planning and Designing Noise Sensitive Development"* (ProPECC PN 4/93) and HKPSG have been incorporated under base case scenario.

Screening by Noise Tolerant Buildings

4.5.7 Due to the limited site area, the noise tolerant buildings (e.g. multi-storey carparks and commercial centres) cannot be provided.

Setback of Building

4.5.8 According to the latest design, the proposed eldering home has been incorporated 5m setback from site access roads to the northeast and west surrounding the Project site and Shan Ha Road. Due to limited site area, it is not possible to allow further setback of the proposed eldering home.

Extended Podium

4.5.9 The proposed eldering home is a 1-storey building structure, the podium design and canopy would not be feasible.

Internal Building Layout

4.5.10 Internal layout of proposed eldering home has been designed in such way that all noise sensitive units would be facing away from noise sources as much as practicable to achieve compliance of 70 dB(A).

Building Orientation

- 4.5.11 The Site is mainly affected by site access roads to the northeast and west surrounding the Project site. Due to limited development area and the shape of the site, the special building designs where noise tolerant portions (e.g. bathroom, kitchen and corridors etc.) orienting to site access roads and Shan Ha Road would not be feasible.
- 4.5.12 The development layout has been optimized according to the ProPECC PN 4/93 and HKPSG. It is expected that the compliance rate would be lower without measures discussed in Section 4.5.6-4.5.11. Based on the given layout plan, all openable windows for ventilation of all the NSRs (see Figure 4.2) have been assigned as assessment points. Predicted road traffic noise

levels during the peak hour at representative noise sensitive facades are summarized in **Table 4.8**. Detail breakdown of the road traffic noise results is shown in **Appendix 4.2**.

Table 4.8 Summary of Predicted Road Traffic Noise Results

NSR	Noise Criterion L _{10 (1 Hour)} dB(A)	Total No. of NSRs	Predicted Maximum L ₁₀ (Peak Hour), dB(A)	No. of NSR with Noise Exceedance	Compliance Rate (%)
Proposed temporary RCHE	70	17	70	0	100

4.5.13 It is found that no NSRs is predicted with road traffic noise exceedances against the L_{10 (1 Hour)} 70 dB(A) noise criterion and the compliance rate is 100%.

4.6 Fixed Noise Sources Impact Assessment

Identification of Noise Sources

Existing Fixed Noise Sources

4.6.1 Site visits have been conducted on 30 July 2021. It is observed that existing car repairing workshops, car parks, open storage areas and logistics company within the noise assessment area. A 2.5m high solid boundary wall (min. 10 kg/m²) is proposed to be erected along the southwest of the proposed temporary RCHE to block the direct line of sight between the proposed temporary RCHE and existing fixed noise sources. The locations of the identified existing noise sources are shown in **Figure 4.1**. Details of the identified existing fixed noise sources are summarised below:

Chung Wai Tat Logistics Ltd. (CWT)

4.6.2 CWT is located at 1m south of the site boundary. According to the interview with the employee, the operation of CWT is from 0700 to 2300 hours on Monday to Saturday. Based on the interview, the major noise sources are heavy vehicles movements along haul roads and material loading and unloading at the open storage area. However, no noisy activities were observed during the site survey on 30 July 2021. As 2.5m high solid boundary wall (min. 10 kg/m²) is proposed to be erected around the proposed temporary RCHE, and the proposed temporary RCHE is a 1-storey development including retrofit of existing buildings and construction of new buildings, the line of sight between the proposed eldering home and noise sources would be fully blocked by 2.5m high solid boundary wall (min. 10 kg/m²). Therefore, adverse fixed noise impact due to the noisy activities to proposed eldering home is anticipated to be minimal.

Hanyang Group (HY)

4.6.3 HY is located at 40m from the site boundary. According to the interview with the persons from the nearby companies, the operation of HY is from 0900 to 1800 hours on Monday to Saturday. Based on the site inspection, open storage is consisted of heavy vehicles and warehouse, and no noisy activity such as vehicle movement was identified. As 2.5m high solid boundary wall (min. 10 kg/m²) is proposed to be erected around the proposed temporary RCHE, the noise sources of the open storage are fully screened by the solid boundary wall. Therefore, no fixed noise impact from the open storage to the proposed temporary RCHE is anticipated.

Sunstar Motor Engineering Ltd. (CR1)

4.6.4 CR1 is a car repairing shop located at 20m from the site boundary. Based on the interview with the employee, the operation of CR1 is from 0900 to 1800 on Monday to Saturday. In

accordance with interview, car repairing, hammering and ties pumping are the major noise sources. The noise sources of the CR1 are fully screened by the proposed 2.5m high solid boundary wall (min. 10 kg/m^2), and no direct line of sight from the proposed temporary RCHE. Hence, no adverse fixed noise impact from SME to the proposed temporary RCHE is anticipated.

Star Power Motor Engineering Ltd. (CR2)

4.6.5 CR2 is a car repairing shop located at 25m from the site boundary. Based on the interview with the employee, the operation of CR2 is from 0830 to 1800 on Monday to Saturday. In accordance with interview, car repairing, hammering and ties pumping are the major noise sources. The noise sources of the CR2 are fully screened by the proposed 2.5m high solid boundary wall (min. 10 kg/m²), and no direct line of sight from the proposed temporary RCHE. Hence, no adverse fixed noise impact from SME to the proposed temporary RCHE is anticipated.

Mass Autotech Co. Ltd. (CR3)

4.6.6 CR3 is a car repairing shop located at 60m from the site boundary. Based on the interview with the employee, the operation of CR3 is from 0900 to 1800 on Monday to Saturday. In accordance with interview, car repairing, hammering and ties pumping are the major noise sources. The noise sources of the CR3 are fully screened by the proposed 2.5m high solid boundary wall (min. 10 kg/m²), and no direct line of sight from the proposed temporary RCHE. Hence, no adverse fixed noise impact from SME to the proposed temporary RCHE is anticipated.

Car Repairing Workshop (CR4)

OS1 is located at 60m from the site boundary. According to the interview with the employee, the operation of HY is from 0800 to 1900 hours on Monday to Saturday. In accordance with interview, car repairing, hammering and ties pumping are the major noise sources. Based on the site inspection, open storage is consisted of heavy vehicles, and no vehicle movement was identified. As 2.5m high solid boundary wall (min. 10 kg/m²) is proposed to be erected around the proposed temporary RCHE, the noise sources of the open storage are fully screened by the solid boundary wall. Therefore, no fixed noise impact from noisy activities to the proposed temporary RCHE is anticipated.

Car Park (CP1)

4.6.7 CP1 is located at 165m from the site boundary. Based on the site observation, the only non-frequent vehicles are slow in movement without any tyre noise, skidding noise and braking noise in the car park. As 2.5m high solid boundary wall (min. 10 kg/m²) is proposed to be erected around the proposed temporary RCHE, the noise sources of the car park are fully screened by the solid boundary wall. As the separation distance from the planned NSR and the proposed development is quite far and the direct line of sight from planned NSRs to the noise source will be blocked by the village houses at Lam Hau Tsuen, no adverse fixed noise impact from the car parks to the proposed temporary RCHE is anticipated.

Assessment Methodology

4.6.8 For the assessment of noise from the planned fixed noise sources, the maximum allowable sound power levels (Max SWLs) of the identified fixed noise sources were determined by adopting standard acoustics principles. The following standard equation is used for calculating the Max SWLs of the fixed plant:

SPL = Max SWL - DC + FC

where

SPL: Sound Pressure Level in dB(A)

Max SWL: Maximum Allowable Sound Power Level in dB(A)

DC: Distance Attenuation in dB(A) = $20 \log D + 8$ [where D is the distance in metres] FC: Façade Correction in dB(A) = +3 dB(A)

- 4.6.9 If exceedance to the planned noise criteria is found for one NSR, the initial SWL of the dominant sources to that NSR would be gradually lowered until the corrected SPL at that NSR meets the acceptable level. The process would be repeated for other representative NSRs with exceedance in the noise criteria until all corrected SPLs at the representative NSRs meet the noise criteria. The maximum allowable SWLs of the planned fixed noise sources will then be predicted.
- 4.6.10 The first layer of noise sensitive uses located close to the fixed noise sources of the planned development have been selected as assessment points / identified as representative NSRs within the study area for prediction of noise impact levels.
- 4.6.11 The noise levels at NSRs from the fixed noise sources are predicted based on basic acoustics equation for point source propagation. They were compared against the relevant fixed noise criteria to determine whether mitigation measures are required.

Evaluation of Noise Impact

Planned Fixed Noise Sources

4.6.12 The major fixed noise sources for the proposed temporary RCHE involve the outdoor units of split type air conditioners, ventilation openings for pumping room and two sewage treatment options, including Sewage Treatment Plant (STP) and Tanker. All equipment is expected to be operated 24 hours in a day. During the operation phase, noise will be generated from fixed plants including screens, blowers, pumps and fans, etc. The outdoor units are located dispersedly in the ground outside the rooms (e.g. bedroom, office) of the proposed temporary where most of them do not have a direct line of sight with the surrounding NSRs. The proposed STP, tanker and pumping room are fully enclosed with installation of silencer at the ventilation openings, so the potential breakout noise impact upon the surrounding NSRs is minimal. The maximum allowable sound power level (SWL) for all ventilation openings is determined in order to ensure the compliance with statutory requirements and guidelines. The day and evening time maximum allowable SWLs for all outdoor E&M equipment and ventilation openings are determined based on the shortest horizontal distance between the noise source and the closest NSR for conservative approach. The maximum allowable SWLs of the planned fixed noise sources are predicted as summarised in Table 4.9 below.

Table 4.9 Maximum Allowable SWLs of the Planned Fixed Noise Sources

Description	Day-time / Evening Period	Night-time Period
Planned Fixed Noise Standards	60 dB(A)	50 dB(A)
Shortest Horizontal Distance between Noise Source and NSR ¹	31 m	
Distance Correction	+ 18 dB(A)	
Tonality Correction	-6 dB(A)	
Façade Correction	-3 dB(A)	
Suggested Mitigation Measures Noise Reduction Correction ²	+10 dB(A)	
Total Maximum Permissible Sound Power Level	99 dB(A)	89 dB(A)

Notes:

- The nearest distance between planned fixed noise sources and NSR is identified as No. 190, Lam Hau Tsuen.
- 2. The direct line of sight of the nearest NSR and outdoor units will be screened by enclosed building structures while the pumping room and STP are fully enclosed with installation of silencer at the ventilation openings. Therefore, noise attenuation of 10 dB(A) will be adopted in the maximum permissible sound power levels calculation under a conservative approach.

4.6.13 With the adoption of the proposed maximum allowable SWLs of the planned fixed noise sources, directing the planned fixed noise sources away from NSRs, installation of silencer and 2.5m high solid boundary wall (min. 10 kg/m²) along the proposed temporary RCHE which block the direct line of sight from it to existing fixed noise sources, no adverse fixed noise impact from the proposed temporary RCHE to the nearby NSRs and from existing fixed noise sources to the proposed temporary RCHE is anticipated.

5 Water Quality Impact Assessment

5.1 Introduction

5.1.1 This section presents the assessment of potential water quality impacts associated with the construction and operation phases of the proposed temporary RCHE. Recommendations for mitigation measures have been made, where necessary, to minimize the potential water quality impacts. During operation phase, the proposed temporary RCHE is unlikely to produce any adverse water quality impact.

5.2 Environmental Legislation, Standards and Guidelines

- 5.2.1 Relevant legislations, standards and guidelines governing water quality in Hong Kong include the following:
 - Chapter 9 of Hong Kong Planning Standards and Guidelines (HKPSG);
 - Water Pollution Control Ordinance (WPCO) (Cap. 358);
 - Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters; and
 - Practice Note for Professional Persons on Construction Site Drainage (ProPECC Note PN 1/94)

Chapter 9 of Hong Kong Planning Standards and Guideline (HKPSG)

5.2.2 The assessment of potential water quality impacts associated with the construction and operation phases of the proposed temporary RCHE while planning of this development should make reference to the Chapter 9 of HKPSG. Recommendations for mitigation measures to minimize the water quality impacts being identified should also be provided.

Water Pollution Control Ordinance (WPCO)

5.2.3 The Water Pollution Control Ordinance (WPCO) (Cap. 358) provides the statutory framework for the protection and control of water quality in Hong Kong. According to the Ordinance and its subsidiary legislation, Hong Kong waters are divided into ten Water Control Zones (WCZs). Water Quality Objectives (WQOs) were established to protect the beneficial uses of water quality in WCZs and specific WQOs are applied to each WCZ. The Site is located within the catchment of the Deep Bay WCZ. The corresponding WQOs for Deep Bay WCZ are listed in Table 5.1.

Professional Persons Environmental Consultative Committee Practice Note 1/94 Construction Site Drainage (ProPECC PN 1/94)

5.2.4 A practice note for professional persons was issued by the EPD to provide guidelines for handling and disposal of construction site discharges. The Professional Persons Environmental Consultative Committee Practice Note 1/94 Construction Site Drainage (ProPECC PN 1/94) provides good practice guidelines for dealing with various types of discharge from a construction site. Practices outlined in ProPECC PN 1/94 should be followed as far as possible during construction to minimise the water quality impact due to construction site drainage.

Table 5.1 Summary of Relevant Water Quality Objectives for Deep Bay WCZ

Parameters	Objectives	Sub-Zone	
Aesthetic appearance	(a) Waste discharges shall cause no objectionable odours or discolouration of the water.	Whole Zone	
	(b) Tarry residues, floating wood, articles made of glass, plastic, rubber or of any other substances should be absent.	Whole Zone	
	(c) Mineral oil should not be visible on the surface. Surfactants should not give rise to a lasting foam.	Whole Zone	
	(d) There should be no recognisable sewage-derived debris.	Whole Zone	
	(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.	Whole Zone	
	(f) Waste discharges shall not cause the water to contain substances which settle to form objectionable deposits.	Whole Zone	
Bacteria	(a) The level of <i>Escherichia coli</i> 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 <i>Escherichia coli</i> 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 <i>Escherichia coli</i> 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.	Yuen 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 (DO)	(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	

Parameters Objectives		Sub-Zone	
	(c) The dissolved oxygen level should not be less than 5 milligrams per litre for 90% of the sampling occasions during the year; values should be taken at 1 metre below surface.	Mariculture Subzone	
	(d) Waste discharges shall not cause the level of dissolved oxygen to be less than 4 milligrams per litre.	Yuen Long & Kam Tin (Upper and Lower) Subzones, Beas Subzone, Indus Subzone, Ganges Subzone, Water Gathering Ground Subzones and other inland waters of the Zone	
рН	(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 Whole Zone temperature range to change by more than 2.0 degrees Celsius.		
Salinity	Waste discharges shall not cause the natural Whole Zone ambient salinity level to change by more than 10%		
Suspended Solids (SS)	(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-ionised ammoniacal nitrogen level should Whole Zone not be more than 0.021 milligram per litre, calculated as the annual average (arithmetic mean).		
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 Subzone	
	(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 metre above seabed).	Outer Marine Subzones	

Parameters Objectives		Sub-Zone		
5-day biochemical oxygen demand (BOD)	(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)		
(CÓD)		Subzone, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones		
	(b) Waste discharges shall not cause the chemical oxygen demand to exceed 30 milligrams per litre.	Yuen Long & Kam Tin (Lower) Subzone and other inland waters		
Toxins (a) Waste discharges shall not cause the toxins in water to attain such levels as to produce significant toxic carcinogenic, mutagenic or teratogenic effects in humans, fish or any other aquatic organisms, with due regard to biologically cumulative effects in food chains and to toxicant interactions with each other.		Whole Zone		
	(b) Waste discharges shall not cause a risk to any beneficial uses of the aquatic environment.	Whole Zone		
Phenol	Phenols shall not be present in such quantities as to produce a specific odour, or in concentration greater than 0.05 milligrams per litre as C6H5OH. Yung Long Bathing Bea Subzone			
Turbidity	Vaste discharges shall not reduce light Yung Long Bathing Beach ransmission substantially from the normal level. Subzone			

5.3 Assessment Area

5.3.1 The assessment area for the water quality impact assessment shall generally include areas within 500m radius from the boundary of the proposed temporary RCHE. This has been identified accordingly and is shown in **Figure 5.1**.

5.4 Assessment Area

5.4.1 The key WSRs are listed in **Table 5.2**. The indicative locations of WSRs are shown in **Figure 5.1**.

Table 5.2 Water Sensitive Receivers

WSR ID	Description		
WSR 1	Nullah along Shan Ha Road and Long Hon Road		
WSR 2	Nullah along Lam Hi Road and Lam Tai East Road		

5.5 Construction Phase Assessment

Construction Site Runoff

- 5.5.1 The surface runoff from construction works areas may contain increased loads of suspended solids (SS) and contaminants. Potential sources of pollution from construction site drainage include:
 - Runoff and erosion from site surfaces, drainage channels, demolition works, earth working areas and stockpiles;
 - Release of any bentonite slurries, concrete washings and other grouting activities;
 - Wash water from dust suppression spray facilities; and
 - Fuel, oil, solvents and lubricants from maintenance of mechanical equipment.
- 5.5.2 Sediment laden runoff particularly from works areas subjected to excavation or earth works, if uncontrolled, may cause increased levels of suspended solids and pollutants entering the stormwater drainage system and into the marine environment.
- 5.5.3 Mitigation measures and good site practices outlined in ProPECC Note PN 1/94/ and ETWB TC (Works) No. 5/ 2005 and listed in **Section 5.7** should be implemented to control construction site runoff and drainage from the works area. The Contractor would also be required to apply for a discharge license under the WPCO. With implementation of the recommended mitigation measures along with compliance of the effluent standards set under TM-DSS, construction site runoff can be effectively controlled, and adverse impacts to storm drains or the marine environment is not anticipated.

General Construction Activities

- 5.5.4 The following on-site construction activities may cause water pollution:
 - uncontrolled discharge of debris and rubbish such as packaging, construction materials and refuse; and
 - spillages of liquids stored on-site, such as oil, diesel and solvents, which will result in water quality impacts if they enter the nearby stormwater drainage channels.
- 5.5.5 Good construction and site management practices should be observed to ensure that litter, fuels and solvents do not enter the drainage system and marine environment. With proper implementation of the good construction and site management practices mentioned in Section 5.7, water pollution arising from the general on-site construction activities can be prevented, and water quality impacts would not be anticipated.

Sewage Effluent from the Construction Workforce

5.5.6 Domestic sewage would be generated from the workforce during the construction phase. However, portable chemical toilets will be provided within the construction site. With implementation of mitigation measures suggested in **Section 5.7**, adverse water quality impact or impact on the identified sensitive receivers are not anticipated.

5.6 Operation Phase Assessment

Sewage generated by the proposed temporary RCHE during operation phase

5.6.1 There is no public sewerage system in the vicinity of the proposed development site. Sewage generated will be treated by on-site STP or stored in a storage tank within the Site and delivered off site by tanker at regular intervals. An on-site sewage treatment plant (STP) or storage tank are proposed within the Site for serving total of population approx. 150. The location of the on-site STP or storage tank is shown in **Appendix 2.1**. Detailed discussion of

the proposed sewerage arrangement is provided in the separate Sewerage Impact Assessment (SIA).

5.7 Recommendation of Mitigation Measures

Construction Phase

5.7.1 The assessment has indicated that the development works, if properly controlled, will not cause adverse impacts to the existing drainage and sewerage systems. Hence, no additional mitigation measures are required. Appropriate on-site measures are defined to reduce potential impacts, which will be sufficient to prevent adverse impacts to water quality from the construction activities. All effluent discharge from the works will be subject to control under the WPCO.

Construction Site Runoff and Drainage

- 5.7.2 At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities.
- 5.7.3 The good site practices outlined in ProPECC PN 1/94 "Construction Site Drainage" should be followed as far as practicable in order to minimise surface runoff and erosion, and also to retain and reduce any suspended solids prior to discharge. The following measures are recommended:
 - Surface run-off from construction sites should be discharged into storm drains via
 adequately designed sand/silt removal facilities such as sand traps (see Appendix A1
 of ProPECC PN 1/94), silt traps and sediment basins. Channels or earth bunds or sand
 bag barriers should be provided on site to properly direct stormwater to such silt
 removal facilities. Perimeter channels at site boundaries should be provided where
 necessary to intercept storm run-off from outside the site so that it will not wash across
 the site. Catchpits and perimeter channels should be constructed in advance of site
 formation works and earthworks.
 - Earthworks final surface should be well compacted and protected by subsequent permanent surface protection works to prevent erosion caused by rainstorms.
 - The ingress of rainwater into trenches should be minimized. Rainwater from the trenches should be pumped out and discharged into storm drains via silt removal facilities.
 - Open stockpiles of construction materials should be covered with tarpaulin or similar fabric during rainstorms to prevent washing away of construction materials.
 - Manhole should always be covered to prevent silt, construction materials or debris from getting into the drainage system.
 - Precautions to be taken at any time of year when rainstorms are likely, actions should be taken when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes.
 - Groundwater pumped out of wells should be discharged into storm drain after removal of silt in silt removal facilities.
 - All vehicles and plant should be cleaned before leaving the construction site to avoid depositing earth, mud and debris on roads.
 - Sand/ Silt removal facilities such as sand traps, silt traps and sedimentation tanks should be provided to remove particles from run-off. These facilities should be properly

- and regularly maintained. The solids removed from these facilities during maintenance desilting should be disposed of to landfill.
- The Contractor is required to obtain a wastewater discharge license under the WPCO prior to implementing any wastewater discharge.
- Programming of the works to minimise soil excavation works during rainy seasons.
- Exposed soil surface should be protected by shortcrete or hydroseeding as soon as possible to reduce the potential for soil erosion.
- Temporary access roads should be protected by crushed gravel and exposed slope surfaces should be protected when rainstorms are likely.
- Oil interceptors should be provided in the drainage system downstream of any oil/fuel
 pollution sources. The oil interceptors should be emptied and cleaned regularly to
 prevent the release of oil and grease into the storm water drainage system after
 accidental spillage.

General Construction Activities

- 5.7.4 Best Management Practices (BMPs) should be implemented at the construction site, including proper handling, sorting and storage of construction solid waste, debris and refuse generated on-site prior to disposal. General refuse and recyclable materials should be collected separately and stored in appropriately labelled bins and removed regularly to minimise the risk of windblown waste / debris discharging into the harbour.
- 5.7.5 Fuel, oil, solvents and lubricants from maintenance of construction machinery and equipment may be spilled or washed onto the ground surface area within the working area. Therefore, oil interceptors are recommended to be installed in areas where runoff could be contaminated by oil and grease. The runoff should be diverted to oil interceptors prior to discharge to storm drains.

Sewage Effluent from the Construction Workforce

5.7.6 The Contractor should provide temporary sanitary facilities, such as portable chemical toilets within the construction site to handle sewage from the workforce. The Contractor has the responsibility to ensure that chemical toilets are used and properly maintained, and that licensed Contractors are employed to collect and dispose of the waste off-site at approved locations.

Operation Phase

5.7.7 With implementation of proposed on-site STP or tanker away which deliver sewage off site, no adverse water quality impact is anticipated during operation phase. Nonetheless, the contingency and mitigation measures proposed in the separate Sewerage Impact Assessment (SIA) including:

Option 1: Regularly Disposed to nearby Public Sewage Treatment Works via Tanker Away

 An emergency storage tank with 2 days storage volume will be provided for tanker away.

Option 2 – Provision of On-site Tertiary Sewage Treatment Plant (STP)

- Dual source electricity supply as an emergency measures of STP will be provided to prevent power failure.
- Standby pumps, in addition to the duty pumps will be provided as backup solution during operation when the duty pump is failure to be operated or for maintenance inspection.
- An emergency storage tank with storage capacity for storing 6 hours of ADWF will be provided to storage the overflow of raw sewage during maintenance or the STP failure.

- A sludge tank for emergency storage of 14 days sludge volume would be provided for the sludge treatment in STP.
- In case of necessary and emergency, provision of tanker service to tank away the excessive raw sewage by licensed collector will be arranged and mobilized.
- 5.7.8 The potential water quality impact during the operation phase will be the run-off or non-point source pollution from road surfaces and developed areas. Proper pre-treatment facilities such as sand-trap and petrol interceptor should be installed at the peripheral drainage. In addition, good management measures such as regular cleaning and sweeping of road surface and open areas are suggested to implement. Therefore, with implementation of proper pre-treatment facilities and good management measures, the potential water quality impact is anticipated to be insignificant.

6 Waste Management Implications

6.1 Introduction

6.1.1 This section identifies the potential waste arising from the construction and operation activities of the proposed temporary RCHE and evaluates the potential environmental impacts that may result from waste generated. Mitigation measures and good site practices, including waste handling, storage and disposal, are recommended with reference to applicable waste legislation and management guidelines to minimise potential waste management impacts.

6.2 Environmental Legislation, Standards and Guidelines

- 6.2.1 The following legislation relates to the handling, treatment and disposal of wastes in Hong Kong and has been used in assessing potential impacts:
 - Waste Disposal Ordinance (Cap. 354);
 - Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C);
 - Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N);
 - Public Health and Municipal Services Ordinance (Cap. 132) Public Cleansing and Prevention of Nuisances Regulation (Cap. 132BK); and
 - Land (Miscellaneous Provisions) Ordinance (Cap. 28)

Waste Disposal Ordinance

6.2.2 The Waste Disposal Ordinance (WDO) prohibits the unauthorised disposal of wastes. Construction waste is defined as any substance, matter or thing that is generated from construction work and abandoned, whether or not it has been processed or stockpiled before being abandoned, but does not include any sludge, screenings or matter removed in or generated from any desludging, desilting or dredging works. Under the WDO, wastes can be disposed of only at designated waste disposal facilities.

Waste Disposal (Chemical Waste) (General) Regulation

- 6.2.3 Under the WDO, the Chemical Waste (General) Regulation provides regulations for chemical waste control, and administers the possession, storage, collection, transport and disposal of chemical wastes.
- 6.2.4 According to the Waste Disposal (Chemical Waste) (General) Regulation, all producers of chemical waste must register with Environmental Protection Department (EPD) and treat their wastes, either utilising on-site plant licensed by EPD, or arranging for a licensed collector to transport the wastes to a licensed facility. The Regulation also prescribes the storage facilities to be provided on site, including labelling and warning signs, and requires the preparation of written procedures and training to deal with emergencies such as spillages, leakages or accidents arising from the storage of chemical wastes.
- 6.2.5 The EPD has also issued a 'guideline' document, the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes (1992), which details how the Contractor should comply with the regulations on chemical wastes.

Waste Disposal (Charges for Disposal of Construction Waste) Regulation

6.2.6 Under the Waste Disposal (Charges for Disposal of Construction Waste) Regulation, enacted in January 2006, 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 facility (PFRF) for disposal must consist entirely of inert material.

Public Health and Municipal Services Ordinance

6.2.7 The Public Cleansing and Prevention of Nuisances Regulation provides control on illegal tipping of wastes on unauthorised (unlicensed) sites.

Land (Miscellaneous Provisions) Ordinance

- 6.2.8 The Land (Miscellaneous Provisions) Ordinance requires that dumping licenses be obtained by individuals or companies who deliver public fill to public filling areas. The CEDD issues the licences under delegated powers from the Director of Lands. The current policy related to dumping of construction and demolition (C&D) material is documented in the Works Branch Technical Circular No. 2/93 Public Dumps. C&D materials that are wholly inert should not be disposed of to landfill but taken to fill banks or public filling areas. Other relevant documents and guidelines that are also applicable to waste management and disposal in Hong Kong as follow:
 - ETWB Technical Circular (Works) No. 19/2005, Environmental Management on Construction Sites:
 - Development Bureau (DEVB) Technical Circular (Works) No. 6/2010, Trip Ticket System for Disposal of Construction and Demolition Materials;
 - ETWB Technical Circular (Works) No. 22/2003A, Additional Measures to Improve Site Cleanliness and Control Mosquito Breeding on Construction Sites;
 - ETWB Technical Circular (Works) No. 6/2002A, Enhanced Specification for Site Cleanliness and Tidiness:
 - ETWB Technical Circular (Works) No.12/2000, Fill Management;
 - Chapter 4 of Project Administration Handbook (PAH) for Civil Engineering Works, 2020 Edition

6.3 Construction Phase Assessment

- 6.3.1 The construction activities will be confined inside the small site area which is approximately about 2,950 m² hectare in size. The proposed temporary RCHE involves very small scale of demolition works, repairing of existing building structures of former Wa Fung School, construction of new 1-storey buildings as extension area and utilities installation. Therefore, it is anticipated that only limited amount of waste will be generated. The identified waste types include:
 - Construction and demolition (C&D) materials;
 - Chemical waste; and
 - General refuse.
- 6.3.2 Each type of the above waste arising is described below, together with an evaluation of the potential environmental impacts associated with the waste generation, handling, storage, transport and disposal.

Construction and demolition (C&D) materials

6.3.3 It is expected that a small amount of inert and non-inert C&D materials will be generated as the site will be involved small area of excavation, and the new 1-storey structures will be adopted with Modular Integrated Construction (MiC). The inert materials should be segregated from the C&D materials on-site for reuse as far as practicable. In order to minimise the impact resulting from collection and transportation of C&D material for off-site disposal,

the C&D material that could be reused on-site as fill materials as far as practicable. The surplus inert C&D materials could be disposed of at the Government's Public Fill Reception Facilities (PFRFs) for beneficial use by any other projects in Hong Kong. Non-inert C&D materials would be disposed to designated landfill. The management options for non-inert C&D materials (i.e. C&D waste) including avoid/ reduce/ minimise the generation of C&D materials and well-planned delivery programme for offsite disposal will be considered during construction phase.

6.3.4 With proper implementation of good construction site practice and mitigation measures recommended, potential dust, noise and water quality impacts associated with on-site handling and transportation of C&D materials are not anticipated.

Chemical Waste

- 6.3.5 Chemical wastes arising during the construction phase may pose environmental, health and safety hazards if not stored and disposed of in an appropriate manner as stipulated in the Waste Disposal (Chemical Waste) (General) Regulations. The potential hazards include:
 - Toxic effects to workers:
 - Adverse impacts on water quality from spills and associated adverse impacts on marine biota; and
 - Fire hazards.
- 6.3.6 The maintenance and servicing of construction plant and equipment may generate some chemical wastes such as used solvents, contaminated rags and waste lubricating oil. It is difficult to quantify the amount of chemical waste that will arise from the construction activities since it will be dependent on the Contractor's on-site maintenance requirements and the amount of plant utilised. However, it is anticipated that the quantity of chemical waste, such as waste lubricating oil and solvents produced from plant maintenance. The amount of chemical waste to be generated will be quantified in the Waste Management Plan (WMP) to be prepared by the Contractor for the site.
- 6.3.7 Materials classified as chemical wastes will require special handling and storage arrangements before removal for off-site disposal at the approved Chemical Waste Treatment Facility (CWTF) or recycling by licensed facilities. Mitigation and control requirements for chemical wastes are detailed in **Section 6.5**. Provided that the handling, storage and disposal of chemical wastes are in accordance with these requirements, adverse environmental impacts are not expected.

General Refuse

6.3.8 The construction workforce will generate refuse comprising food scraps, waste paper and empty containers etc. Such refuse will be properly managed so that intentional or accidental release to the surrounding environment will be avoided. Disposal of refuse at sites other than approved waste transfer or disposal facilities will be prohibited. Effective collection of site wastes will be required to prevent waste materials being blown around by wind, flushed or

leached into the marine environment, or creating an odour nuisance or pest/ vermin problem. Waste storage areas will be well maintained and cleaned regularly.

6.3.9 With the implementation of good waste management practices at the site, adverse environmental impacts are not expected to arise from the storage, handling and transportation of workforce wastes.

6.4 Operation Phase Assessment

- 6.4.1 The following types of wastes would be generated during operation of the proposed temporary RCHE:
 - Grit and Sludge to be Generated from the Operation of the STP;
 - · Household waste; and
 - Chemical waste.

Grit and Sludge to be Generated from the Operation of the STP

- 6.4.2 With reference to the "Guidelines for the Design of Small Sewage Treatment Plants" published by the EPD for the design of the sewage treatment plant, a sludge dewatering machine capable of attaining 30% w/w dry solids content for landfill disposal and a sludge tank for emergency storage of 14 days sludge volume would be provided for the sludge treatment. The sludge generated from the STP will be dewatered for landfill disposal. The Average Dry Weather Flow (ADWF) for the STP is about 33 m³/day, as such, about 2.97 m³/day of sludge will be generated from the STP. After the dewatering process by the sludge dewatering machine, about 0.039 m³/day of dewatered sludge would be generated and a sludge tank of volume about 0.55 m³ would be provided for emergency storage of 14 days sludge volume.
- 6.4.3 The screening and grits will be properly stored in a fully enclosed container before disposal to designated landfill sites. The total quantity of screening and grits generated in the proposed STP is expected to be so small. Considering the small amount of screening and grits generated, the number of containers required for disposal of screening and grits would be minimal. The transportation and disposal of the screening will be handled by a reputable licensed waste collector. No adverse environmental impact is anticipated given proper handling and disposal of the screening and grits generated.

Household Waste

- 6.4.4 Household waste (such as food waste, scraps, waste paper, empty containers, etc) from operation phase of the proposed temporary RCHE will mainly comprise the domestic waste generated from future residences of housing. Such household waste will be properly managed by suitable waste collectors so that intentional or accidental release to the surrounding environment will not occur.
- 6.4.5 Effective collection of general wastes will be implemented to prevent waste materials from creating odour nuisance or pest/ vermin problem. Waste storage areas will be well maintained and cleaned regularly. To reduce waste and improve recycling, it is expected that waste such as waste paper, plastics and aluminium can be segregated for off-site recycling.

Chemical Waste

6.4.6 Chemical waste will be generated from various routine maintenance and servicing activities for electrical and mechanical equipment. Chemical waste such as waste lubricating oil, contaminated rags, waste paint, used solvents and spent chemicals are expected to be generated from these activities. It is difficult to quantify the amount of chemical waste that will

arise from those activities at this stage since it will be dependent on the equipment maintenance requirements and the amount of equipment utilised.

6.4.7 Chemical wastes may pose environmental, health and safety hazards if not stored and disposed of in an appropriate manner as stipulated in the Waste Disposal (Chemical Waste) (General) Regulation. Chemical wastes will require special handling and storage arrangements in accordance with the relevant regulations before removal for off-site disposal at the approved CWTF or recycling by licensed facilities. Mitigation and control requirements for chemical wastes are detailed in **Section 6.5**. Provided that the handling, storage and disposal of chemical wastes will be in accordance with these requirements, adverse environmental impacts are not anticipated.

6.5 Recommendation of Mitigation Measures

Construction Phase

Good Site Practices

- 6.5.1 Adverse impacts related to waste management such as dust, odour, noise and wastewater discharge will not be expected to arise, provided that good site practices will be strictly followed. Recommendations for good site practices during the construction activities include:
 - Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site;
 - Training of site personnel in proper waste management and chemical handling procedures;
 - Provision of sufficient waste disposal points and regular collection of waste;
 - Appropriate measures to minimise windblown litter and dust / odour during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;
 - Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads; and
 - Well planned delivery programme for offsite disposal such that adverse environmental impact from transporting the inert or non-inert C&D materials is not anticipated.

Waste Reduction Measures

- 6.5.2 Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:
 - Sort inert C&D materials to recover any recyclable portions such as metals;
 - Segregation and storage of different types of waste in different containers or skips to enhance reuse or recycling of materials and their proper disposal;
 - Encourage collection of recyclable waste such as waste paper and aluminium cans by providing separate labelled bins to enable such waste to be segregated from other general refuse generated by the work force;
 - Proper site practices to minimise the potential for damage or contamination of inert C&D materials; and
 - Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.

6.5.3 In addition to the above measures, specific mitigation measures are recommended below for the identified waste arising to minimise environmental impacts during handling, transportation and disposal of these wastes.

C&D materials

- 6.5.4 In order to minimise impacts resulting from collection and transportation of inert C&D materials for off-site disposal, the excavated materials should be reused on-site as fill material as far as practicable. In addition, inert C&D materials generated from excavation works could be reused as fill materials in local projects that require public fill for reclamation.
- 6.5.5 The surplus inert C&D materials will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong.
- 6.5.6 Liaison with the CEDD PFC on the allocation of space for disposal of the inert C&D materials at PFRF is underway. No construction work is allowed to proceed until all issues on management of inert C&D materials have been resolved and all relevant arrangements have been endorsed by the relevant authorities including PFC and EPD.
- 6.5.7 The C&D materials generated from general site clearance should be sorted on site to segregate any inert materials for reuse or disposal of at PFRFs whereas the non-inert materials will be disposed of at the designated landfill site. The Contractor should explore any mitigation measures/ management options for non-inert C&D generated from works other than site clearance, such as avoidance/ reducing/ reuse packaging waste/ paper/ timber from construction works, install the recycle facilities to encourage the recycle of material (e.g. paper and plastic bottom etc.).
- 6.5.8 In order to monitor the disposal of inert and non-inert C&D materials at respectively PFRFs and the designated landfill site, and to control fly-tipping, it is recommended that the Contractor should follow the Technical Circular (Works) No. 6/2010 for Trip Ticket System for Disposal of Construction & Demolition Materials issued by Development Bureau. In addition, it is also recommended that the Contractor should prepare and implement a WMP detailing their various waste arising and waste management practices in accordance with the relevant requirements of the Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site.

Chemical Waste

- 6.5.9 If chemical wastes are produced at the construction site, the Contractor will 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, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor should use a licensed collector to transport and dispose of the chemical wastes at the approved CWTF or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.
- 6.5.10 Potential environmental impacts arising from the handling activities (including storage, collection, transportation and disposal of chemical waste) are expected to be minimal with the implementation of appropriate mitigation measures as recommended.

General Refuse

6.5.11 General refuse should be stored in enclosed bins or compaction units separated from inert C&D materials. A reputable waste collector should be employed by the Contractor to remove

general refuse from the site, separately from inert C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.

Operation Phase

Household Waste

6.5.12 Household waste should be collected on daily basis and delivered to the refuse collection point accordingly. A reputable waste collector should be employed to remove general refuse regularly to avoid odour nuisance or pest/vermin problem. Sufficient recycling containers are recommended to be provided at suitable locations of the proposed temporary RCHE to encourage recycling of such waste as aluminium cans, plastics and waste paper.

Chemical Waste

6.5.13 If chemical wastes are expected to be produced during the operation phase, the Applicant should register with the EPD as a chemical waste producer and 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, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidising, irritant, toxic, harmful, corrosive, etc. Licensed collector should be deployed to transport and dispose of the chemical wastes at the approved Chemical Waste Treatment Centre or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.

7 Land Contamination

7.1 Introduction

7.1.1 This section presents the assessment of potential land contamination impacts associated with the proposed temporary RCHE.

7.2 Environmental Legislation, Standards and Guidelines

7.2.1 In 2007, Environmental Protection Department (EPD) issued two guidelines for utilizing Risk-based Remediation Goals (RBRGs) developed for Hong Kong, namely, "Guidance Note for Contaminated Land Assessment and Remediation" (Guidance Note) and "Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management" (Guidance Manual). The land contamination assessment was carried out in accordance with the Guidance Manual and Guidance Note. In addition, reference was also made to the "Practice Guide for Investigation and Remediation of Contaminated Land" (Practice Guide).

7.3 Assessment Methodology

7.3.1 Desktop and site appraisal were undertaken, including review of historical aerial photographs and site survey to identify the presence of any potentially contaminated land within the Project site.

7.4 Evaluation of Potential Land Contamination Issue

Review of Aerial Photographs and Site Survey

7.4.1 The relevant historical aerial photographs taken between years 1963 and 2021, where available, were collected and reviewed. The aim of the review is to evaluate the potential contamination implication associated with any land use changes within the Project site. The representative historical aerial photographs are shown in **Figure 7.1**. The development history of Project site is summarized in **Table 7.1**.

Table 7.1 Summary of Development History

Year	Description
1963	The site area is mainly occupied by a former Wa Fu School.
1973	The site area is mainly occupied by a former Wa Fu School and covered by vegetation and plantation partially.
1983	No significant change in land use was observed.
1993	No significant change in land use was observed.
1999	No significant change in land use was observed.
2009	No significant change in land use was observed.
2014	No significant change in land use was observed.
2021	No significant change in land use was observed.

7.4.2 According to the historical aerial photo of Year 1963, the site area is covered by a former Wa Fung school. For Year 1973, the site area is mainly covered by former Wa Fu School, vegetation and plantation. For the historical aerial photos from 1983 to 2021, no significant

- changes in the land use within the site were observed. Thus, no potential land contamination could be identified.
- 7.4.3 Site reconnaissance was conducted on 30 July 2021. The photo records during the site survey are shown in **Appendix 7.1**. The site was still occupied by a former Wa Fung school which has been abandoned for years. There is no activity causing potential land contamination could be identified during the site survey.

Review of Relevant Information from Government Departments

A review of the chemical waste producer (CWP) records had been conducted on 18 January 2022, and no registered CWP was identified within the Project site. According to the information provided by EPD on 6 January 2022, there was no record of chemical spillage / leakage within the Project site as shown in **Appendix 7.2**. According to the information provided by FSD on 20 January 2022, there was no record of dangerous good licenses, fire incidents and incidents of spillage / leakage dangerous goods within the Project site as shown in **Appendix 7.2**.

7.5 Conclusion

7.5.1 According to the historical aerial photos of the site from Year 1963 to 2021, the site did not involve any potential land contamination activity. In addition, relevant information from government department (i.e. EPD and FSP) have been reviewed, and no any activity causing potential land contamination and spillage / leakage was identified.

8 Conclusion

8.1 Air Quality Impact

Construction Dust

8.1.1 Due to the small-scale and limited extent of construction, dust emission induced by the proposed temporary RCHE would be expected to be insignificant. With the implementation of proper mitigation measures, no adverse air quality impacts are anticipated during construction phase.

Vehicular Emission

8.1.2 Considering that adequate buffer distances have been provided between the sensitive uses in the proposed temporary RCHE and the nearby road networks, no adverse impact arising from road traffic emissions is anticipated.

Industrial Emission

8.1.3 No industrial chimney was identified within 500m radius of the Study Area. Therefore, adverse air quality impact due to industrial emission on the proposed temporary RCHE is not anticipated.

Odour Emission

8.1.4 As the odour mitigation measures (e.g. enclosing the STP or storage tank facilities with negative pressure, forced ventilation system fitted with deodourization (DO) unit, cooker hoods with grease filter, water curtain scrubber and hydrovent, and directing away the exhaust air from the ARS etc.) will be adopted in order to protect the ASRs, the potential odour nuisance to the ASRs is anticipated to be minimal.

8.2 Noise Impact

Construction Noise Impact

8.2.1 Due to the small-scale and limited extent of construction, construction noise due to the proposed temporary RCHE would be expected to be insignificant. With the implementation of proper mitigation measures, no adverse construction noise impacts are anticipated during construction phase.

Road Traffic Noise Impact

8.2.2 Road traffic noise assessment results indicated that the compliance rate of the proposed eldering home is 100.0% and no road traffic noise exceedance are anticipated in the proposed eldering home. Therefore, no adverse road traffic noise impact is anticipated.

Fixed Noise Impact

8.2.3 With the adoption of the proposed maximum allowable SWLs of the planned fixed noise sources, directing the planned fixed noise sources away from NSRs, installation of silencer and 2.5m high solid boundary wall (min. 10 kg/m²) along the proposed temporary RCHE which block the direct line of sight from it to existing fixed noise sources, no adverse fixed noise

impact from the proposed temporary RCHE to the nearby NSRs or from existing fixed noise sources to the proposed temporary RCHE is anticipated.

8.3 Water Quality Impact

8.3.1 Proper sewerage facilities would be provided during the construction and operation of the proposed development. No adverse water quality impact is anticipated.

8.4 Waste Management

8.4.1 Handling, collection, transportation and disposal practices of the waste generated during the construction phase would follow the relevant guidelines and good practices. Proper waste collection and transportation system will also be provided in the proposed temporary RCHE in order to minimize potential adverse environment impacts. Provided that the environmental control measures are properly implemented, no adverse environmental impact is anticipated with respect to solid waste management.

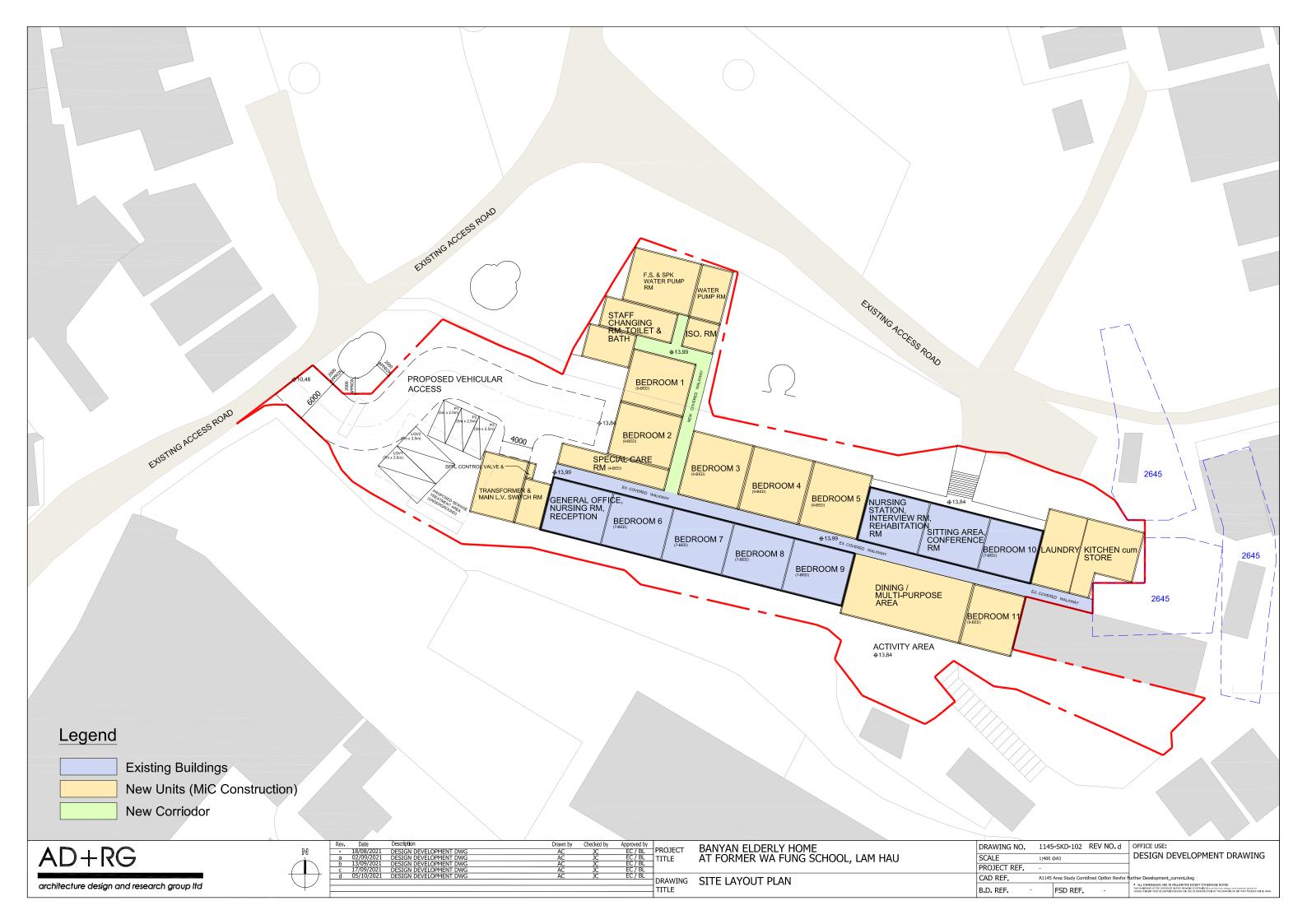
8.5 Land Contamination

8.5.1 According to the historical aerial photos of the site from Year 1963 to 2021, the site did not involve any potential land contamination activity. In addition, relevant information from government department (i.e. EPD and FSP) have been reviewed, and no any activity causing potential land contamination and spillage / leakage was identified.

Appendices

Appendix 2.1	Location Plan of Application Site
Appendix 4.1	Traffic Forecast with Key Plan
Appendix 4.2	Road Traffic Noise Results
Appendix 4.3	TD's Endorsement on Traffic Forecast Data (To be provided)
Appendix 7.1	Photos Records during Site Reconnaissance Survey
Appendix 7.2	Reply from EPD and FSD

Appendix 2.1 Location Plan of Application Site



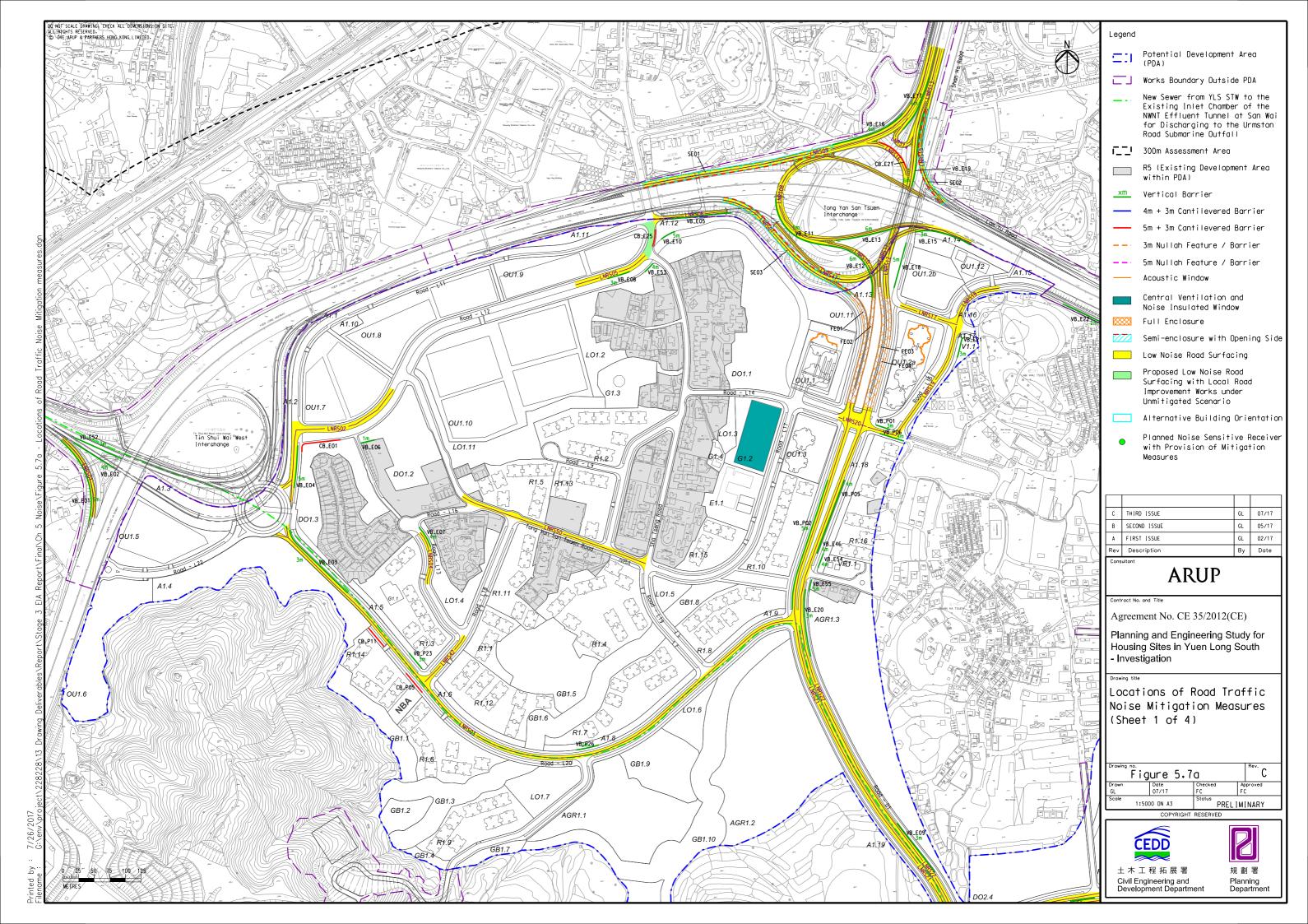
Appendix 4.1 Traffic Forecast with Key Plan

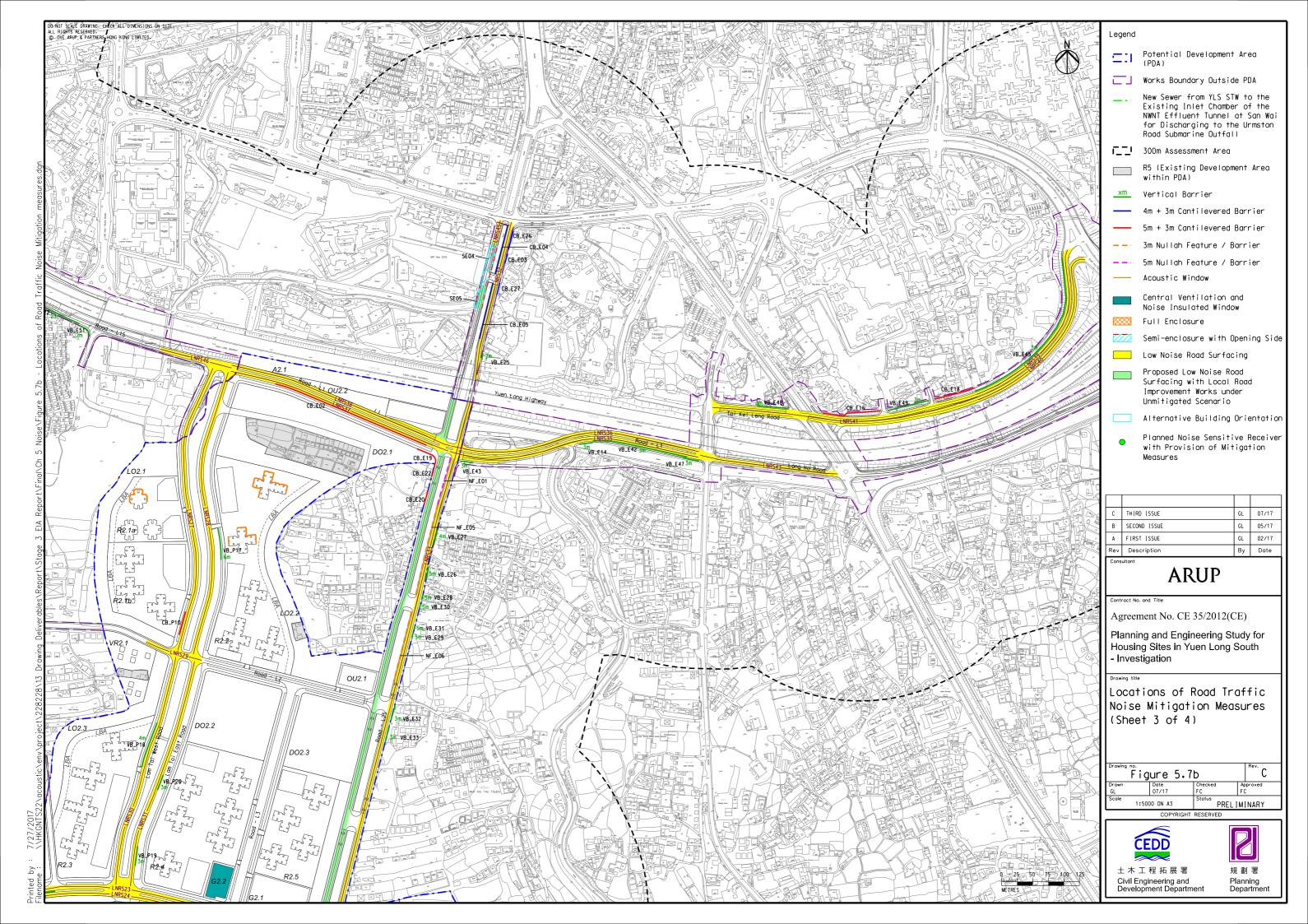
Traffic Forecast Data

Index	Road	1-Way/2-Way	Direction	Speed Limit (kph)	2039 Flow (veh/hr)	Heavy Veh %
1a	Yuen Long Highway	1-way	WB	80	7265	47.2
1b	Yuen Long Highway	1-way	EB	80	6629	34.0
2a	Shan Ha Road	2-way	NB & SB	50	105	32.9
2b	Shan Ha Road	2-way	EB & WB	50	345	35.0
3a	Tong Yan San Tsuen Interchange	1-way	SB	50	565	25.5
3b	Tong Yan San Tsuen Interchange	1-way	SB	50	90	33.4
3c	Tong Yan San Tsuen Interchange	1-way	SB	50	655	26.5
3d	Tong Yan San Tsuen Interchange	1-way	NB	50	385	26.1
3e	Tong Yan San Tsuen Interchange	1-way	NB	50	735	14.9
3f	Tong Yan San Tsuen Interchange	1-way	NB	50	1120	18.8
3g	Tong Yan San Tsuen Interchange	1-way	WB	50	1820	34.8
4a	Lam Yu Road	2-way	EB & WB	50	583	19.4
4b	Lam Yu Road	2-way	EB & WB	50	572	29.0
5a	Lam Hau Tsuen Road	2-way	NB & SB	50	887	17.5
5b	Lam Hau Tsuen Road Roundabout	1-way	SB	50	477	25.2
5c	Lam Hau Tsuen Road Roundabout	1-way	WB	50	525	34.2
5d	Lam Hau Tsuen Road Roundabout	1-way	NB	50	863	20.4
6a	Lam Hi Road	2-way	NB & SB	50	20	10.0
7a	Lam Tai West Road	2-way	NB & SB	50	535	36.5
8a	Lam Tai East Road	2-way	NB & SB	50	565	25.4
9a	Planned Road	2-way	EB & WB	50	105	39.8
9b	Planned Road	2-way	EB & WB	50	555	25.3
9c	Shan Ha Road	2-way	EB & WB	50	370	32.1
9d	Shan Ha Road	2-way	EB & WB	50	340	29.7
10a	Planned Road	1-way	NB	50	940	15.3
10b	Planned Road	1-way	SB	50	400	30.0
11a	Planned Road	2-way	NB & SB	50	445	11.0
11b	Planned Road	2-way	EB & WB	50	445	17.4
11c	Planned Road	2-way	EB & WB	50	425	17.4
12a	Site Access Road	2-way	NB & SB	50	30	34.8

Key Plan

Mitigation Measures from Yuen Long South EIA (Register No.: AEIAR-215/2017)





Appendix 4.2 Road Traffic Noise Results

Section 16 Planning Application for Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories

Project:

NSR ID	Noise Sensitive Use	Floor	Noise Criterion L10 (1 Hour) dB(A)	Assessment Height, mPD	Noise Level (Base Case), (dB(A))	Exceedance?		
PN1	Isolation Room^				64	NO		
PN2					65	NO		
PN3	Bedroom				66	NO		
PN4					68	NO		
PN5	Nursing Station [^] , Invterview Room, Rehabitation Room [^]				68	NO		
PN6	Sitting Area, Conference Room				67	NO		
PN7	Bedroom				66	NO		
PN8	Bedroom				60	NO		
PN9	Dining/Multi-purpose Area	1/F	1/F 70	15.2	61	NO		
PN10					61	NO		
PN11	Bedroom				62	NO		
PN12	Bedroom				62	NO		
PN13					62	NO		
PN14	General Office, Nursing Room^, Reception						63	NO
PN15	Special Care Room^				70	NO		
PN16	Bedroom				65	NO		
PN17	Deuroom				60	NO		

Note:

^Isolation Room, Nursing Station, Rehabitation Room, Nursing Room will not involve diagnosis room, ward and long staying registered nurse to provide medical treatment, so these rooms are considered to be same as residential dwellings and offices. Therefore, with reference to HKPSG, the noise criterion of L10(1 Hour) 70 dB(A) is adopted.

Appendix 4.3

TD's Endorsement on Traffic Forecast Data (To be provided)

Alex Ho

From: Samuel Lo <samuello@howangspb.com>
Sent: Monday, January 24, 2022 5:58 PM

To: Alex Ho

Cc: Steven Tang; ansoncheung@adrg.com.hk; 'Wilson Wong';

tommylam@howangspb.com; tinsonleung@howangspb.com

Subject: FW: Planning Application No. A/YL-TYST/1132 - Temporary RCHE for a Period of

10 Years - Road Classification for Shan Ha Road and local access roads

Attachments: J1645 Road type.jpg

Dear Alex,

Regarding the road type of Shan Ha Road and the local access road, below please find TD's reply for your information.

Based on our understanding, the local access road should also be classified as feeder road.

Best regards,

Samuel Lo Assistant Transport Planner



5 Floor, So Hong Commercial Building, 41-47 Jervois Street, Sheung Wan, HK

Tel : (852) 2865 0090 Fax : (852) 2866 4332 E-mail : info@howangspb.com



From: Sze Man FOK [mailto:szemanfok@td.gov.hk]

Sent: 2022年1月24日5:26 PM

To: Tommy Lam

Cc: 'Samuel Lo'; tinsonleung@howangspb.com; Ray YC LAI

Subject: Re: Planning Application No. A/YL-TYST/1132 - Temporary RCHE for a Period of 10 Years - Road

Classification for Shan Ha Road and local access roads

Dear Tommy,

The local access road is not under TD's purview. Pls seek relevant authorities' view.

Regarding Shan Ha Road, it should be classified as a feeder road presently.

Regards, Grace FOK E/YLS,TD

From: "Tommy Lam" <tommylam@howangspb.com>

To: <szemanfok@td.gov.hk>

Cc: "Samuel Lo" <samuello@howangspb.com>, <tinsonleung@howangspb.com>

Date: 20/01/2022 05:27 PM

Subject: Planning Application No. A/YL-TYST/1132 - Temporary RCHE for a Period of 10 Years - Road Classification for Shan

Dear Grace,

We are the traffic consultant for the captioned project, we refer to EPD's comment on the Air Quality Assessment, the road types of Shan Ha Road and local access road as highlighted in the attachment should be clarified with TD.

According to the Annual Traffic Census issued by Transport Department, there is no classification for the road type of Shan Ha Road and the local access road. Based on our understanding, the road types for each roads under the Hierarchy of Roads according to TPDM Vol. 2 Chap. 3.2 are assumed as below.

Road	Road type
Shan Ha Road	Local Distributor
Local access roads	Local Distributor

We would be grateful if you could kindly confirm the road types of Shan Ha Road and local access road at your earliest convenience. The site location plan is enclosed for your easy reference.

Should you have any queries, please do not hesitate to contact the undersigned.

Best regards,

Tommy Lam Senior Traffic Engineer

Ho Wang SPB Limited 5 Floor, So Hong Commercial Building, 41-47 Jervois Street, Sheung Wan Hong Kong

T: 2865 0090 F: 2866 4332



5 Floor, So Hong Commercial Building, 41-47 Jervois Street, Sheung Wan, HK

Tel : (852) 2865 0090 Fax : (852) 2866 4332 E-mail : info@howangspb.com



____ ESET NOD32 Antivirus _____

已掃描此電子郵件,沒有發現任何威脅。

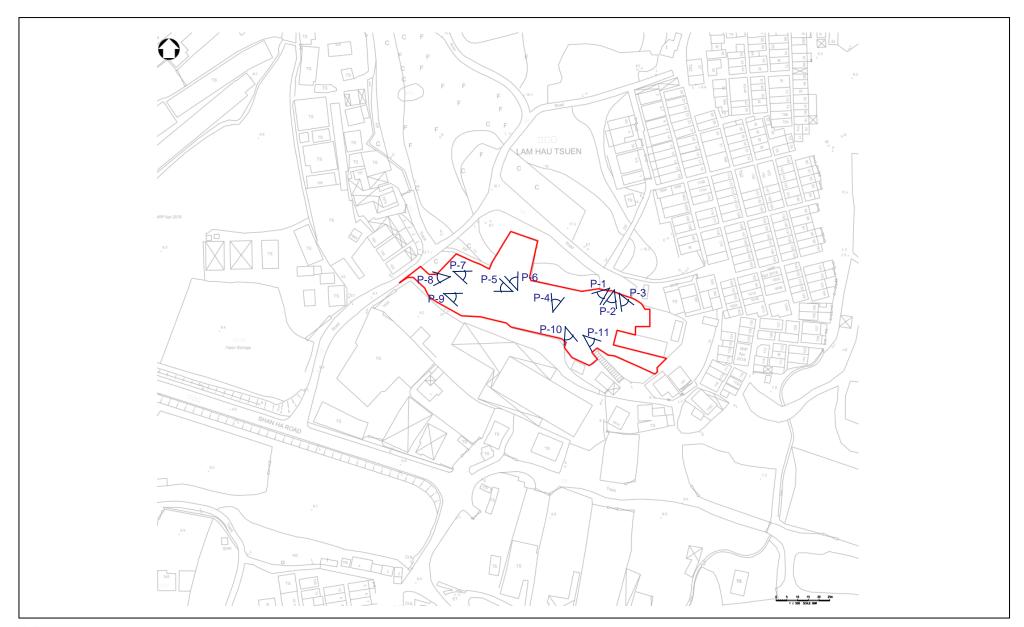
電子郵件 收件人: Alex Ho (alex.ho1@mottmac.com) 主題 FW: Planning Application No. A/YL-TYST/1132 - Temporary RCHE for a Period of 10 Years - Road Classification for Shan Ha Road and local access roads - 正常

偵測引擎版本: 24669 (20220124)

https://www.eset.hk

Appendix 7.1

Photos Records during Site Reconnaissance Survey







P-1 - Abandoned School, trees and vegetation



P-2 - Abandoned School, trees and vegetation



P-3 - Abandoned School, trees and vegetation



P-4 - Abandoned School



P-5 - Abandoned School, trees and vegetation



P-5 - Abandoned School, trees and vegetation





P-7 - Abandoned School, trees and vegetation



P-8 -Trees and vegetation



P-9 - Abandoned School, trees and vegetation



P-10 – Well, trees and vegetation



P-11 -Trees and vegetation



Appendix 7.2

Reply from EPD and FSD

Alex Ho

From: hauyinwong@epd.gov.hk

Sent: Thursday, January 6, 2022 2:44 PM

To: Alex Ho

Subject: Fw: Planning Application No. A/YL-TYST/1132 - Temporary RCHE for a Period of

10 Years [ADRG/Lam Hau] - Environmental Assessment (EA)

Attachments: EPD comment on EA 20211228.pdf; Figure 1.pdf; L0001 EPD Chemical Waste

Producer and Spillage or Leakage Incident.pdf

Dear Mr. HO,

We spoke this morning. I refer your email dated 3 Jan 2022 requesting spillage/ leakage incident record within the study area of the captioned project.

This Regional Office has no record of reported accidents of spillage / leakage of chemicals within the study area in the past 5 years. You may also need to check with other parties / departments for such information as appropriate.

Please contact me should you have any questions.

Best regards, (Suki WONG) for Director of Environmental Protection 2158 5823 6.1.2022

---- Forwarded by Hau Yin WONG/EPD/HKSARG on 06/01/2022 11:00 -----

From: Alex Ho <alex.ho1@mottmac.com>

To: "lataliemwliang@epd.gov.hk" <lataliemwliang@epd.gov.hk>, "lchui@epd.gov.hk" <lchui@epd.gov.hk>

Cc: "ansoncheung@adrg.com.hk" <ansoncheung@adrg.com.hk>, Wilson Wong <wiwong@visionplanning.com.hk>, Steven

Tang <Steven.Tang@mottmac.com>

Date: 03/01/2022 12:22

Subject: Planning Application No. A/YL-TYST/1132 - Temporary RCHE for a Period of 10 Years [ADRG/Lam Hau] -

Environmental Assessment (EA)

Dear Latalie/Esther,

Request for Information about Chemical Waste Producer and Spillage/ Leakage Incidents

We have been commissioned by Project Architect (i.e. Architecture Design and Research Group Limited (ADRG)) to undertake the PER works for the captioned ArchSD's Project. Further to EPD's comments on our EA report dated 28 December 2021 (see attached comments), we are required to undertake a land contamination site appraisal in order to identify any potential contaminated sites within the Study Area as shown in the attached drawing **Figure 1**. For this, we would like to request for the following information within the Study Area:

- 1. Records of current and past (as early as the records are available) registered Chemical Waste Producer(s) within the Study Area (preferably with the registration date, nature and quantity of the chemical waste and storage location); and
- 2. Any records of spillage/ leakage of chemical waste or chemicals at the Study Area.

The original of the attached letter will be separately delivered (by POST) to your office. Thanks for your help in advance.

Should you have any enquiries, please feel free to contact the undersigned at Tel: 2828-5815 or by email: alex.ho1@mottmac.com

1

Regards, Alex Ho

D +852 28285815

alex.ho1@mottmac.com

Mott MacDonald 3/F Manulife Place 348 Kwun Tong Road Kwun Tong

MOTT Kwun Tong
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Hong Kong

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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. : (114) in FSD GR 6-5/4 R Pt. 38

來函檔號 YOUR REF. : AFK/EC/st/409610/02/02/L-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

20 January 2022

Mott MacDonald Hong Kong Limited 3/F, International Trade Tower, 348 Kwun Tong Road, Kolwoon, Hong Kong.

(Attn: Mr. Steven TANG, Project Manager)

To Action mone / Date

1 2

Res 2 7 JAN 2022

Dear Mr. TANG,

A Section 16 Planning Application for Proposed Temporary Social Welfare Facility (Residential Care Home for the Eldery) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories –Environmental Assessment (EA)

Request for Information of Dangerous Goods & Incident Records

I refer to your letter of 3.1.2022 regarding the captioned request and reply below in response to your questions:-

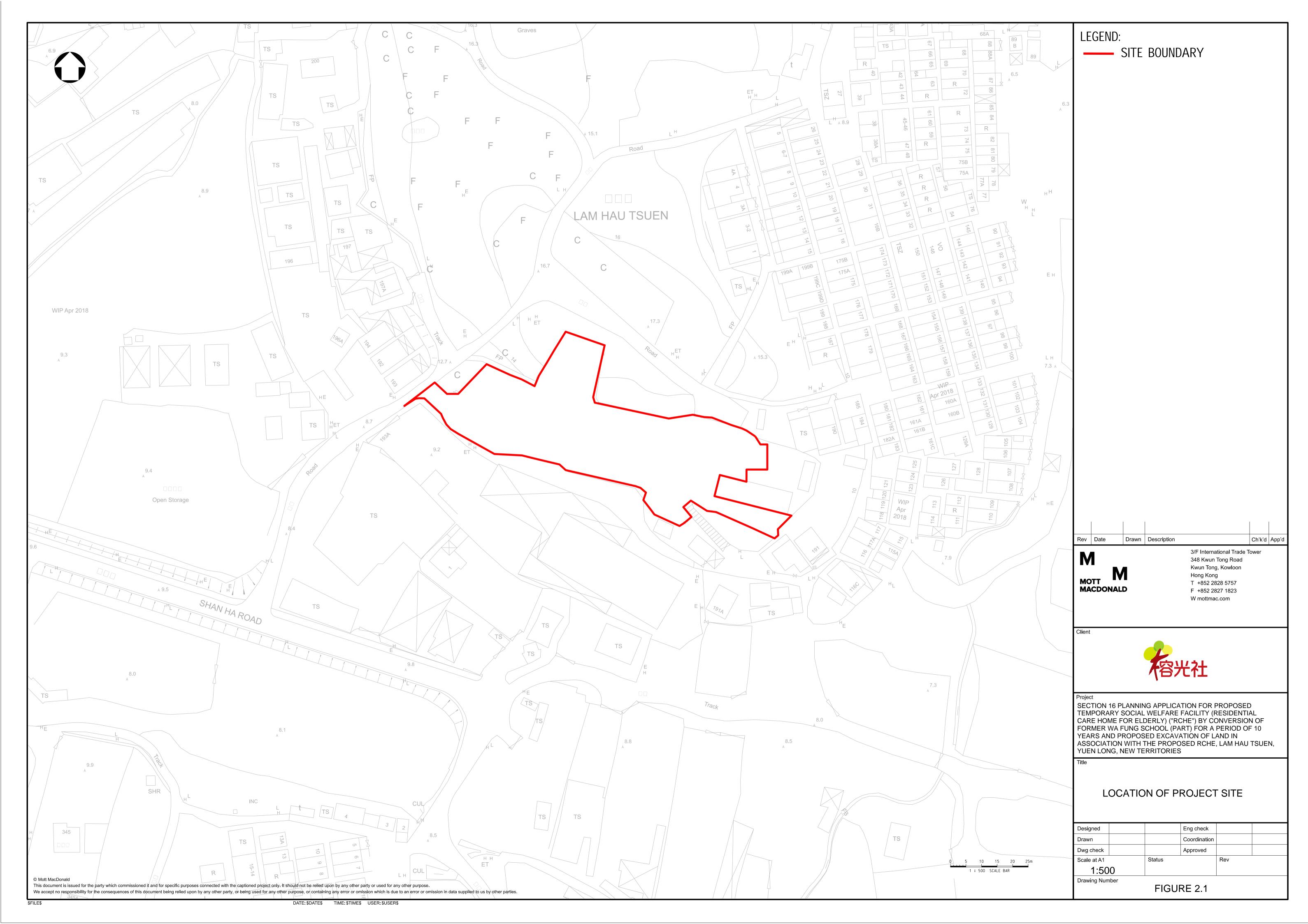
Please be advised that neither records of dangerous goods license, fire incidents nor incidents of spillage / leakage of dangerous goods were found in connection with the given conditions of your request at the subject location.

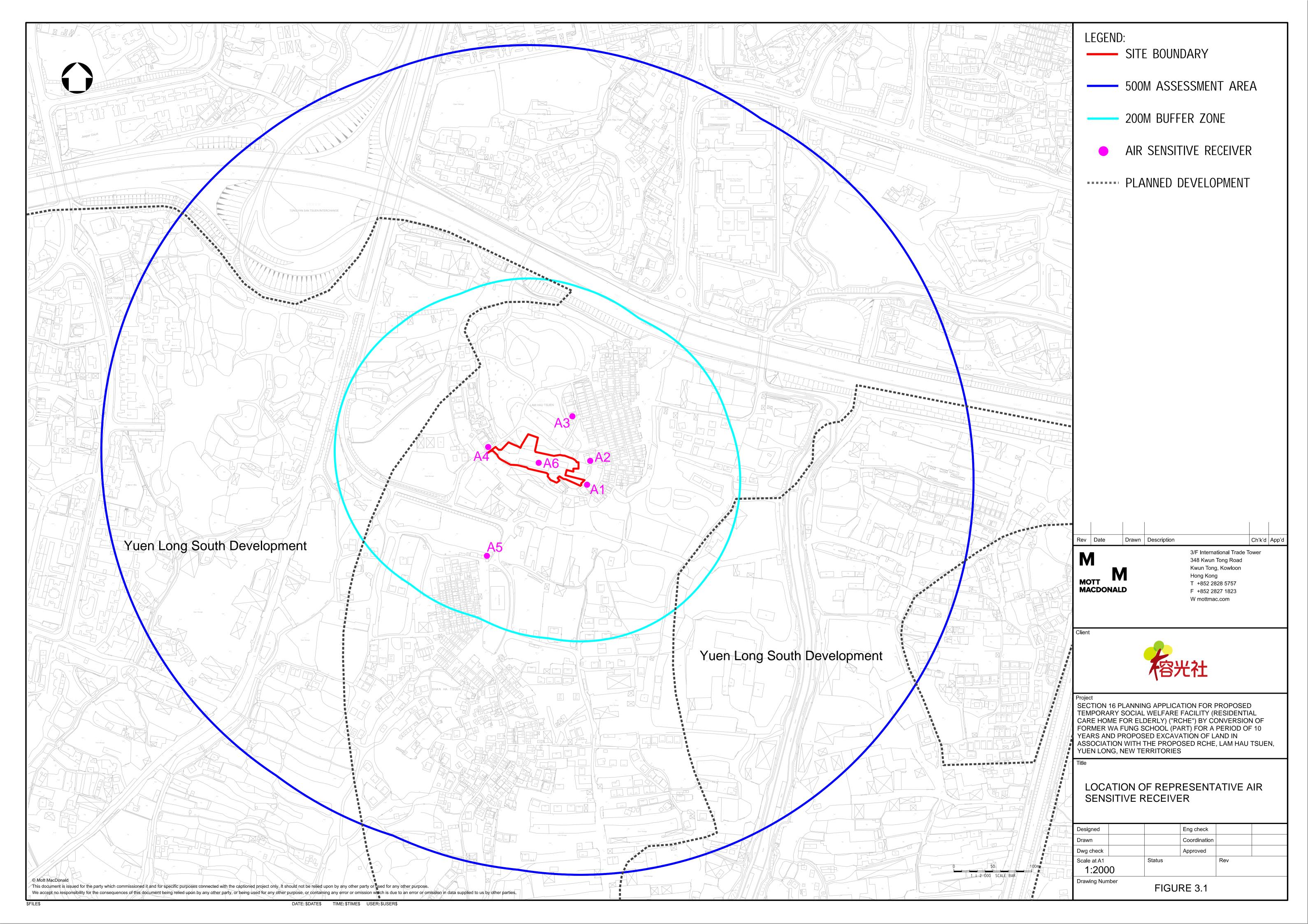
If you have further questions, please feel free to contact the undersigned.

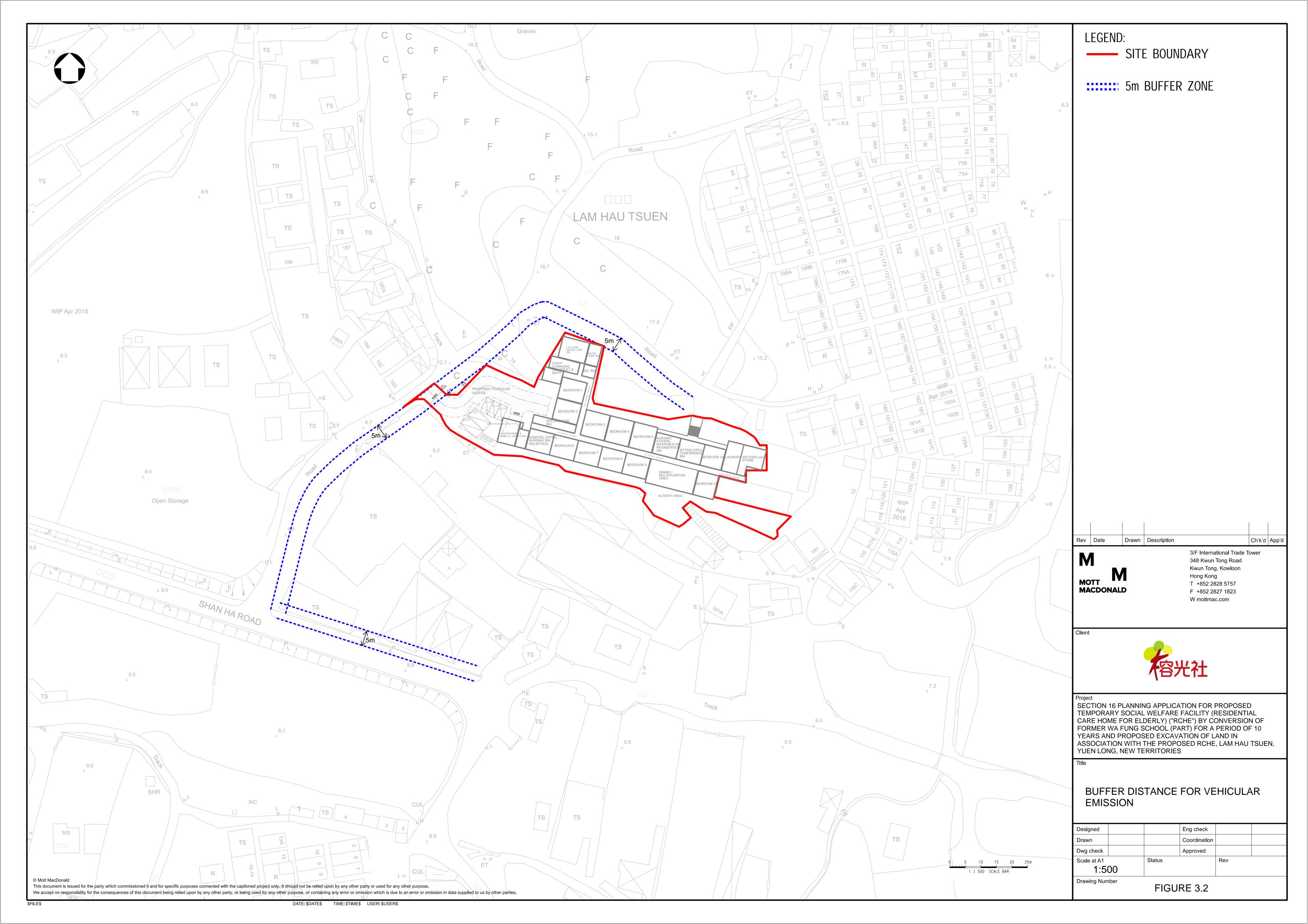
Yours sincerely.

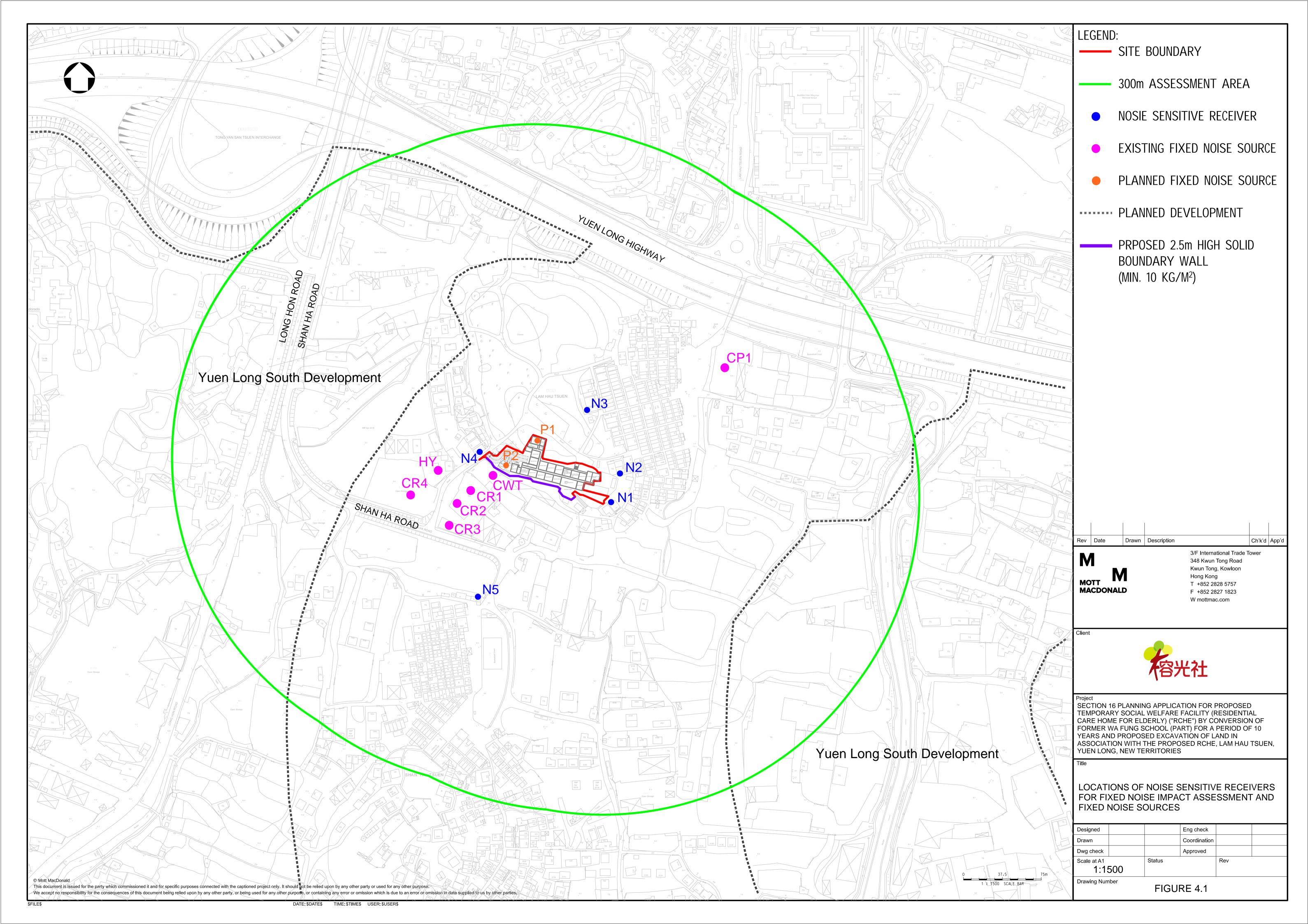
(NG Wing-chit)
for Director of Fire Services

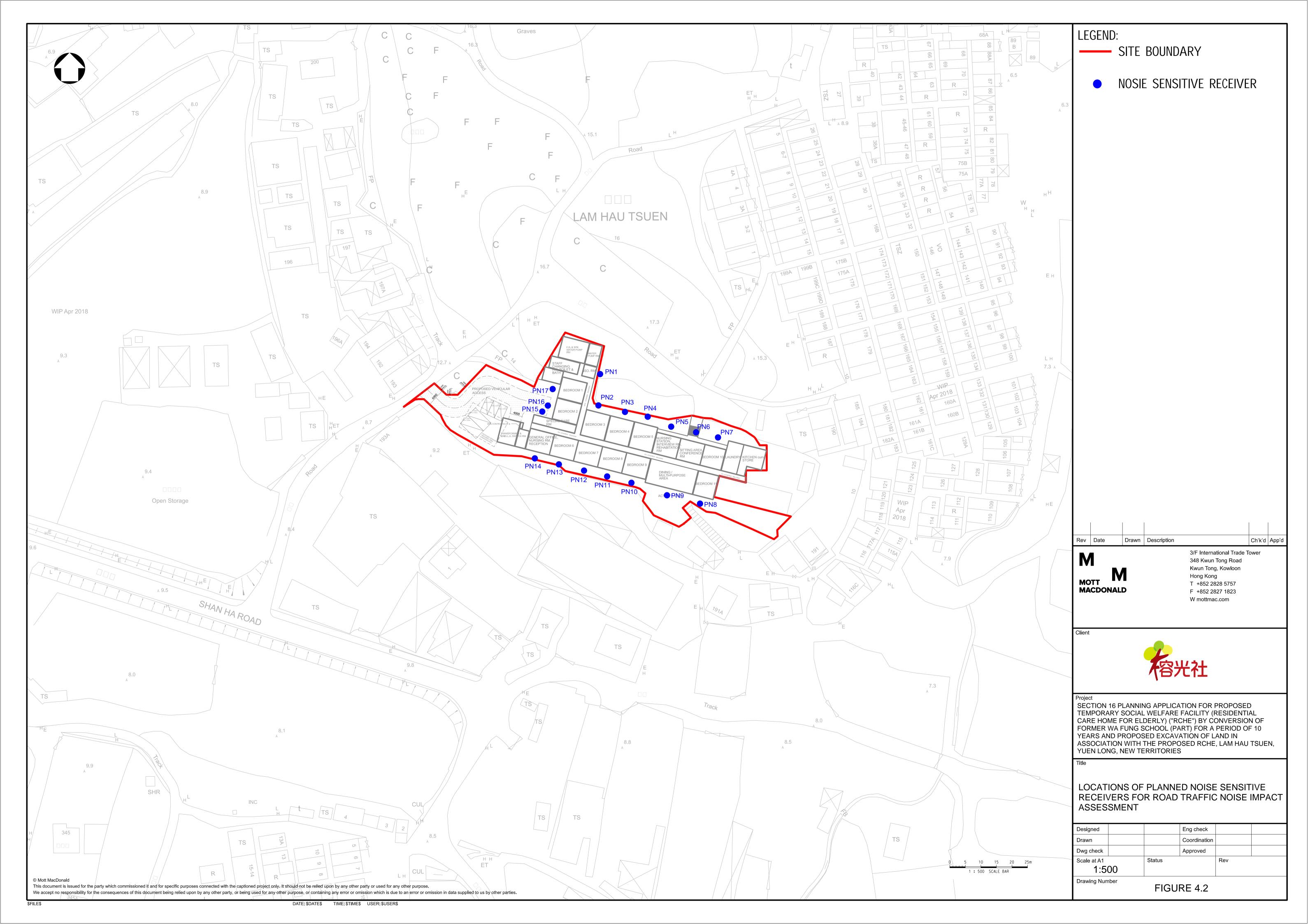
Figures

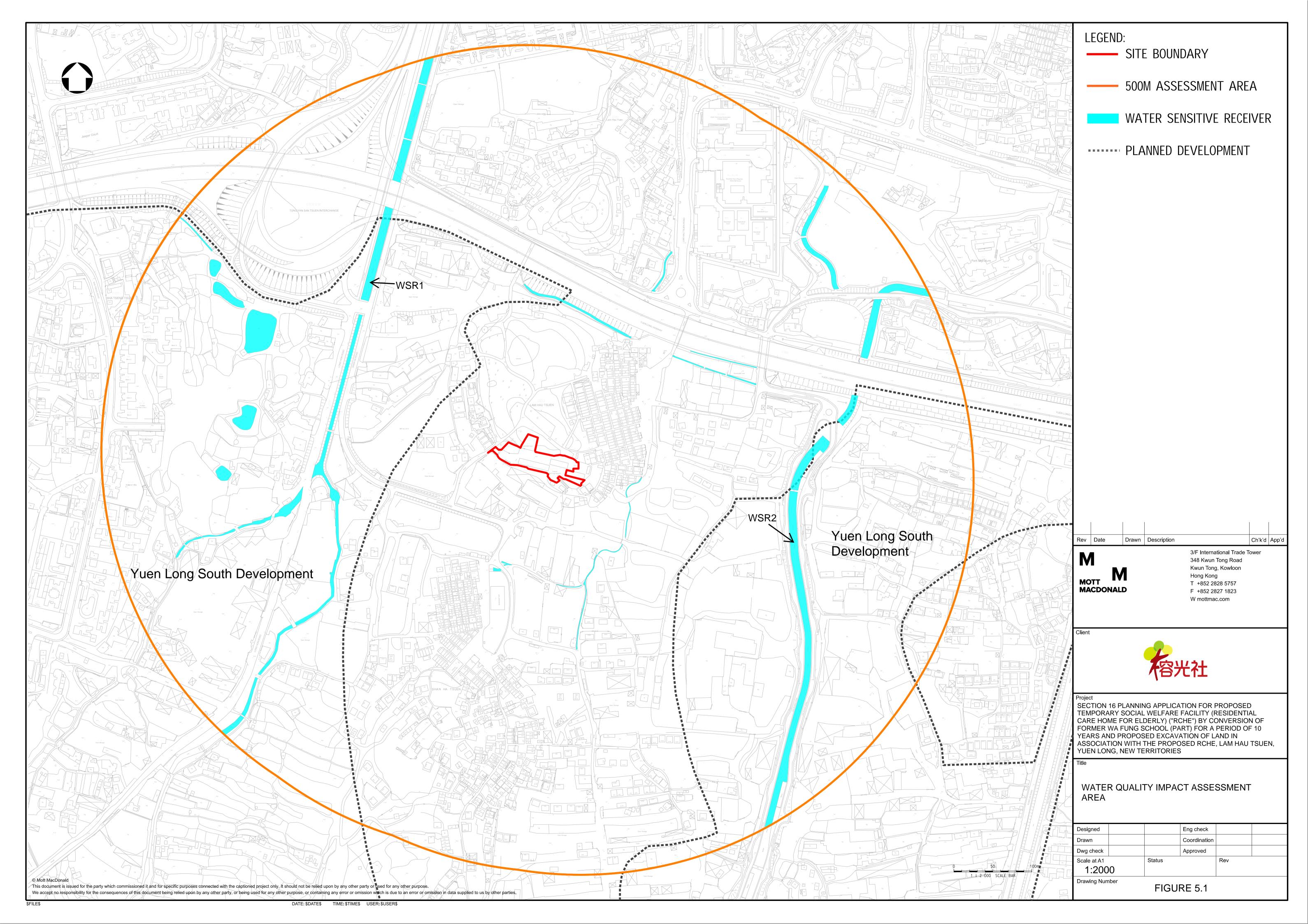












M MOTT MACDONALD

Figure 7.1 Representative Historical Aerial Photographs





Observation: The site area is mainly occupied by a former Wa Fu School.

LEGEND:

Site Boundary

Year: 1963 Ref No.: 63_8445 Height: 3900'

M MOTT MACDONALD

Figure 7.1 Representative Historical Aerial Photographs





Observation: The site area is mainly occupied by a former Wa Fu School and covered by vegetation and plantation partially.

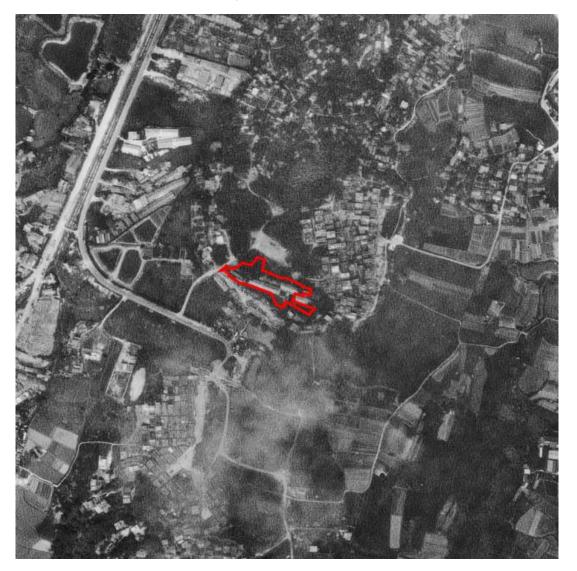


Site Boundary

Year: 1973 Ref No.: 6048 Height: 1700'

M MOTT MACDONALD

Figure 7.1 Representative Historical Aerial Photographs





Observation: The site area is mainly occupied by a former Wa Fu School and covered by vegetation and plantation partially.

LEGEND:

Site Boundary

Year: 1983 Ref No.: 50367 Height: 4000'

M MOTT MACDONALD

Figure 7.1 Representative Historical Aerial Photographs





Observation: The site area is mainly occupied by a former Wa Fu School and covered by vegetation and plantation partially.



Site Boundary

Year: 1993 Ref No.: CN3583 Height: 3000'

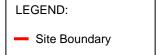
M MOTT MACDONALD

Figure 7.1 Representative Historical Aerial Photographs





Observation: The site area is mainly occupied by a former Wa Fu School and covered by vegetation and plantation partially.



Year: 1999 Ref No.: CN24580 Height: 3500'

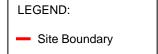
M MOTT MACDONALD

Figure 7.1 Representative Historical Aerial Photographs





Observation: The site area is mainly occupied by a former Wa Fu School and covered by vegetation and plantation partially.



Year: 2009 Ref No.: CS25756 Height: 6000'

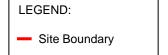
M MOTT MACDONALD

Figure 7.1 Representative Historical Aerial Photographs





Observation: The site area is mainly occupied by a former Wa Fu School and covered by vegetation and plantation partially.



Year: 2014 Ref No.: CW110570 Height: 2000'

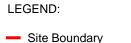
M MOTT MACDONALD

Figure 7.1 Representative Historical Aerial Photographs

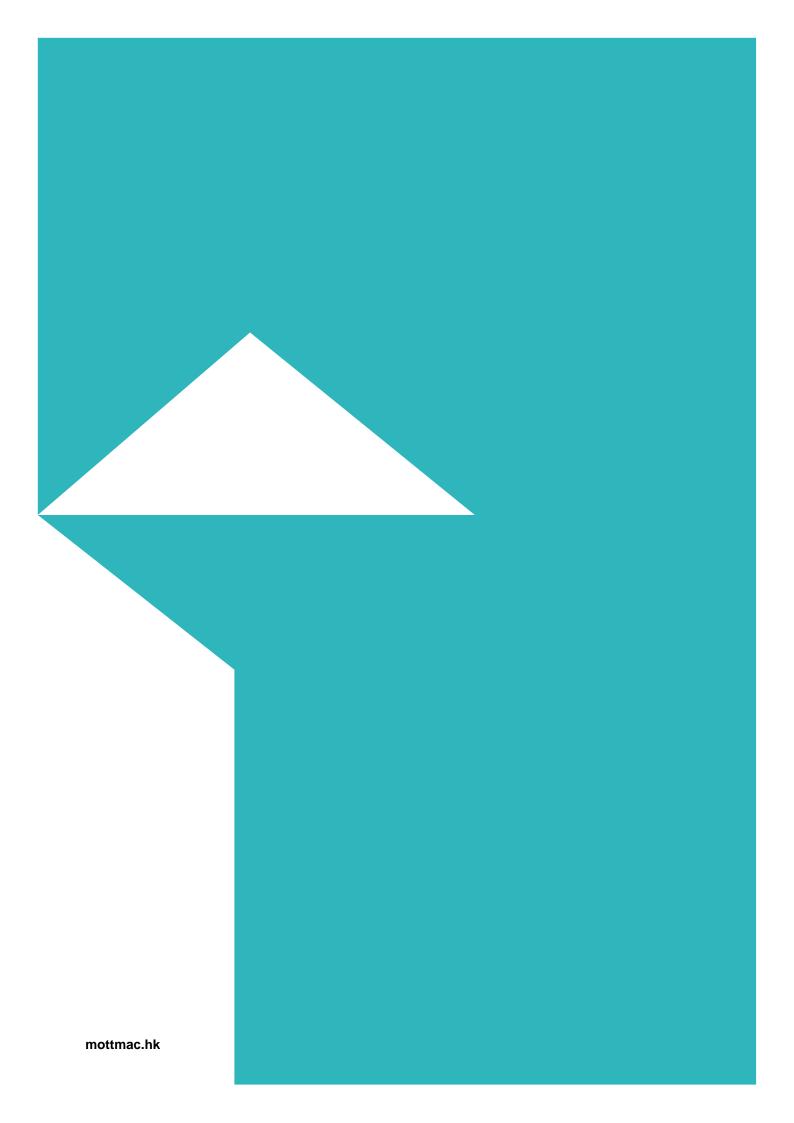


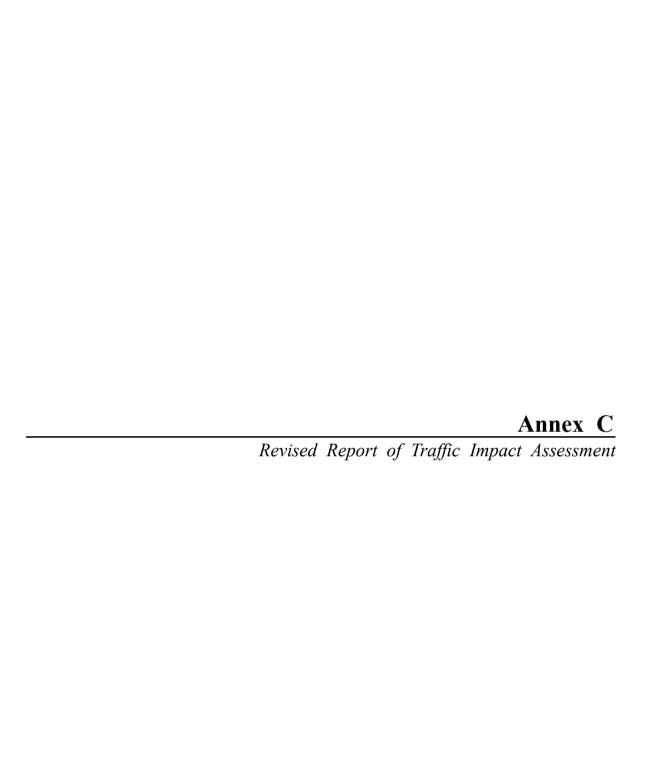


Observation: The site area is mainly occupied by a former Wa Fu School and covered by vegetation and plantation partially.



Year: 2021 Ref No.: E140637C Height: 3000'







Traffic Impact Assessment Report

March 2022

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3.	EXISTING TRAFFIC CONDITIONS
4.	FUTURE TRAFFIC CONDITIONS
5.	TRAFFIC IMPACT ASSESSMENT
6.	SUMMARY AND CONCLUSIONS

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- Appendix A Junction Calculation Sheets
- Appendix B Confirmation from PlanD on the Planned Development via email dated 31 January 2022
- Appendix C CEDD's Improvement Proposal of Tong Yan San Tsuen Interchange

1. INTRODUCTION

1.1 Background

- 1.1.1 The Applicant intends to convert the Former Wa Fung School (part) into a temporary Residential Care Home for the Elderly (RCHE) with around 100 beds for a period of 10 years. The Former Wa Fung School is located at Lam Hau Tsuen, Yuen Long.
- 1.1.2 The location of the subject site is shown in **Figure 1.1**.
- 1.1.3 Ho Wang SPB Ltd. (hereinafter as "HWSPB") is commissioned as the traffic consultant on behalf of the Applicant to conduct a traffic impact assessment (TIA) study to support this planning application.
- 1.1.4 In December 2021, Transport Department (TD) has comment on this TIA study. This revised TIA report has incorporated with TD's comment.

1.2 Study Objectives

- 1.2.1 The objectives of this TIA study are listed below with a view to reviewing the traffic and transport engineering feasibility for the proposed temporary RCHE development:
 - (a) Review and recommend on the car park and loading/unloading provisions for the development site;
 - (b) Review the internal traffic arrangements and the development access for the development site;
 - (c) Conduct vehicle traffic survey to record existing traffic conditions during AM and PM peak periods within the study area;
 - (d) Review the existing traffic condition and transport facilities in the vicinity of the development site;
 - (e) Estimate the development traffic generation and attraction; and traffic forecast based on the latest available 2016-Based TPEDM from the Planning Department's website and Annual Traffic Census (ATC) from the Transport Department; and
 - (f) Assess the likely traffic impacts generated by the proposed redevelopment site upon completion within the study area; and develop traffic improvement schemes to mitigate any adverse impact; if necessary.

1.3 Structure of the Report

- 1.3.1 Following this introductory chapter describes the background and study objective, this TIA report focuses on the presentation and elaboration of the following key areas:
 - Chapter 2 describes the proposed development schedule, vehicular access arrangements and the proposed internal transport facilities provisions;
 - Chapter 3 describes the baseline traffic surveys and the existing 2021 traffic conditions and junction performance in the vicinity;
 - Chapter 4 describes the traffic forecast methodology and future traffic conditions;
 - Chapter 5 presents the traffic assessment results for the reference and design scenarios, and to propose improvement measures to mitigate adverse traffic impact, if necessary; and
 - Chapter 6 summarizes and concludes the TIA study findings.

2. PROPOSED REDEVELOPMENT

2.1 Proposed Development Parameters

2.1.1 The proposed RCHE will provide about 100 beds and is tentatively in operation by 2024.

2.2 Proposed Internal Parking Provisions

- 2.2.1 There are no specific guidelines on internal parking provision in accordance with HKPSG for the proposed RCHE.
- 2.2.2 The proposed car parking and loading/unloading provisions for this proposed development are summarised in **Table 2.1**.

Table 2.1 Proposed Parking and Loading/Unloading Facilities Provisions for Development

Parking Spaces and Loading/Unloading Bays	Proposed
Car Parking Space (5m x 2.5m)	3
Loading/Unloading Bay for LGV (7m x 3.5m)	2

2.2.3 The above car parking and loading / unloading provisions are considered adequate to meet the end-user's requirements and operation needs.

2.3 Site Access Arrangement

- 2.3.1 The proposed vehicular access to the proposed RCHE is located at the west of the site which connects to the local access road that directly branch off from Shan Ha Road.
- 2.3.2 Detailed swept path analysis shown in **Figure 2.1** demonstrated that there are no manoeuvre problems for the design vehicle (i.e. 7m LGV).

3. EXISTING TRAFFIC CONDITIONS

3.1 Existing Road Networks

- 3.1.1 The local access road connecting the subject site and Shan Ha Road is an unnamed access road with width varied from 3m to 6m.
- 3.1.2 Shan Ha Road is a 2-way carriageway connecting Tong Yan San Tsuen Interchange which joining many district and local roads, includes Yuen Long Highway, Long Tin Road, Castle Peak Road, Shan Ha Road, Lam Yu Road, Town Park Road North, Yuen Long Tai Yuk Road and Ma Tong Road.
- 3.1.3 The Area of Influence (AOI) covers the 6 key junctions in the vicinity of the site as shown in **Figure 3.1**.

3.2 Public Transport Facilities

- 3.2.1 There is a GMB (Route No. 604) servicing within the 500m radius catchment area of this site.
- 3.2.2 Visitors and staff can commute to/from the site via this GMB service between Yuen Long Town Centre and Shan Ha Tsuen.

3.3 Baseline Traffic Surveys

Vehicular Survey

- 3.3.1 In consideration of the proposed site as a temporary RCHE development, the majority of the development traffic induced by the development are visiting trips which are normally generated/attracted during the visiting hours [i.e. off-peak hours (10:00-15:00)].
- 3.3.2 In order to assess the existing traffic conditions, vehicular count survey was carried out on 12 January 2022 (under normal school traffic condition without zoom classes and without work from home arrangement) during the off-peak period (10:00-15:00).
- 3.3.3 The worst off-peak hour of the existing local road network is identified as 12:45-13:45 hour.
- 3.3.4 The observed traffic flows for the 6 concerned junctions in 2022 during the worst off-peak hour are presented in **Figure 3.2**.

Pedestrian Survey

3.3.5 A pedestrian count survey has been conducted on 11 January 2022 (<u>under normal school traffic condition without zoom classes and without work from home arrangement</u>) during the off-peak period (10:00-15:00). The observed pedestrian flows are summarized in **Table 3.1**.

Table 3.1 2022 Surveyed Pedestrian Flows

Location	2-way Peak 15 mins Pedestrian Flows (ped/15 mins) Off-Peak
Site Access Road Footpath	6

GMB Utilization Survey

3.3.6 A GMB utilization survey on GMB No. 604 has been conducted on 11 January 2022 (under normal school traffic condition without zoom classes and without work from home arrangement) during the off-peak period (10:00-15:00).

3.4 Existing Junction Performance

3.4.1 Based on the 2022 surveyed traffic flows, the junction capacity analysis for the 6 concerned junctions during the worst off-peak period has been assessed. The results of the junction capacity analysis are summarized in **Table 3.2**.

 Table 3.2
 2022 Existing Junction Performance During the Worst Off-Peak

	Junction Location	Junction Type	Off-Peak
J1	Unnamed Access Road / Shan Ha Road	Priority (DFC)	0.04
J2)	Shan Ha Road / Tong Yan San Tsuen Interchange	Priority (DFC)	0.90
J3)	Slip Road from Long Tin Road Southbound / Slip Road from Shan Ha Road	Priority (DFC)	0.54)
J4	Slip Road Leading to Long Tin Road Northbound / Slip Road from Shan Ha Road	Priority (DFC)	0.95
J5)	Castle Peak Road - Ping Shan / Ma Wang Road / Long Tin Road	Signal (RC)	135%
<u>J6</u>	Shui Pin Wai Interchange	Signal (RC)	60%

3.4.2 The results of the junction performance enclosed in **Appendix A** have concluded that all the 6 concerned junctions are having adequate junction capacity during off-peak periods except J2 and J4 which will operate with marginal junction capacity.

3.5 Existing Footpath Performance

- 3.5.1 According to TPDM Volume 6 Chapter 10.4 Section 10.4.2, The Level of Service (LOS) is defined varied from A to F, with the best LOS 'A' and the worst LOS 'F'. The LOS 'C' is considered acceptable and LOS 'D' is barely acceptable with considerably likely occurrence of friction and interactions between pedestrians. LOS 'E' and 'F' are simply unacceptable.
- 3.5.2 The pedestrian flows for the concerned footpath during the off-peak hour period have been assessed and the performance are summarized in **Table 3.3**.

Table 3.3 2022 Existing Footpath Capacity Assessment

	2022 Existing		
Location	Off-Peak Flow	Flow Rate	LOS
	(ped/15mins)	(ped/min/m)	LOS
Site Access Road Footpath	6	0.4	A

Note: The clear footpath width = 1.5m actual width -0.5m dead width = 1m.

3.5.3 The analysis results show that the pedestrian footpath is operating with ample capacity [LOS A] in the off-peak period.

3.6 Existing GMB Performance

3.6.1 The demand and occupancy for the GMB No. 604 during the off-peak hour periods have been assessed and the results are summarized in **Table 3.4**.

Table 3.4 2022 Existing GMB No. 604 Assessment

Yuen Long Station Bound				
Hour	Frequency	Capacity	Demand	Occupancy
Houl	(veh/hr)	(pax/hr)	(pax/hr)	%
10:00-11:00	6	198	49	25%
11:00-12:00	4	134	30	22%
12:00-13:00	6	185	62	34%
13:00-14:00	3	86	62	72%
14:00-15:00	6	166	76	46%
	Shan 1	Ha Tsuen Bou	ınd	
Hour	Frequency	Capacity	Demand	Occupancy
noul	(veh/hr)	(pax/hr)	(pax/hr)	%
10:00-11:00	6	166	40	24%
11:00-12:00	4	134	29	22%
12:00-13:00	7	220	70	32%
13:00-14:00	3	86	46	53%
14:00-15:00	6	220	88	40%

3.6.2 The survey results demonstrated that GMB No. 604 has adequate capacity currently.

4. FUTURE TRAFFIC CONDITIONS

4.1 Traffic Forecast Approach

- 4.1.1 This temporary RCHE is anticipated to be commenced in 2024. A design year is adopted 3 years after the commencement (i.e. 2027) to assess the impact of the development related traffic on the local road network.
- 4.1.2 The traffic forecast has been conducted based on the following data:
 - Historical trend data from the Annual Traffic Census (ATC) by Transport Department
 - 2016-based Territorial Population and Employment Data Matrix (TPEDM) planning data by Planning Department's Website
- 4.1.3 The historical traffic data of the surrounding road links are based on the Annual Average Daily Traffic (AADT) extracted from the "Annual Traffic Census" report issued by Transport Department. The relevant AADT data from 2016 to 2020 are summarized in **Table 4.1**.

Table 4.1 AADT at Counting Stations Extracted from Annual Traffic Census – 2016 to 2020

Stn No.	Road	From	То	2016	2017	20	18	2019	2020
5236	Castle Peak Rd - Ping Shan	Yuen Long Tai Yuk Rd	Ma Wang Rd	19,560	19,250	19,	070	20,510	19,660
6049	Castle Peak Rd - Ping Shan	Ping Ha Rd	Ma Wang Rd	27,500	24,910	21,	090	21,930	20,880
All Stations Total		47,060	44,160	40,	160	42,440	40,540		
	Average Growth Rate (% p. a.)			-6.16%	-9.)6%	5.0	68%	-4.48%
Overall Growth Rate (% p. a.) from 2016 to 2020			-	-3.5	50%		-		

4.1.4 The population and employment data of the Planning Data District are extracted from the 2016-based TPEDM issued by Planning Department's website. The relevant growth rates from 2016 to 2026 are summarized in **Table 4.2**.

Table 4.2 Population and Employment Forecast (TPEDM)

Planning Data District Data : Yuen Long				
Average Annual Growth	2016-2021	2021-2026		
Rate of Total Population and Employment (%)	+1.13%	+0.48%		

4.1.5 The annual growth rates obtained from ATC and TPEDM from 2016 to 2026 are summarized in **Table 4.3**.

Table 4.3 Summary of Annual Growth Rates obtained from ATC and TPEDM from 2016 to 2026

	Annual Growth Rate		
	2016-2020	2016-2021	2021-2026
ATC	-3.50%		
TPEDM		+1.13%	+0.48%

4.1.6 After reviewing the above AADT traffic data and future planning data forecast, it is considered to adopt an annual growth rate of +0.48% p.a. from 2022 to 2027 for the projection of the 2027 reference traffic flows for the traffic assessment.

4.2 Future Planned Developments

- 4.2.1 The traffic flows generated by adjacent potential developments in the vicinity have also been taken into account in the reference case scenario.
- 4.2.2 The planned developments in the vicinity are summarised in **Table 4.4.**
- 4.2.3 Planning Department's advice on the planned developments in the vicinity of the proposed development has been sought and Planning Department's confirmation via email dated 31/1/2022 is enclosed in **Appendix B**.

 Table 4.4
 Summary of Future Planned Developments in the Vicinity

Planned Development	Development Parameters	Estimated Population	Anticipated Intake Year
Yuen Long South Development	229,930m ² commercial GFA 484,110m ² industrial GFA	32,850 flats	First intake: 2028 Full intake: 2038
Hung Shui Kiu/Ha Tsuen New Development Area (HSK/HT NDA)	2,000,000m ² commercial GFA 4,300,000m ² industrial GFA	61,000 flats	First intake: 2024 Full intake: 2037
Proposed Public Rental Housing Development at Ex-Long Bin Interim Housing	•	Phase 1: 3,080 flats Phase 2: 8,860 flats	Phase 1: 2024/2025 Phase 2: 2029/30-2030/31
Proposed Public Housing Development at Wang Chau Remaining Phases (WCRP)	•	13,000 flats	2033
Yuen Long Industrial Estate Extension	300,000m ² industrial GFA	•	2032/2033

- 4.2.4 The traffic generations of the above planned / committed developments will be taken into account in the reference case scenario traffic forecast for the TIA purpose.
- 4.2.5 The 2027 reference traffic flows are shown in **Figure 4.1**.

5. TRAFFIC IMPACT ASSESSMENT

5.1 Vehicular Generation and Attraction by the Proposed Development

5.1.1 The trip generations of this temporary RCHE development are estimated based on the trip rate of a reference similar project and are summarized in **Table 5.1**.

Table 5.1 Estimated Vehicular Trips upon Development

Proposed	AM	Peak	PM Peak		
Development (100 beds)	Attraction	Generation	Attraction	Generation	
Adopted Trip Rate (1) (pcu/hr/beds)	0.0435	0.0435	0.0362	0.0362	
Estimated Vehicular Trips (pcu/hr)	4	4	4	4	

Note: (1) Adopted from in-house trip rate of reference project with similar facilities.

Reference Site		AM Peak		PM Peak	
220707		Att	Gen	Att	Gen
Hong Shui Garden of Aged Company Limited, Tuen	Traffic Generations (pcu/hr)	6	6	5	(5)
Mun (138 beds)	Vehicular Trip Rate (pcu/hr/beds)	0.435	0.0435	0.0362	0.0362

- 5.1.2 The proposed development will attract and generate 8 (i.e. 4+4) pcus in the AM peak hour and 8 (i.e. 4+4) pcus in the PM peak hour.
- 5.1.3 In view of the traffic condition in the vicinity of the site, management of the RCHE will control the development traffic within the off-peak hours (10:00-15:00) only to minimize the traffic impact onto the local road network.
- 5.1.4 As conservative assessment, the proposed development will be assumed to attract and generate 8 (4+4) pcus in the off-peak hours.
- 5.1.5 The 2027 design flows are shown in **Figures 5.1**.

5.2 Traffic Impact Assessments

Junction Capacity Performance

5.2.1 The assessments of the junction performance based on the 2027 reference and design scenarios are summarized in **Table 5.2**.

 Table 5.2
 Junction Capacity Assessment for Year 2027

Junction	Junction	Junction Type	2027 Reference	2027 Design
No		J.F.	Off-Peak	Off-Peak
J1	Unnamed Access Road / Shan Ha Road	Priority (DFC)	0.04	0.05
J2	Shan Ha Road / Tong Yan San Tsuen Interchange	Priority (DFC)	0.93	0.94
J3)	Slip Road from Long Tin Road Southbound / Slip Road from Shan Ha Road	Priority (DFC)	0.55)	0.55
J4)	Slip Road Leading to Long Tin Road Northbound / Slip Road from Shan Ha Road	Priority (DFC)	0.99	0.99
(J5)	Castle Peak Road - Ping Shan / Ma Wang Road / Long Tin Road	Signal (RC)	130%	129%
J 6	Shui Pin Wai Interchange	Signal (RC)	56%	56%

- 5.2.2 The results of the junction capacity analysis enclosed in **Appendix A** have indicated that all the 6 junctions will operate satisfactorily with adequate junction capacity in both 2027 reference and 2027 design scenarios except J2 and J4 with marginal capacity during the off-peak period.
- 5.2.3 By 2027, J2 and J4 will operate with marginal junction capacity of 0.93 and 0.99 (Off-Peak) respectively under reference scenario (without development traffic). The results of the traffic assessment demonstrate that there will be minimal reduction in junction capacity for J2 and J4 compared with 2027 reference and design scenarios. This is mainly due to the background traffic growth but not the development traffic.
- 5.2.4 It is noted that CEDD has proposed junction improvement at the Tong Yan San Tsuen Interchange for the Yuen Long South (YLS) development. This junction improvement will be implemented before 2033 and will relieve the current traffic condition. The CEDD's improvement proposal is enclosed in **Appendix C**.

5.3 Pedestrian Generation and Attraction by the Proposed Development

5.3.1 The pedestrian trip generations of this temporary RCHE development are estimated based on the trip rate of a reference similar project and are summarized in **Table 5.3**.

 Table 5.3
 Estimated Pedestrian Trips upon Development

Proposed	AM	AM Peak PM Peak		Peak
Development (100 beds)	Attraction	Generation	Attraction	Generation
Adopted Pedestrian Trip Rate (1) (ped/hr/beds)	0.04	0.04	0.00	0.00
Estimated Pedestrian Trips (ped/hr)	4	4	0	0

Note: (1) Adopted from in-house trip rate of reference project with similar facilities.

Reference Site		AM	Peak	PM Peak	
11010101		Att	Gen	Att	Gen
Yuen Yuen Home for the	Pedestrian Trips (ped/hr)	2	2	0	0
Aged (56 beds)	Pedestrian Trip Rate (ped/hr/beds)	0.04	0.04	0.00	0.00

- 5.3.2 The proposed development will attract and generate 8 (i.e. 4+4) ped in the AM peak hour and 0 (i.e. 0+0) ped in the PM peak hour.
- 5.3.3 The prime objective of this RCHE aims to provide residential care timely for those solitary elderlies in the community. The expected visitor for this RCHE is low. This proposed RCHE development will generate/attract 8 (4+4) pedestrian trips during the worst peak hour for conservative assessment.
- **5.4** Pedestrian Impact Assessment for Year 2027
- 5.4.1 The pedestrian assessment for the year 2027 is summarized in **Table 5.4**.

 Table 5.4
 2027 Footpath Capacity Analysis

	2027 Reference			2027 Design		
Location	Flow (ped/15 mins)	Flow Rate (ped/ min/m)	LOS	Flow (ped/15 mins)	Flow Rate (ped/ min/m)	LOS
Site Access Road Footpath ⁽¹⁾	6 ⁽²⁾	0.4	A	8	0.53	A

Note: (1) The clear footpath width = 1.5m actual width -0.5m dead width = 1m

5.4.2 The results of the pedestrian assessment demonstrated the concerned footpath will operate with adequate pedestrian capacity in design year 2027.

⁽²⁾ Adopted an annual growth rate of +0.48% p.a. from 2022 to 2027 for the projection of the 2027 reference pedestrian flow

5.5 GMB Impact Assessment for Year 2027

5.5.1 It is assumed that 100% of visitors will be travelled by GMB. The anticipated GMB No. 604 occupancy in 2027 reference and design scenarios are summarized in **Table 5.5**.

Table 5.5 2027 GMB Occupancy Analysis

Peak Hour	2027 Reference			2027 Design		
(13:00-14:00)	Demand (pax/hr)	Capacity (pax/hr)	Occupancy %	Demand (pax/hr)	Capacity (pax/hr)	Occupancy %
Yuen Long Station Bound	64 ⁽¹⁾	86	74%	68	86	79%
Shan Ha Tsuen Bound	47 ⁽¹⁾	86	55%	(51)	86	59%

Note: (1) Adopted an annual growth rate of +0.48% p.a. from 2022 to 2027 for the projection of the 2027 reference GMB demand

5.5.2 The results of the GMB occupancy analysis demonstrated the GMB No. 604 will operate with adequate capacity in design year 2027.

March 2022

6. PROPOSED TRAFFIC MANAGEMENT IMPROVEMENT MEASURES

- 6.1.1 It is noted that the proposed RCHE will be a community-based operation by engaging local manpower in the area as its priority. Vehicles will be provided for scheduled point-to-point pick-up/drop-off for staffs and residents of this RCHE. It is therefore expected that most of the visitors and staff will commute to the RCHE by walking or public transport instead of private vehicle and taxi.
- 6.1.2 Traffic management measures are proposed to minimize the traffic impact at the nearby Tong Yan San Tsuen Interchange by regulating the visiting time for the visitors outside the AM/PM peak periods [i.e. 10:00-15:00 except emergency case]. This arrangement can eliminate traffic congestion during the peak hour period.

7. SUMMARY AND CONCLUSIONS

7.1 Summary

Proposed Development and Parking Provisions

- 7.1.1 The Applicant is proposed to develop a Residential Care Home for the Elderly (RCHE) with 100 beds (approx.).
- 7.1.2 There are no specific guidelines for parking provision in accordance with HKPSG for this kind of development. A total of 3 car parking spaces and 2 loading/unloading bays for LGV are proposed to satisfy the operation needs and requirement.

Existing Traffic Conditions

- 7.1.3 In consideration of the proposed site as a RCHE development, majority of the development traffic induced by the development are visiting trips which are generated and attracted during off-peak hours (i.e. 10:00-15:00).
- 7.1.4 The results of the junction capacities show that all the 6 concerned junctions are having adequate junction capacity during the off-peak periods except J2 and J4 with marginal junction capacity.

Future Traffic Conditions

- 7.1.5 It is anticipated that the site will be fully developed by 2024. A design year 2027 is adopted for the traffic assessment.
- 7.1.6 The 2027 traffic forecasts flows have been referred to the historical trend data from the ATC, the latest 2016-based TPEDM planning assumptions from PlanD's website and all planned and committed developments in the vicinity.

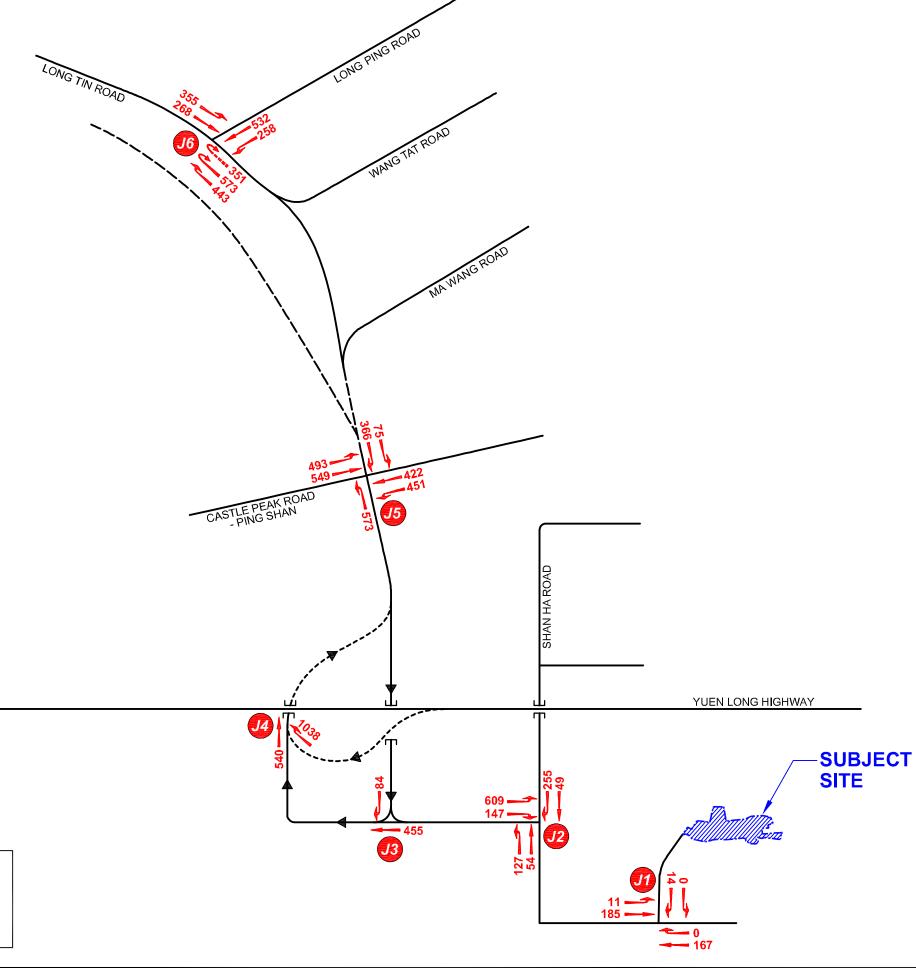
Traffic Impact Assessment

- 7.1.7 The proposed development will attract and generate 8 pcus in the off-peak hours as conservative assessment.
- 7.1.8 The results show that all the 6 junctions will operate satisfactorily with ample junction capacity in both 2027 reference and 2027 design scenarios during off-peak except J2 and J4 with marginal capacity. This is mainly due to the background traffic growth but not the development traffic.

- 7.1.9 It is noted that CEDD has proposed junction improvement at the Tong Yan San Tsuen Interchange for the Yuen Long South (YLS) development. This junction improvement will be implemented before 2033 and will relieve the current traffic condition.
- 7.1.10 Traffic management measures are proposed to minimize the traffic impact at the nearby Tong Yan San Tsuen Interchange by regulating the visiting time for the visitors (10:00-15:00). This arrangement can avoid traffic congestion during the AM/PM peak hour period.

7.2 Conclusion

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



LEGEND:

123

WORST OFF-PEAK (12:45 - 13:45) TRAFFIC FLOWS (PCU/HR)

9	HWSPB @	-
	Traffic & Transportation Consultants Ho Wang SPB Limited	l

Project Title

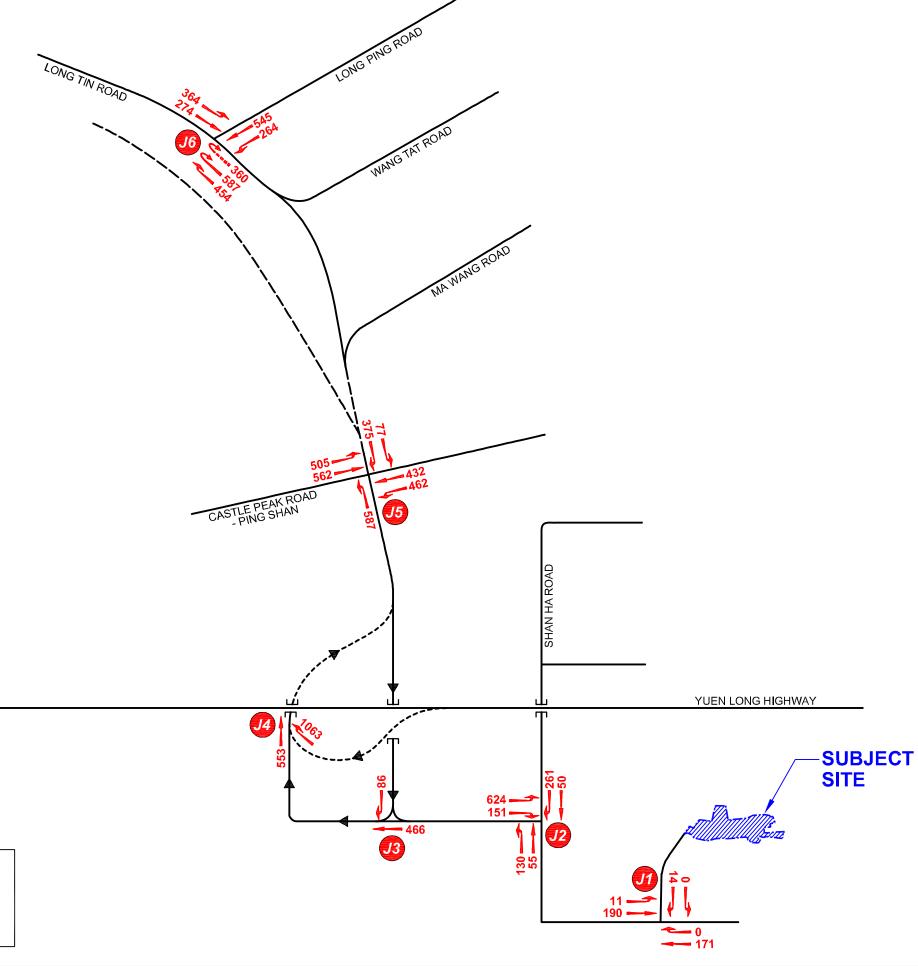
PROPOSED TEMPORARY SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) ("RCHE") BY CONVERSION OF FORMER WA FUNG SCHOOL (PART) FOR A PERIOD OF 10 YEARS AND PROPOSED EXCAVATION OF LAND IN ASSOCIATION WITH THE PROPOSED RCHE, LAM HAU TSUEN, YUEN LONG, NEW TERRITORIES

N. T. S.

OCT 2021

3.2

Project No. CAD Ref. J1645 J1645/TIA1/F32A/2022-01-25



LEGEND:

123

WORST OFF-PEAK (12:45 - 13:45) TRAFFIC FLOWS (PCU/HR)

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Transportation Consultants ang SPB Limited

Project Title

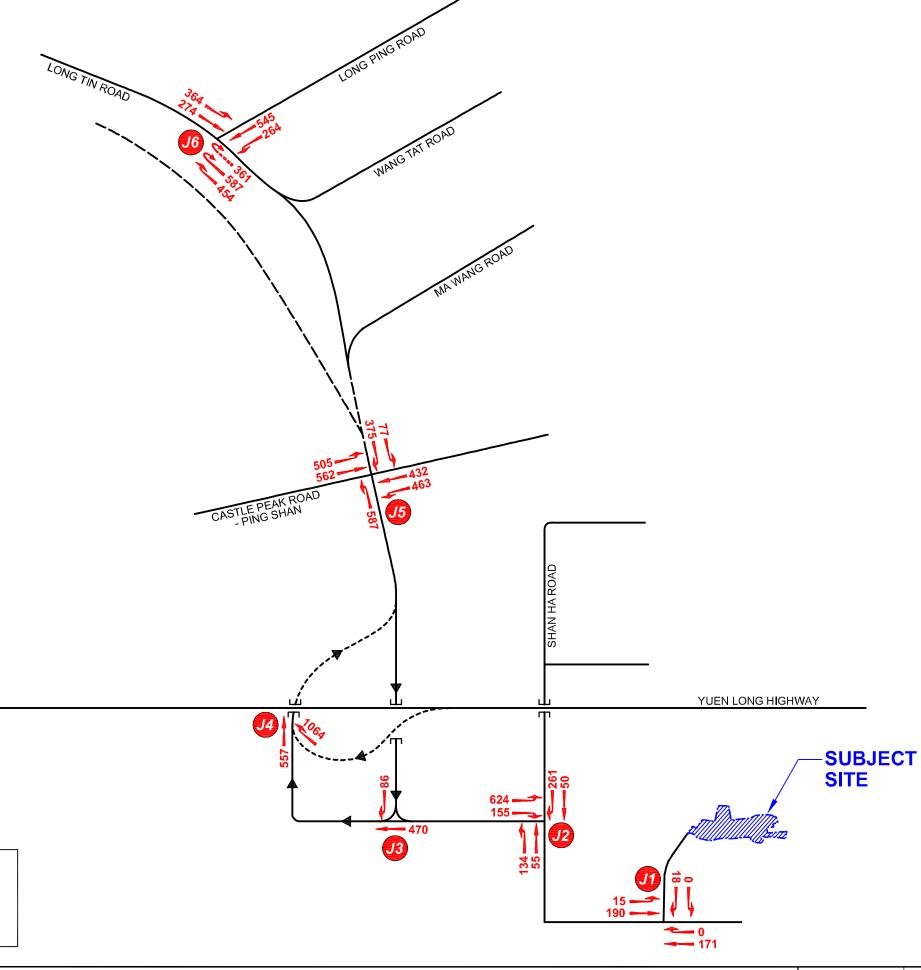
PROPOSED TEMPORARY SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) ("RCHE") BY CONVERSION OF FORMER WA FUNG SCHOOL (PART) FOR A PERIOD OF 10 YEARS AND PROPOSED EXCAVATION OF LAND IN ASSOCIATION WITH THE PROPOSED RCHE, LAM HAU TSUEN, YUEN LONG, NEW TERRITORIES

OCT 2021

Figure No. 4.1

2027 REFERENCE OFF-PEAK TRAFFIC FLOWS

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LEGEND:

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WORST OFF-PEAK (12:45 - 13:45) TRAFFIC FLOWS (PCU/HR)

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	Traffic & Transportation Consultants
	Ho Wang SPB Limited

Project Title

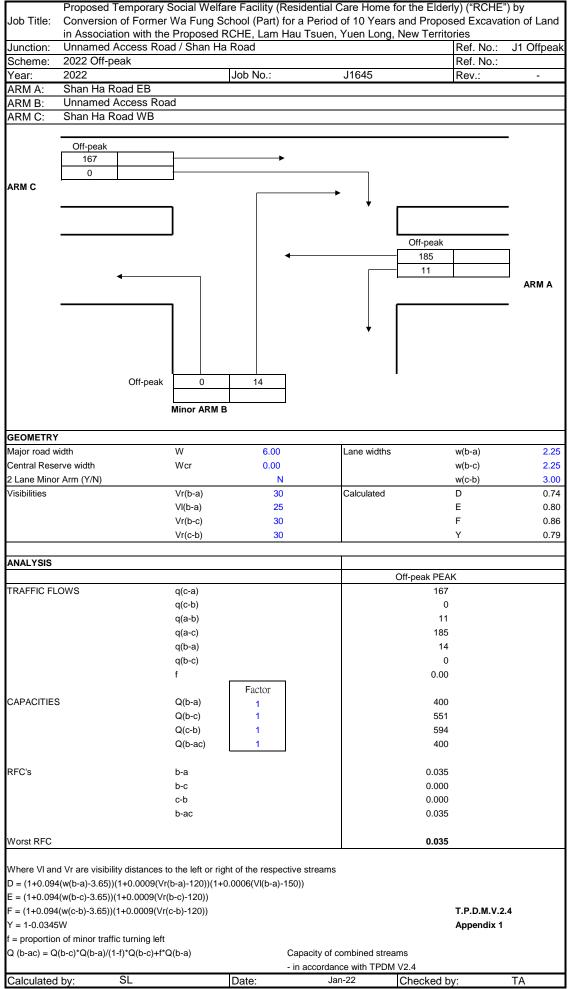
PROPOSED TEMPORARY SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) ("RCHE") BY CONVERSION OF FORMER WA FUNG SCHOOL (PART) FOR A PERIOD OF 10 YEARS AND PROPOSED EXCAVATION OF LAND IN ASSOCIATION WITH THE PROPOSED RCHE, LAM HAU TSUEN, YUEN LONG, NEW TERRITORIES

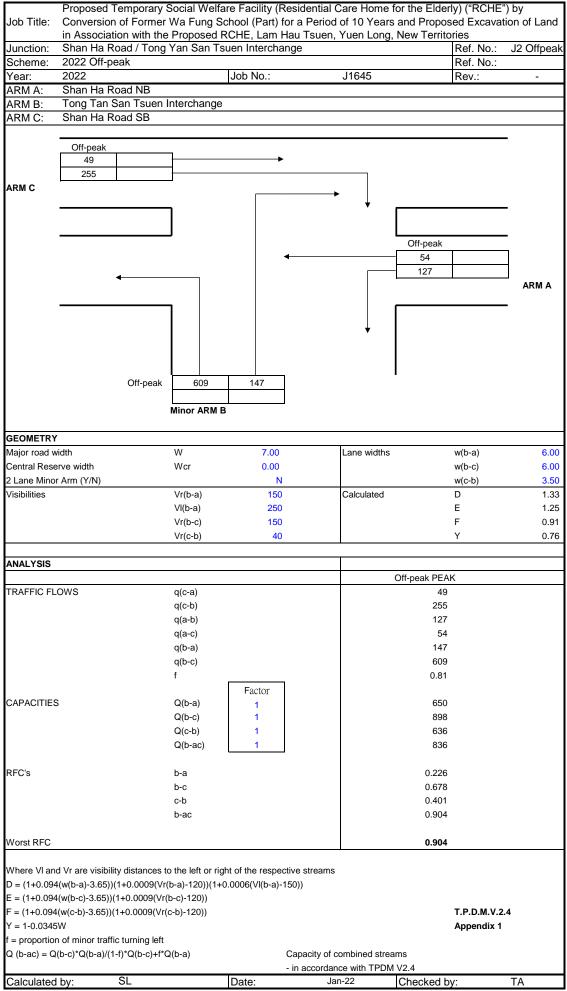
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Figure No. 5.1 OCT 2021

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APPENDIX A Junction Calculation Sheets





Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Slip Road from Long Tin Road Southbound / Slip Road from Shan Ha Road Ref. No.: J3 Offpeak 2022 Off-peak Scheme: Ref. No.: Year: 2022 Job No.: J1645 Rev. Slip Road from Long Tin Road Southbound ARM A: ARM B: Slip Road from Shan Ha Road Off-peak ARM A Off-peak 455 Minor ARM B GEOMETRY Major road width W 9.00 Lane widths w(b-a) 5.50 Central Reserve width Wcr 0.00 w(b-c) 5.50 2 Lane Minor Arm (Y/N) 0.00 w(c-b) Visibilities Vr(b-a) 120 Calculated D 1.07 VI(b-a) 0 Е 1.17 F 120 0.59 Vr(b-c) 0 0.69 Vr(c-b) ANALYSIS Off-peak PEAK TRAFFIC FLOWS 0 q(c-a) q(c-b) 0 q(a-b) 0 84 q(a-c) 0 q(b-a) q(b-c) 455 f 1.00 Factor CAPACITIES Q(b-a) 647 Q(b-c) 850 424 Q(c-b) Q(b-ac) 850 RFC's 0.000 b-a 0.535 b-c c-b 0.000 b-ac 0.535 Worst RFC 0.535 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))T.P.D.M.V.2.4 F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 Date: Jan-22 Checked by: Calculated by:



Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Slip Road Leading to Long Tin Road Northbound / Slip Road from Shan Ha Road Ref. No.: J4 Offpeak 2022 Off-peak Scheme: Ref. No.: Year: 2022 Job No.: J1645 Rev.: Slip Road Leading to Long Tin Road Northbound ARM A: ARM B: Slip Road from Shan Ha Road Off-peak 1038 ARM A Off-peak 540 Minor ARM B GEOMETRY Major road width W 11.00 Lane widths w(b-a) 5.00 Central Reserve width Wcr 0.00 w(b-c) 5.00 2 Lane Minor Arm (Y/N) 0.00 w(c-b) Visibilities Vr(b-a) 0 Calculated D 0.91 VI(b-a) 0 Е 1.11 105 F 0.59 Vr(b-c) 0 0.62 Vr(c-b) ANALYSIS Off-peak PEAK TRAFFIC FLOWS 0 q(c-a) q(c-b) 0 q(a-b) 0 1038 q(a-c) q(b-a) 0 q(b-c) 540 f 1.00 Factor CAPACITIES Q(b-a) 359 Q(b-c) 568 299 Q(c-b) Q(b-ac) 568 RFC's 0.000 b-a 0.951 b-c c-b 0.000 b-ac 0.951 Worst RFC 0.951 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))T.P.D.M.V.2.4 F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 Date: Jan-22 Checked by: Calculated by:

Traffic Signal Junction Calculation Sheet

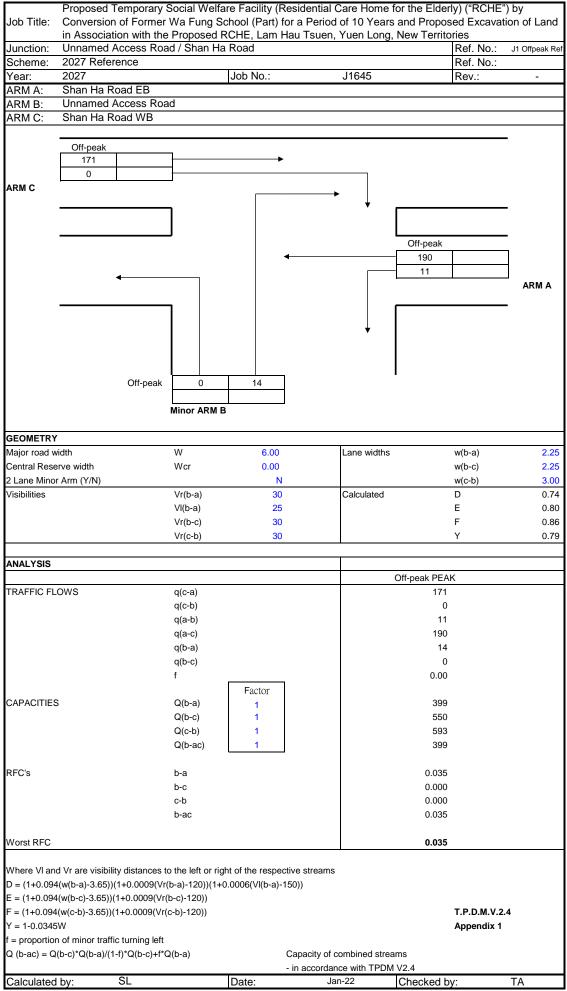


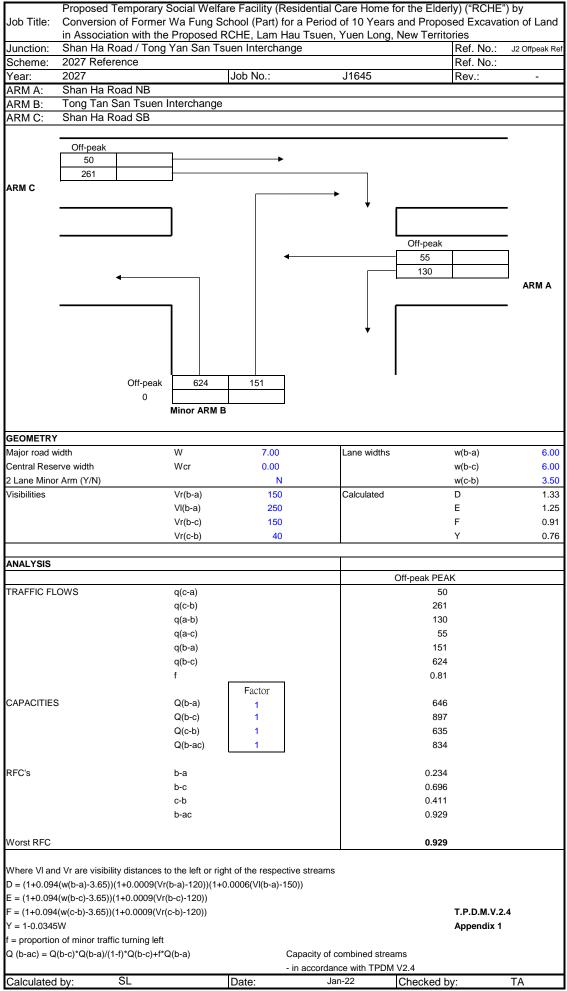
Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Job Title: Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Castle Peak Road - Ping Shan / Ma Wang Road / Long Tin Road Ref. No.: J5 Offpeak Scheme: 2022 Off-peak Ref. No.: 2022 Job No.: J1645 Year: Rev. Peak Hour Traffic Flows (pcu/hr) Off 422 451 11p 3 11 3 8 2 3 4 14 3 Off Peak Lane Wide No. No. Rad. Rad. Grad. Site Turning Saturation Flow Approach / Phase (m) Near Oppo L(m) R(m) (%) Pro. (f) (pcu/hr) Flow Crit. 3.50 1870 493 0.264 3.50 1965 493 0.251 0.130 2 3.50 4210 549 AB 2 3.50 4210 549 0.130 0.205 AB 3.00 2055 422 100 451 0.264 AB 3.00 12.5 1710 3.00 4110 305 0.074 C 3.00 1840 136 0.074 Critical Ped. Phase Stage Width Across Min. GM Min. FGM Lost Time Note Crit. 5p C 19 6р AB 15 7p 1(LRT) **Check Critical Phase** 4,3 2,1(LRT),3 Nearside Lane: 1940 + 100 x (W - 3.25) 10,7p 0.338 0.264 0.205 2080 + 100 x (W - 3.25) Other Lanes: Sum of y values, Y 24 14 29 Gradient & Radius: Lost time, L -42 x (gradient in %) Cycle Time, C 120 Opposed Traffic -230 120 120 Practical Y, Y_{pr} Turning Proportion: x 1 / (1 + 1.5 f/R)0.795 0.720 0.683 Practical Y (Ypr): 0.9 x (1 - L/C) Reserve Capacity, R.C. (%) 135% 173% 234% Reserve Capacity (RC): $(Y_{pr}/Y - 1) \times 100\%$ In accordance with TPDM - Volume 4.2.4 Calculated by: Date: Jan-2022 Checked by:

Traffic Signal Junction Calculation Sheet



Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Shui Pin Wai Interchange Ref. No.: J6 Offpeak Scheme: 2022 Off-peak Ref. No.: 2022 Job No.: J1645 Year: Rev. Peak Hour Traffic Flows (pcu/hr) Off 355 LONG PING ROAD 朗屏路 573 532 258 3 4 9 3 3 3 3 3 5 3 4 3 3 Off Peak Lane Wide No. No. Rad. Rad. Grad. Site Turning Saturation Flow Approach / Phase Oppo L(m) R(m) (m) Near (%) Pro. (f) (pcu/hr) Flow Crit. $\downarrow\downarrow\downarrow\downarrow$ В 3.50 6315 268 0.042 BCD2 3.50 175 100 4035 355 0.088 0.128 CD 2 3.20 4150 532 С 30 100 1845 258 0.140 3.20 0.078 D 2 5.00 100 4510 351 4.00 2155 360 0.167 4.00 75 2005 335 0.167 4.00 12.5 1925 321 0.167 Critical Ped. Phase Stage Width Across Min. GM Min. FGM Lost Time Note Crit. Check Critical Phase Nearside Lane: 1940 + 100 x (W - 3.25) 2.1.4.3 2.1.5 0.427 0.338 2080 + 100 x (W - 3.25) Sum of y values, Y Other Lanes: 29 Lost time, L 18 Gradient & Radius: -42 x (gradient in %) Cycle Time, C 120 120 Opposed Traffic -230 Practical Y, Y_{pr} Turning Proportion: x 1 / (1 + 1.5 f/R)0.683 0.765 Practical Y (Ypr): 0.9 x (1 - L/C) Reserve Capacity, R.C. (%) 60% 127% Reserve Capacity (RC): $(Y_{pr}/Y - 1) \times 100\%$ In accordance with TPDM - Volume 4.2.4 Calculated by: Date: Jan-2022 Checked by:





Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Slip Road from Long Tin Road Southbound / Slip Road from Shan Ha Road Ref. No.: J3 Offpeak Re 2027 Reference Scheme: Ref. No.: Year: 2027 Job No.: J1645 Rev.: Slip Road from Long Tin Road Southbound ARM A: ARM B: Slip Road from Shan Ha Road Off-peak ARM A Off-peak 466 Minor ARM B GEOMETRY Major road width W 9.00 Lane widths 5.50 w(b-a) Central Reserve width Wcr 0.00 w(b-c) 5.50 2 Lane Minor Arm (Y/N) 0.00 w(c-b) Visibilities Vr(b-a) 120 Calculated D 1.07 VI(b-a) 0 Е 1.17 F 120 0.59 Vr(b-c) 0 0.69 Vr(c-b) ANALYSIS Off-peak PEAK TRAFFIC FLOWS 0 q(c-a) q(c-b) 0 q(a-b) 0 86 q(a-c) q(b-a) 0 q(b-c) 466 f 1.00 Factor CAPACITIES Q(b-a) 647 Q(b-c) 849 424 Q(c-b) Q(b-ac) 849 RFC's b-a 0.000 0.549 b-c c-b 0.000 b-ac 0.549 Worst RFC 0.549 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))T.P.D.M.V.2.4 F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 Date: Jan-22 Checked by: Calculated by:

Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Slip Road Leading to Long Tin Road Northbound / Slip Road from Shan Ha Road Ref. No.: 2027 Reference Scheme: Ref. No.: Year: 2027 Job No.: J1645 Rev.: Slip Road Leading to Long Tin Road Northbound ARM A: ARM B: Slip Road from Shan Ha Road Off-peak 1063 ARM A Off-peak 553 Minor ARM B GEOMETRY Major road width W 11.00 Lane widths 5.00 w(b-a) Central Reserve width Wcr 0.00 w(b-c) 5.00 2 Lane Minor Arm (Y/N) 0.00 w(c-b) Visibilities Vr(b-a) 0 Calculated D 0.91 VI(b-a) 0 Е 1.11 105 F 0.59 Vr(b-c) 0 0.62 Vr(c-b) ANALYSIS Off-peak PEAK TRAFFIC FLOWS 0 q(c-a) q(c-b) 0 q(a-b) 0 1063 q(a-c) q(b-a) 0 q(b-c) 553 f 1.00 Factor CAPACITIES Q(b-a) 354 Q(b-c) 561 296 Q(c-b) Q(b-ac) 561 RFC's 0.000 b-a 0.986 b-c c-b 0.000 b-ac 0.986 Worst RFC 0.986 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))T.P.D.M.V.2.4 F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 Date: Jan-22 Checked by: Calculated by:

Traffic Signal Junction Calculation Sheet

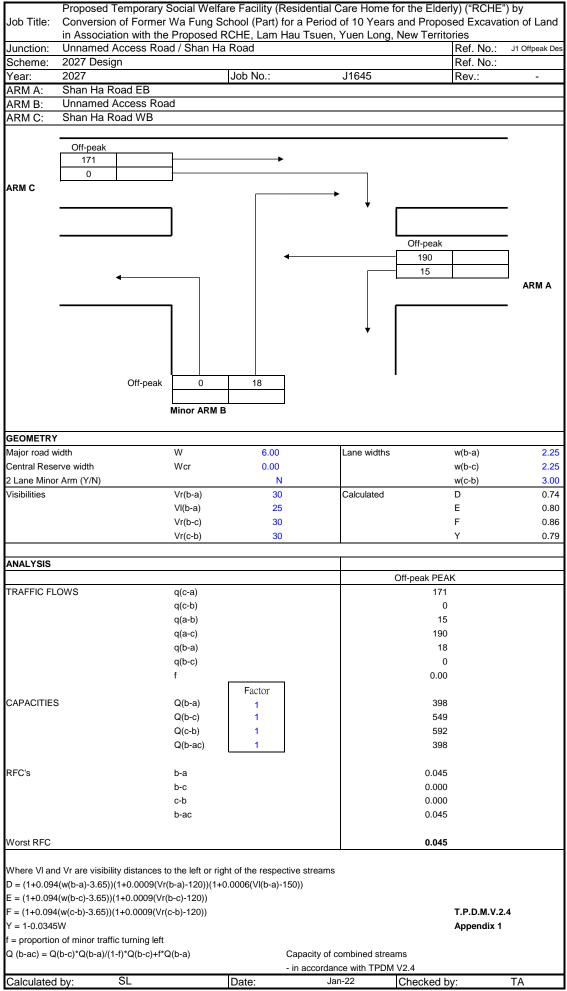


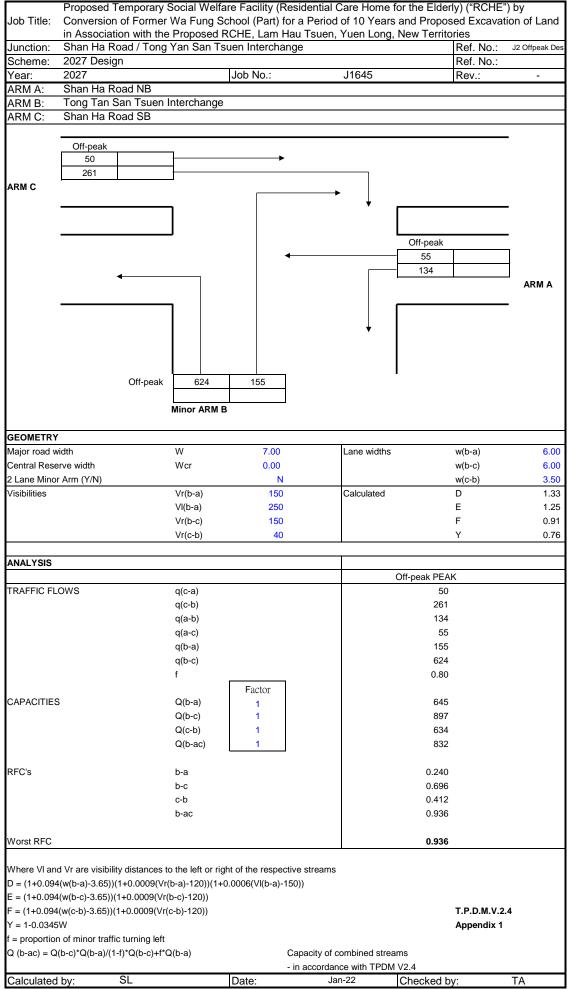
Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Job Title: Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Castle Peak Road - Ping Shan / Ma Wang Road / Long Tin Road Ref. No.: J5 Offpeak Scheme: 2027 Reference Ref. No.: 2027 Job No.: J1645 Year: Rev. Peak Hour Traffic Flows (pcu/hr) Off 432 462 11p 3 11 3 8 2 3 4 14 3 Off Peak Lane Wide No. No. Rad. Rad. Grad. Site Turning Saturation Flow Approach / Phase (m) Near Oppo L(m) R(m) (%) Pro. (f) (pcu/hr) Flow Crit. 3.50 1870 505 0.270 3.50 1965 505 0.257 0.133 2 3.50 4210 562 AB 2 3.50 4210 562 0.133 0.210 AB 3.00 2055 432 100 462 0.270 AB 3.00 12.5 1710 3.00 4110 312 0.076 C 3.00 1840 140 0.076 Critical Ped. Phase Stage Width Across Min. GM Min. FGM Lost Time Note Crit. 5p C 19 6р AB 15 7p 1(LRT) **Check Critical Phase** 4,3 2,1(LRT),3 Nearside Lane: 1940 + 100 x (W - 3.25) 10,7p 0.346 0.270 0.209 2080 + 100 x (W - 3.25) Other Lanes: Sum of y values, Y 24 14 29 Gradient & Radius: Lost time, L -42 x (gradient in %) Cycle Time, C 120 Opposed Traffic -230 120 120 Practical Y, Y_{pr} Turning Proportion: x 1 / (1 + 1.5 f/R)0.795 0.720 0.683 Practical Y (Ypr): 0.9 x (1 - L/C) Reserve Capacity, R.C. (%) 130% 167% 226% Reserve Capacity (RC): $(Y_{pr}/Y - 1) \times 100\%$ In accordance with TPDM - Volume 4.2.4 Calculated by Date: Jan-2022

Traffic Signal Junction Calculation Sheet



Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Shui Pin Wai Interchange Ref. No.: J6 Offpeak Scheme: 2027 Reference Ref. No.: 2027 Job No.: J1645 Year: Rev. Peak Hour Traffic Flows (pcu/hr) Off LONG PING ROAD 朗屏路 587 545 264 3 4 9 3 3 3 3 3 5 3 4 3 3 Off Peak Lane Wide No. No. Rad. Rad. Grad. Site Turning Saturation Flow Approach / Phase Oppo L(m) R(m) (m) Near (%) Pro. (f) (pcu/hr) Flow Crit. $\downarrow\downarrow\downarrow\downarrow$ В 3.50 6315 274 0.043 BCD2 3.50 175 100 4035 364 0.090 0.131 CD 2 3.20 4150 545 С 30 100 1845 264 0.143 3.20 0.080 D 2 5.00 100 4510 360 4.00 2155 369 0.171 4.00 75 2005 343 0.171 4.00 12.5 1925 329 0.171 Critical Ped. Phase Stage Width Across Min. GM Min. FGM Lost Time Note Crit. Check Critical Phase Nearside Lane: 1940 + 100 x (W - 3.25) 2.1.4.3 2.1.5 0.437 0.346 2080 + 100 x (W - 3.25) Sum of y values, Y Other Lanes: 29 Lost time, L 18 Gradient & Radius: -42 x (gradient in %) Cycle Time, C 120 120 Opposed Traffic -230 Practical Y, Y_{pr} Turning Proportion: x 1 / (1 + 1.5 f/R)0.683 0.765 Practical Y (Ypr): 0.9 x (1 - L/C) Reserve Capacity, R.C. (%) 56% 121% Reserve Capacity (RC): $(Y_{pr}/Y - 1) \times 100\%$ In accordance with TPDM - Volume 4.2.4 Calculated by Date: Jan-2022







Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Slip Road from Long Tin Road Southbound / Slip Road from Shan Ha Road Ref. No.: 2027 Design Scheme: Ref. No.: Year: 2027 Job No.: J1645 Rev.: Slip Road from Long Tin Road Southbound ARM A: ARM B: Slip Road from Shan Ha Road Off-peak ARM A Off-peak 470 Minor ARM B GEOMETRY Major road width W 9.00 Lane widths w(b-a) 5.50 Central Reserve width Wcr 0.00 w(b-c) 5.50 2 Lane Minor Arm (Y/N) 0.00 w(c-b) Visibilities Vr(b-a) 120 Calculated D 1.07 VI(b-a) 0 Е 1.17 F 120 0.59 Vr(b-c) 0 0.69 Vr(c-b) ANALYSIS Off-peak PEAK TRAFFIC FLOWS 0 q(c-a) q(c-b) 0 q(a-b) 0 86 q(a-c) q(b-a) 0 q(b-c) 470 f 1.00 Factor CAPACITIES Q(b-a) 647 Q(b-c) 849 424 Q(c-b) Q(b-ac) 849 RFC's 0.000 b-a 0.554 b-c c-b 0.000 b-ac 0.554 Worst RFC 0.554 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))T.P.D.M.V.2.4 F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 Date: Jan-22 Checked by: Calculated by:

Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Slip Road Leading to Long Tin Road Northbound / Slip Road from Shan Ha Road Ref. No. 2027 Design Scheme: Ref. No.: Year: 2027 Job No.: J1645 Rev.: Slip Road Leading to Long Tin Road Northbound ARM A: ARM B: Slip Road from Shan Ha Road Off-peak 1064 ARM A Off-peak 557 Minor ARM B GEOMETRY Major road width W 11.00 Lane widths w(b-a) 5.00 Central Reserve width Wcr 0.00 w(b-c) 5.00 2 Lane Minor Arm (Y/N) 0.00 w(c-b) Visibilities Vr(b-a) 0 Calculated D 0.91 VI(b-a) 0 Е 1.11 105 F 0.59 Vr(b-c) 0 0.62 Vr(c-b) ANALYSIS Off-peak PEAK TRAFFIC FLOWS 0 q(c-a) q(c-b) 0 q(a-b) 0 1064 q(a-c) q(b-a) 0 q(b-c) 557 f 1.00 Factor CAPACITIES Q(b-a) 354 Q(b-c) 561 296 Q(c-b) Q(b-ac) 561 RFC's 0.000 b-a 0.993 b-c c-b 0.000 b-ac 0.993 Worst RFC 0.99 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))T.P.D.M.V.2.4 F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 Date: Jan-22 Checked by: Calculated by:

Traffic Signal Junction Calculation Sheet



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Traffic Signal Junction Calculation Sheet



Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Shui Pin Wai Interchange Ref. No.: J6 Offpeak I Scheme: 2027 Reference Ref. No.: 2027 Job No.: J1645 Year: Rev. Peak Hour Traffic Flows (pcu/hr) Off LONG PING ROAD 朗屏路 587 545 264 3 4 9 3 3 3 3 3 5 3 4 3 3 Off Peak Lane Wide No. No. Rad. Rad. Grad. Site Turning Saturation Flow Approach / Phase Oppo L(m) R(m) (m) Near (%) Pro. (f) (pcu/hr) Flow Crit. $\downarrow\downarrow\downarrow\downarrow$ В 3.50 6315 274 0.043 BCD2 3.50 175 100 4035 364 0.090 0.131 CD 2 3.20 4150 545 С 30 100 1845 264 0.143 3.20 0.080 D 2 5.00 100 4510 361 4.00 2155 369 0.171 4.00 75 2005 343 0.171 4.00 12.5 1925 329 0.171 Critical Ped. Phase Stage Width Across Min. GM Min. FGM Lost Time Note Crit. Check Critical Phase Nearside Lane: 1940 + 100 x (W - 3.25) 2.1.4.3 2.1.5 0.438 0.346 2080 + 100 x (W - 3.25) Sum of y values, Y Other Lanes: 29 Lost time, L 18 Gradient & Radius: -42 x (gradient in %) Cycle Time, C 120 120 Opposed Traffic -230 Practical Y, Y_{pr} Turning Proportion: x 1 / (1 + 1.5 f/R)0.683 0.765 Practical Y (Ypr): 0.9 x (1 - L/C) Reserve Capacity, R.C. (%) 56% 121% Reserve Capacity (RC): $(Y_{pr}/Y - 1) \times 100\%$ In accordance with TPDM - Volume 4.2.4 Calculated by Date: Jan-2022

APPENDIX B

Confirmation from PlanD on the Planned Development via email dated 31 January 2022

Samuel Lo

寄件者:ocmwong@pland.gov.hk寄件日期:2022年1-31日 3:50 PM

收件者: Wilson Wong

副本: ansoncheung@adrg.com.hk; kimchan; 'Samuel Lo'

主旨: Re: [A/YL-TYST/1132] [ADRG/Lam Hau] Enquiry on planning assumptions (TD comment (j))

Dear Wilson,

I refer to your preceding emails with an enclosed letter dated 17.1.2022 (Your Ref.: YL-LH/PA/GCSE/21-11) requesting the information of the planned developments in the vicinity of the proposed development under planning application No. A/YL-TYST/1132.

Based on the location plan attached to your email dated 19.1.2022, we would like to confirm the planned developments listed in the summary list enclosed in your letter is generally in line with the current development in the area and please see below for our comment on the Yuen Long Industrial Estate Extension:

- The GFA should be 300,000 sq.m and the project will be completed tentatively in 2032/33.

Regards,

Ophelia WONG

Tuen Mun & Yuen Long West District Planning Office

Planning Department

Tel.: 2158 6298 Fax.: 2489 9711

From: Wilson Wong < wiwong@visionplanning.com.hk >

To: Ophelia Wong < ocmwong@pland.gov.hk >

Cc: kimchan < kimchan@visionplanning.com.hk >, 'Samuel Lo' < samuello@howangspb.com >, ansoncheung@adrg.com.hk

Date: 19/01/2022 17:03

Subject: Re: [A/YL-TYST/1132] [ADRG/Lam Hau] Enquiry on planning assumptions (TD comment (j))

Dear Ophelia,

Please find the AOI boundary with a radius of 500m from the concerned junctions marked on the attached plan (500m radius of concerned junctions.jpg) for your reference. Thanks!

Best Regards, Wilson Wong

Vision Planning Consultants Ltd.

D: 2566 7031 | T: 2566 9988 | F: 2566 9978

From: Wilson Wong [mailto:wiwong@visionplanning.com.hk]

Sent: Monday, January 17, 2022, 6:53 PM **To:** Ophelia Wong socmwong@pland.gov.hk>

Cc: 'Samuel Lo' samuello@howangspb.com, <a href="mailto:ansanged-nashed-nas

<kimchan@visionplanning.com.hk>

Subject: [A/YL-TYST/1132] [ADRG/Lam Hau] Enquiry on planning assumptions (TD comment (j))

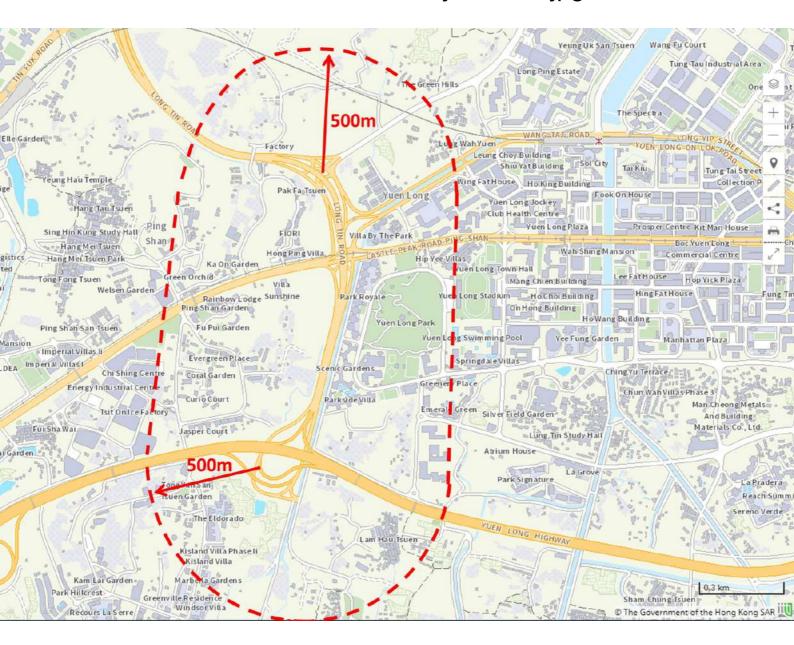
Dear Ophelia,

As per TD's comment (j) on the report of TIA submitted under Application No. A/YL-TYST/1132, please find attached a letter seeking PlanD's confirmation on the relevant planned developments in the vicinity of the application site.

Should you have any questions, please feel free to contact me. Thanks.

Best Regards,
Wilson Wong
Vision Planning Consultants Ltd.
D: 2566 7031 | T: 2566 9988 | F: 2566 9978

500m radius of concerned junctions.jpg





VISION PLANNING CONSULTANTS LTD. 弘 域 城 市 規 劃 顧 問 有 限 公 司

Our Ref: YL-LH/PA/GCSE/21-11 Your Ref: TPB/A/YL-TYST/1132

Date: 17 January, 2022

Ms. WONG, Ophelia
Tuen Mun and Yuen Long West
District Planning Office,
Planning Department,
14/F, Sha Tin Government Offices,
1 Sheung Wo Che Road,
Sha Tin, N.T.

Dear Ms. WONG,

Proposed Temporary 'Social Welfare Facility' (Residential Care Home for the Elderly) ("RCHE") for a Period of 10 Years and Excavation of Land in Government Land in D.D. 120, Lam Hau Tsuen, Yuen Long, New Territories – Enquiry on planning assumptions

We refer to the request of the Transport Department in its comment (j) on the report of TIA submitted under Application No. A/YL-TYST/1132: "the applicant should seek Planning Department's advice on the planning assumptions and provide the written record from Planning Department for our review". In this connection, the project traffic consultant, Ho Wang SPB Limited ("HWSPB"), has identified all relevant planned developments in the vicinity of the application site, and we would like to seek your kind assistance to confirm whether there are any other planned developments not included in the summary list provided in HWSPB's letter (Attachment A).

Should you have any queries with regards to the above, please do not hesitate to contact our Mr. Wilson WONG or the undersigned at 2566 9988.

Thank you very much for your kind attention.

Yours faithfully, for and on behalf of

VISION PLANNING CONSULTANTS LTD.

Kim On CHAN Managing Director

Encl. [KC/WW]

[YL-LH/PA/GCSE/21-05] c.c Project Team

TM&YLW DPO (Attn.: Ms. Ophelia WONG)

By email By email



By Email



Ho Wang SPB Limited 何黃交通顧問有限公司

香港上環蘇杭街41 - 47號蘇杭商業大廈5樓

5 Floor, So Hong Commercial Building, 41 - 47 Jervois Street, Sheung Wan, Hong Kong Tel: (852) 2865 0090 Fax: (852) 2866 4332 E-mail: info@howangspb.com

BY EMAIL (ocmwong@pland.gov.hk)

17 January 2022

Our reference: J1645/5

Planning Department District Planning Branch New Territories District Planning Division Tuen Mun and Yuen Long West District Planning Office 14/F, Sha Tin Government Offices, 1 Sheung Wo Che Road, Sha Tin, N.T.

Attention: Ms. WONG Cheuk Man, Ophelia (Asst Town Plnr/Yuen Long West 1)

Dear Ms. Wong,

Planning Application No. A/YL-TYST/1132 - Temporary RCHE for a Period of 10 Years PlanD's Confirmation on the Adopted Planning Assumptions for Traffic Forecast

We refer to the Transport Department's comment item (j) on the TIA report of this captioned planning application dated 28/12/2021 and requested HWSPB to seek PlanD's confirmation on the future planned developments adopted in the traffic forecast for TIA (Design year: 2027) and EIA (Design year: 2039) studies.

We have summarised the adopted planned developments in the vicinity of the site based on the public available information for your review/confirmation.

Planned Development	Development Parameters	Estimated Population	Anticipated Intake Year
Yuen Long South Development	229,930m ² commercial GFA 484,110m ² industrial GFA	32,850 flats	First intake: 2028 Full intake: 2038
Hung Shui Kiu/Ha Tsuen New Development Area (HSK/HT NDA)	2,000,000m ² commercial GFA 4,300,000m ² industrial GFA	61,000 flats	First intake: 2024 Full intake: 2037
Proposed Public Rental Housing Development at Ex- Long Bin Interim Housing		Phase 1: 3,080 flats Phase 2: 8,860 flats	Phase 1: 2024/2025 Phase 2: 2029/30- 2030/31
Proposed Public Housing Development at Wang Chau Remaining Phases (WCRP)	æ:	13,000 flats	2033
Yuen Long Industrial Estate Extension	291,545m² industrial GFA		2026/2027

Cont'd/...2

BEng (Hons) MSc MHKIE MCIHT



传 眞: (86) 21-5465 6573



Page 2 (17 January 2022) Our reference: J1645/5 Planning Department Ms. WONG Cheuk Man, Ophelia

We would be grateful if you could kindly confirm whether the above planned developments are accurate.

We wish to thank you for your kind assistance and should you have any queries, please feel free to contact the undersigned or our Mr. Tommy Lam at 2865-0090.

Yours sincerely, For and on behalf of Ho Wang SPB Limited

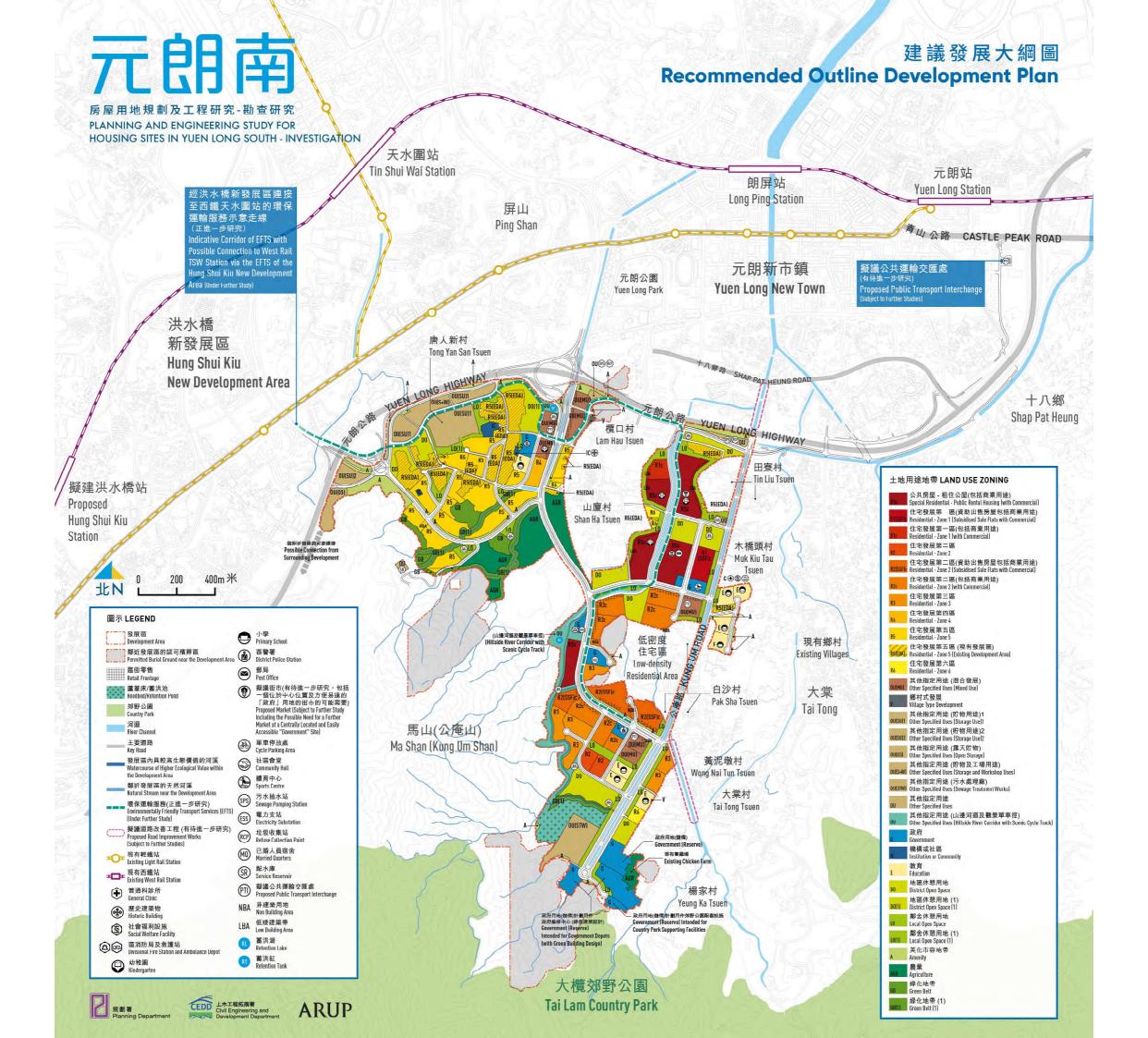
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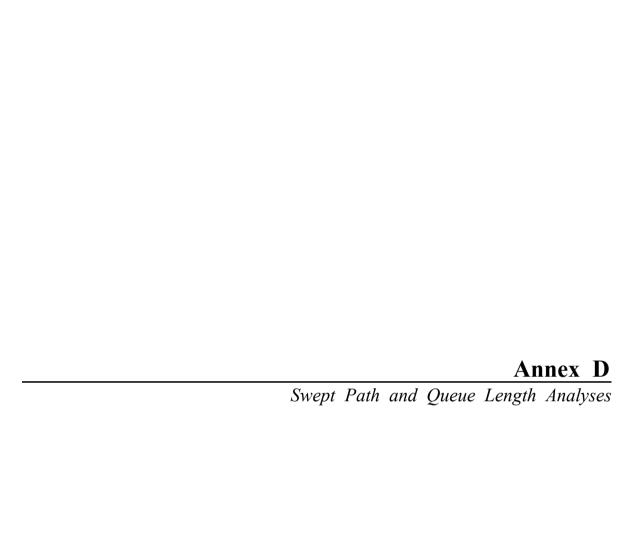
Deputy Executive Director

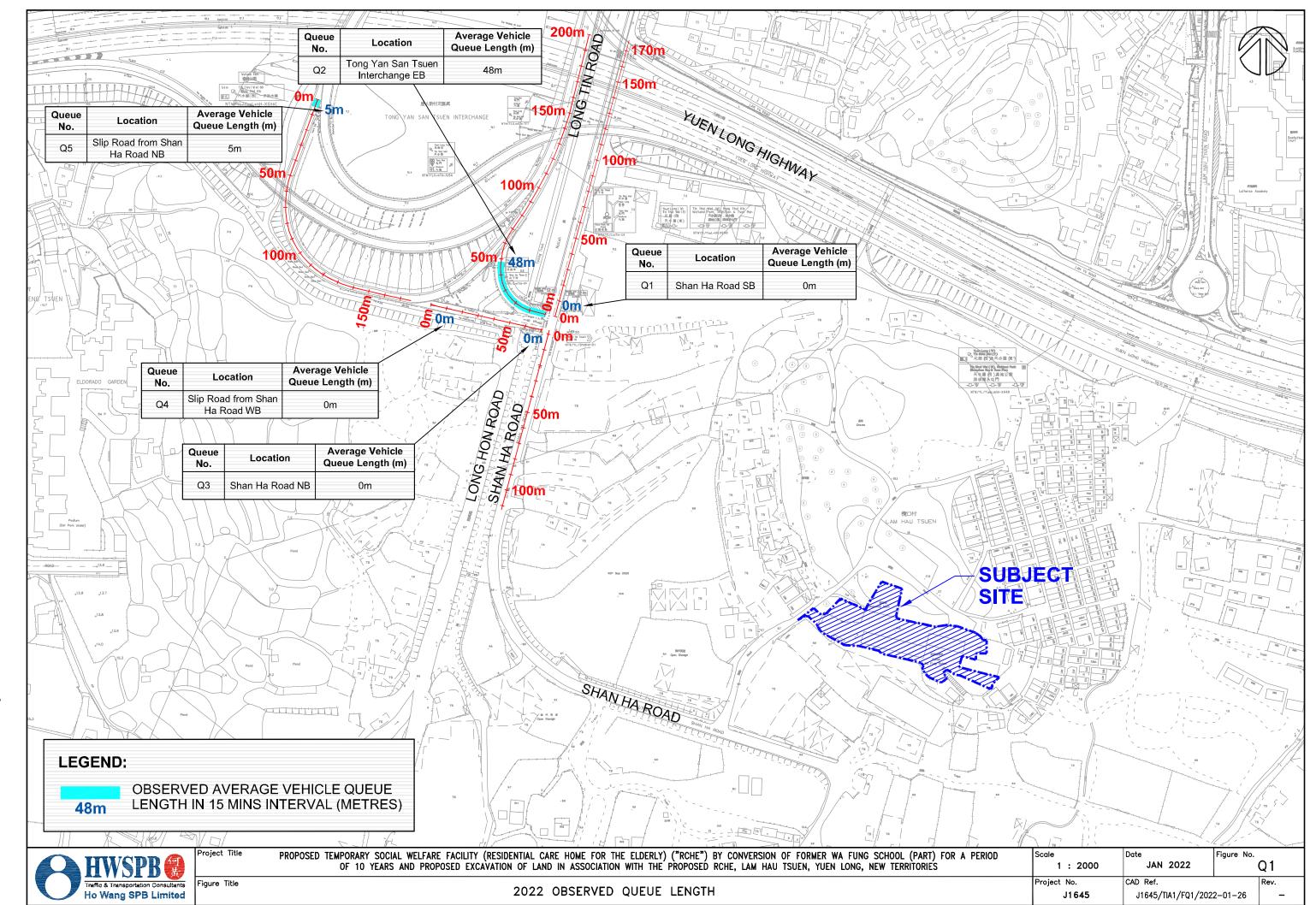
JW/TL/TA/SL/my Encl.

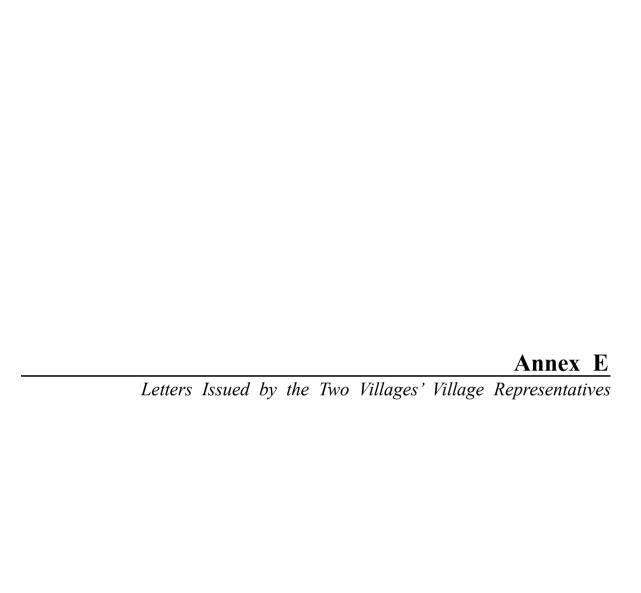
APPENDIX C

CEDD's Improvement Proposal of Tong Yan San Tsuen Interchange









致 城市規劃委員會秘書:

新界元朗欖口村丈量約份第 120 的政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期 10 年)及挖土工程 (申讀編號: A/YL-TYST/1132) 支持意見

就有關上述規劃申請,本村提出支持意見如下:

- (一) 經本村村代表諮詢,本村大部份村民支持上述規劃申請。
- (二) 上述地段適合開辦護理安老院,因為村內環境較為幽靜,適 合長者安養生活。而且可以為元朗區內有需要的長者提供服 務,解決需求問題。
- (三) 申請者「榕光社」在本港開辦安老院知名度高,聲譽良好, 所以得到屏山鄉山廈村村代表及欖口村村代表的支持。
- (四)本村得悉規劃署收到個別人士對上述申請提出反對意見,理由是要求保留該幅土地以興建小型屋宇。但本村一眾村民均認為該幅土地更適合開辦安老院,而且相信地政總署難以審批興建小型屋宇。

現特函聯署向 貴委員會提出意見,請 貴委員會批准上述規劃申 請。有勞之處,不勝臧銘。

地址:新界元朗安寧路 139-147 號屏山鄉鄉事委員會

電話: 医器 (張錦福)

屏山鄉欖口村村民聯署支持:

滚点南	预熟度	
强力度	文档表.	珍惠州
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莫自弗	蕉貂尾	影 學 B
强 儒凌	蒙医思	张福泰
京杨松	3是淡色	
交送林		强地生
张峰 名	<u>0</u>	强烈益
逐年顺	38年5届	基 秋

地址: 新界元朗安寧路 139-147 號屏山鄉鄉事委員會

電話: 6178 8338 (張錦福)

2021年12月28日

屏山鄉欖口村村民聯署支持:

李槿芝	建	- 英緒
李福琴	化岭美	張崗包
陳麗利	蔡蘭图	stks
题差较	堂室相	旅葵菜
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陳佩芳		张峰培
复处之	李桂(宋	<u> </u>
序属室	孩子为	張梅暉
英宝旺	瑟春老	
立基络	盘脚复	
楊 范芬	悉叙绝	

地址: 新界元朗安寧路 139-147 號屏山鄉鄉事委員會

電話: (張錦福)

2021年12月28日

規劃申請編號: A/YL-TYST/1132

屏山鄉欖口村村民聯署支持:

後先色	張風手	張起王
3E133-3	養無寒	東是搜
凭家护	登佩表	張振韜
36 2616	省两步	恶 .
3626	延美巧	
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地址:新界元朗安寧路 139-147 號屏山鄉鄉事委員會

電話: (張錦福)

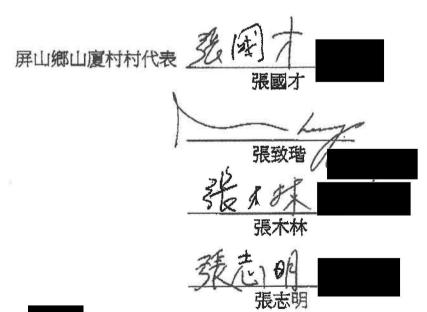
致 城市規劃委員會秘書:

新界元朗欖口村丈量約份第 120 的政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期 10 年)及挖土工程 (申請編號: A/YL-TYST/1132) 支持意見

就有關上述規劃申請,本村提出支持意見如下:

- (一) 經本村村代表諮詢,本村大部份村民支持上述規劃申請。
- (二) 上述地段適合開辦護理安老院,因為村內環境較為幽靜,適 合長者安養生活。而且可以為元朗區內有需要的長者提供服 務,解決需求問題。
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現特函聯署向 貴委員會提出意見,請 貴委員會批准上述規劃申 請。有勞之處,不勝歐銘。



地址:元朗屏山鄉山廈村

電話: (張國才)

新界元朗權口村丈量約份第 120 的政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期 10 年)及挖土工程 規劃申請編號: A/YL-TYST/1132

屏山鄉山廈村村民聯署支持:

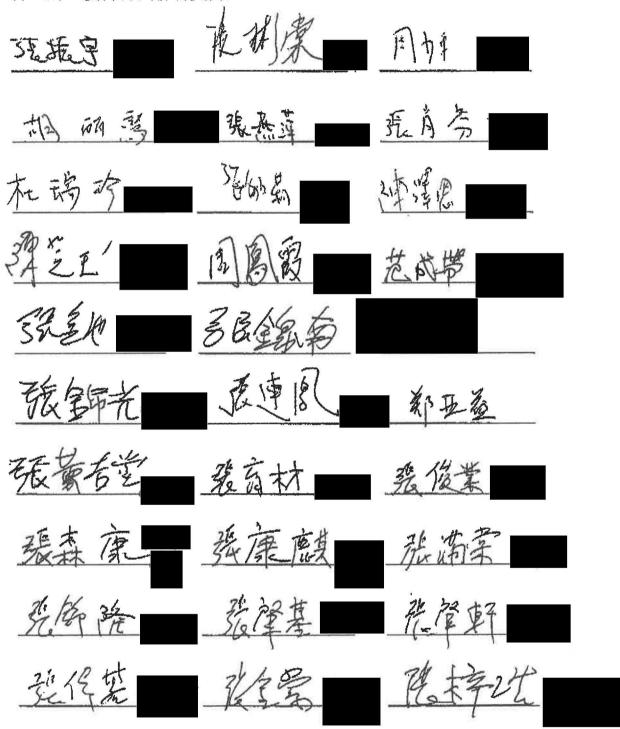
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地址:元朗屏山郷山厦村

電話: (張國才)

規劃申請編號: A/YL-TYST/1132

屏山鄉山厦村村民聯署支持:

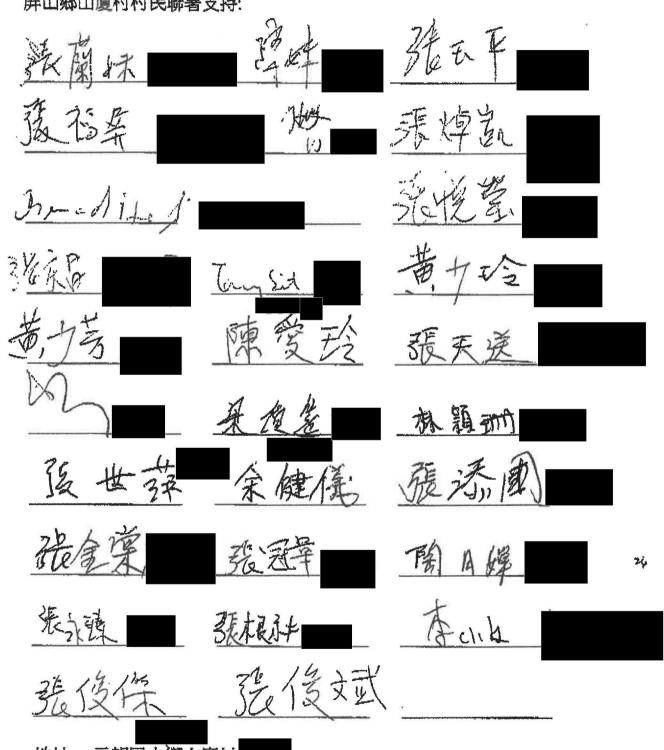


地址:元朗屏山鄉山廈村

電話: (張國才)

新界元朗欖口村丈量約份第120的政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期 10年)及挖土工程 規劃申請編號: A/YL-TYST/1132

屏山鄉山廈村村民聯署支持:



地址:元朗屏山鄉山廈村

電話: (張國才)

規劃申請編號:A/YL-TYST/1132

屏山鄉山廈村村民聯署支持:

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地址:元朗屏山鄉山廈村

電話: (張國才)

2021年12月29日

17

新界元朗欖口村丈量約份第120的政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期10年)及挖土工程 規劃申請編號: A/YL-TYST/1132

屏山鄉山廈村村民聯署支持:

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摄刷网		
强連旅		
張禧熟		
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地址:元朗屏山鄉山厦村

電話: (張國才)

新界元朗欖口村丈量約份第 120 的政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期 10 年)及挖土工程 規劃申請編號: A/YL-TYST/1132

屏山鄉山廈村村民聯署	学支持 :	1
造大林	藩士南	張達点
是公为度	猎水流	强弹贵
張煜敞	張偉琛	混致谐
张加泰		
聚鄉島		
强安南		
就成岛·		
赞昌东		
文艺长		
EAR (AM)		• •
\		

地址:元朗屏山鄉山廈村■

電話;

(張國才)

新界元朗欖口村丈量約份第 120 的政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期 10 年)及挖土工程 規劃申請編號: A/YL-TYST/1132

屏山鄉山廈村村民聯署支持:

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地址:元朗屏山鄉山廈村

電話: (張國才)



VISION PLANNING CONSULTANTS LTD. 弘域城市規劃顧問有限公司

Our Ref: YL-LH/PA/GCSE/21-15 Your Ref: TPB/A/YL-TYST/1132 Date: 22 April, 2022

By Email and Hand

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

Dear Sirs,

Proposed Temporary 'Social Welfare Facility' (Residential Care Home for the Elderly) ("RCHE") for a Period of 10 Years and Excavation of Land in Government Land in D.D. 120, Lam Hau Tsuen, Yuen Long, New Territories - Further Information

On behalf of the Applicant, we submit herewith for the consideration of the Town Planning Board ("TPB") a total of 8 copies of Responses-to-Comments ("R-to-C") Table, which incorporates replacement pages for the report of Environmental Assessment (Annex A) and a revised report of Traffic Impact Assessment (Annex B) to respond to comments raised by the Environmental Protection Department and the Transport Department on the captioned application.

Should you have any queries with regards to the above, please do not hesitate to contact our Mr. Wilson WONG or the undersigned at 2566 9988.

Thank you very much for your kind attention.

Yours faithfully.

for and on behalf of

Vision Planning Consultants Ltd.

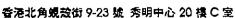
Kim On CHAN Managing Director

Encl. (KC/WW)

[YL-LH/PA/GCSE/21-15] [FI02]

Project Team

TMAVIW DPO (Attn.; Ms. Opholia WONG) By cmail By chait TOWN PLANKING BOARD



Unit C, 20/F, Seabright Plaza, 9-23 Shell Street, North Point, Hong Kong.

Tel: (852) 2566 9988 Fox: (852) 2566 9978

Email; vision@visionplanning.com.hk Website; www.visionplanning.com.hk



Planning Application No. A/YL-TYST/1132

Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) for a Period of 10 Years and Excavation of Land in Government Land in D.D. 120, Lam Hau Tsuen, Yuen Long, New Territories (Former Wa Fung School (Part))

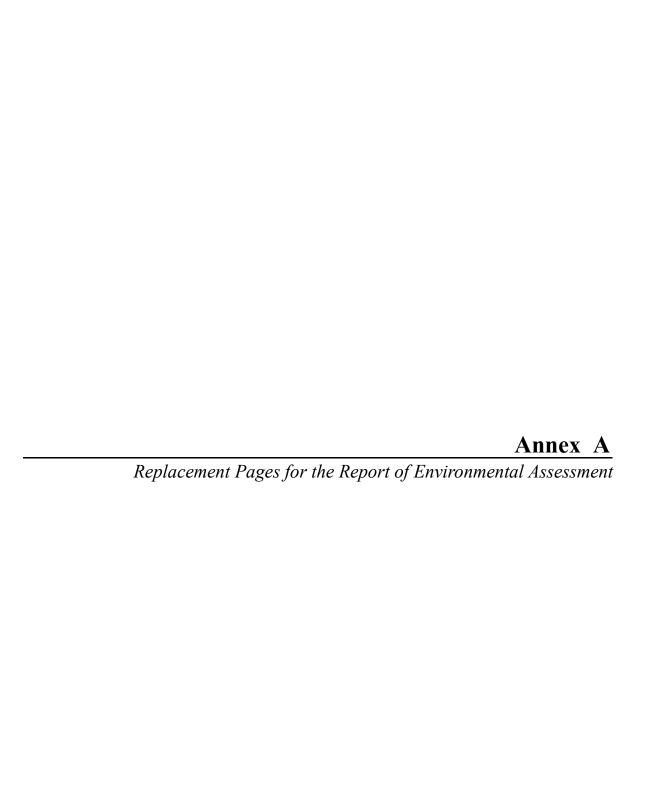
Response to Comments (RtC)

Issue: FI2 / Issue Date: 22/4/2022

No.	De	partmental Comments	Responses
J.	Co	om: Environmental Protection Department ontact: Mr. Chris TSIU l: 2835 2164	
J1.	Ai	r Quality	
J2.	1.	Table 3.1 Please note that the number of exceedances for 24-hr average FSP for government and non-government projects are 18 and 35 respectively. Please supplement in the table.	Noted and updated accordingly. See replacement pages at Annex A .
J3.	2.	Section 3.5.4 Please delete "distances" in 3 rd last line.	Noted and updated accordingly. See replacement pages at Annex A .
K.	Co	om: Transport Department ontact: Miss Grace FOK 1: 2399 2565	
K1.	1.	RtoC F2 and table 2.1: Instead of mixing up the parking provision of different usages, please present them separately;	Please note that the scale of development under application is small. All parking spaces will solely be for internal use. The anticipated visitor car park demand is very minimal as stated in our response to comment 5(b) from TD (see K5).
K2.	2.	RtoC F3 and para. 6.1.1: It is noted that RCHE usually provides light bus services for the elderly to travel to/from the Hospital for health care, group visit, outdoor travel activity for the elderly, etc. (similar to the reference case "Hong Shui Garden of Aged Company Ltd. you have quoted). Clarify if the vehicles mentioned in para. 6.1.1 would be for these purposes and advise the parking provision for these vehicles, including size and nos.;	Light bus service will be provided for scheduled point-to-point pick-up/drop-off for staffs and ad-hoc residents' travelling to/from nearby hospital(s)/clinic(s). No group visit or outdoor travel activity have been planned at this moment. No outside vehicle will be permitted to park at the RCHE and therefore no parking space will be provided for vehicles.
K3.	3.	RtoC F4:	
K4.		a. The figures should show the road marking at Shan Ha Road;	Noted. Figures in the revised report of Traffic Impact Assessment at Annex B are updated with road marking at Shan Ha Road.

No.	Dej	partmental Comments	Responses	
K5.		b. Pls provide written statement from Fire Services Department that only Light Fire Appliance would be used for the proposed development;	We note that FSD has no objection in principle to the proposed RCHE provided that the fire service installations and water supplies for firefighting being provided to the satisfaction of the Director of Fire Services and that the height restriction as stipulated in S.20 of Residential Care Homes (Elderly Persons) Regulation, Cap. 459A is observed.	
			In this regard, the Applicant has proposed fire safety installations in accordance to the Codes of Practice for Minimum Fire Service Installations and has included an alternative arrangement comprising enhanced fire safety provisions to compensate for deficiency / non-provision of emergency vehicular access ("EVA") subject to comment from BD and FSD at future general building plan ("GBP") submission (see page 6 of A_YL-TYST_1132_Others_4.pdf - Appendix X - Preliminary Study of M&E Services Supply).	
			Approval of the detailed fire service / emergency vehicular access arrangement will be sought from relevant Government Bureaus / Departments at subsequent stages, including, but not limited to, the Buildings Department and the Fire Services Department at General Building Plan approval stage and RCHE licensing stage.	
			To reiterate, the RCHE will comply with the licensing requirements stipulated in the Residential Care Homes (Elderly Persons) Ordinance, Cap. 459, its subsidiary legislation and the latest version of the Code of Practice for Residential Care Home (Elderly Persons).	
K6.		c. Pls provide swept path of refuse collection vehicle. Reference should be made to APP-35 issued by BD;	A private refuse collection service with a smaller size of RCV (≤7m long) will be deployed to serve the proposed development.	
K7.		d. Pls provide the dimensions of the proposed run-in/out at Shan Ha Road;	The existing run-in/out at Shan Ha Road is 8.5m wide.	
K8.		e. Pls provide site measurement record of the proposed run-in/out at Shan Ha Road;	Noted. Please refer to the Appendix D of the revised TIA (Annex B) for the topographic survey record including Shan Ha Road.	
К9.	4.	RtoC F5 and F6: Since Lam Yu Road, road section of Shan Ha Road between Town Park Road South and Long Hon Road/Shan Ha Road junction and Town Park Road South are the major egress/ingress routes connecting the proposed developments and the Town Centre, please include them into the AOI;	Noted. The updated AOI has been included Shan Ha Road/Town Park Road South junction (J7), Shan Ha Road/Lam Yu Road junction (J8) and Slip Road from Shan Ha Road/Long Hon Road junction (J9) accordingly. Please refer the revised Figure 3.1, Table 3.2 and 5.2 for details.	
K10.	5.	RtoC F7:		
K11.		a. While you assumed that 100% visitors would be travelled by GMB, you also assumed that visitors with wheelchairs would travel using taxi services. These are contradicting. Please clarify;	It is assumed that 100% visitors would be travelled by GMB for conservative public transport service assessment.	

No.	Departmental Comments	Responses
K12.	b. Please clarify why you assumed no visitor would drive to the proposed development;	The prime objective of this RCHE aims to provide residential care timely for those solitary elderlies in the community. The residents of this RCHE are solitary (i.e. living alone or lacking family support, and vulnerable) and mostly living in nearby neighbourhood (i.e. Shan Ha Tsuen and Lam Hau Tsuen), and there will be no parking space for any outside vehicle(s), therefore it is assumed that no visitors would drive to the proposed development.
K13.	6. RtoC F8, F10, F12, para. 3.3: It is noted that the peak traffic operation hours of RCHE usually happens in weekend. As such, please assess the weekend traffic. If you encounter difficulty in carrying the traffic survey again during the pandemic, please consider to adopt appropriate factor to work out the weekend traffic. Please note that this approach could only be adopted when the site traffic was abnormal;	Census (ATC) Station No. 5025 have been reviewed accordingly. [Yuen Long
K14.	7. RtoC F12: Please clarify why the dead width was 0.5m instead of 1m;	Noted. The dead width should read as 1m. Please refer to the revised Table 3.3 and 5.4.
K15.	8. Para. 1.1.4: Please state clearly the purpose of this paragraph. Otherwise, please delete it;	
K16.	9. The content of the RtoC should be included in the main text of the TTIA report;	Noted. The content of the RtoC has been included in the main text of the TIA report. Please refer to the additional sections 2.3.3 and 3.7.
K17.	10. Para. 7.1.1: Please replace the word approx. to maximum;	Noted. The word in Para. 7.1.1 has been amended accordingly.



Pollutant	Averaging Time	AQO concentration (μg/m³)	Allowable exceedances
Fine Suspended Particulates (FSP or PM _{2.5})	Annual	25	Not Applicable
Nitrogen Dioxide (NO ₂)	1 hour	200	18
	Annual	40	Not Applicable
Ozone (O ₃)	8 hours	160	9
Carbon Monoxide (CO)	1 hour	30,000	0
	8 hours	10,000	0
Lead	Annual	0.5	Not Applicable
Total Suspended Particulates (TSP)*	1 hour	500	-

Note

Air Pollution Control (Construction Dust) Regulation

The Air Pollution Control (Construction Dust) Regulation enacted under the APCO defines notifiable and regulatory works activities that are subject to construction dust control, as listed below:

Notifiable Works:

- Demolition of a building
- Work carried out in any part of a tunnel that is within 100 m of any exit to the open air
- Construction of the foundation of a building
- Construction of the superstructure of a building
- Road construction work

Regulatory Works:

- Renovation carried out on the outer surface of the external wall or the upper surface of the roof of a building
- Road opening or resurfacing work
- Slope stabilisation work
- Any work involving any of the following activities:
 - Stockpiling of dusty materials
 - · Loading, unloading or transfer of dusty materials
 - Transfer of dusty materials using a belt conveyor system
- Use of vehicles
- Pneumatic or power-driven drilling, cutting and polishing
- Debris handling
- Excavation or earth moving
- Concrete production
- Site clearance
- Blasting

Notifiable works require that advance notice of activities shall be given to EPD. The Air Pollution Control (Construction Dust) Regulation also requires the works contractor to ensure that both notifiable works and regulatory works are conducted in accordance with the Schedule of the Regulation, which provides dust control and suppression measures.

Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation

^{*:} Criterion specified under EIAO-TM, not an AQO

^{^:} The number of exceedances for 24-hr average FSP for government and non-government projects are 18 and 35 Respectively.

access roads at southwest and northeast are assumed as Local Distributor (LD) under a conservative approach for this project.

- 3.5.4 Yuen Long Highway is located about 200m away from the proposed temporary RCHE. The minimum buffer distances as stipulated in HKPSG, which are >5m (for active and passive recreation uses) or <5m (for passive recreational uses), have been adopted in the assessment for Shan Ha Road and local access roads. The separation distances between Yuen Long Highway/ Shan Ha Road/ local access roads and the proposed temporary RCHE are shown in **Figure 3.2**. As there is no air sensitive use of the proposed temporary RCHE will be located within the buffer zone, the proposed temporary RCHE fully complies with the relevant buffer distance requirements recommended in HKPSG. Therefore, adverse air quality impact due to vehicular emission on the proposed temporary RCHE is not anticipated.
- 3.5.5 Due to the small-scale of the proposed temporary RCHE, additional traffic introduced by the proposed temporary RCHE is expected to be insignificant. Therefore, additional vehicular emission impact induced from the proposed temporary RCHE to the ASRs in the vicinity is not anticipated.

Industrial Emission

3.5.6 Site visit was conducted on 30 July 2021. No industrial chimney was identified within 500m radius of the Study Area. Therefore, adverse air quality impact due to industrial emission on the proposed temporary RCHE is not anticipated.

Odour Emission

3.5.7 As no existing public sewerage system is located in the vicinity of the Site, two options of sewerage arrangement have been proposed in the separate Sewerage Impact Assessment (SIA). The odour emission sources of the proposed temporary RCHE are listed below:

A. Sewage Treatment

• On-site sewage treatment plant (STP)

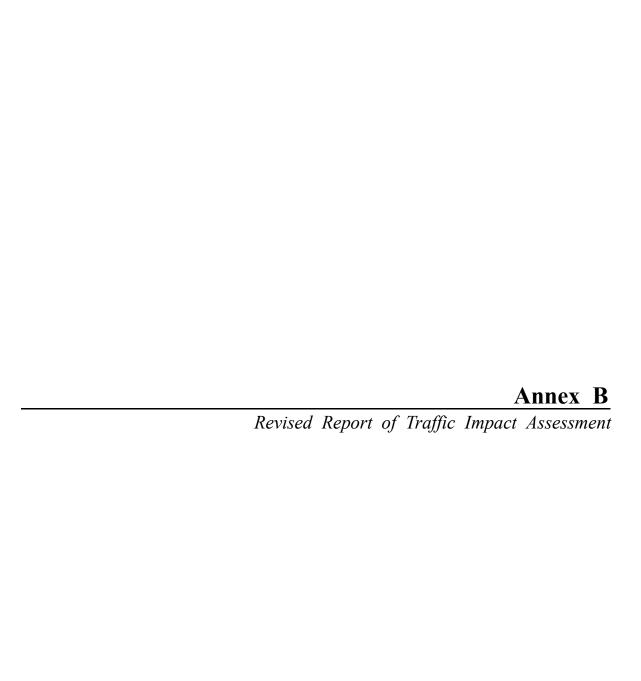
An on-site sewage treatment plant (STP) is proposed within the proposed temporary RCHE (see **Appendix 2.1**). The potential odour nuisance to the nearby ASRs (including proposed eldering home) would result. Nonetheless, the "Guidelines for the Design of Small Sewage Treatment Plants" published by EPD will be followed to minimize the odour impacts from the on-site sewage treatment plant. In addition, the odour mitigation measures (e.g. enclosing the STP facilities with negative pressure, forced ventilation system fitted with deodourization (DO) unit will be adopted in order to protect the ASRs. The ventilation exhaust of STP is proposed directing to the south of the proposed temporary RCHE which is away from the surrounding ASRs. Hence, the potential odour nuisance to the ASRs is anticipated to be minimal; or

Deliver the sewage off-Site by tanker

Sewage generated from the proposed temporary RCHE will be stored in a storage tank within the Site. The stored sewage will be delivered off site by tanker daily. A sewage storage tank with storage volume of about 105m³ (i.e. 35m³ for storage of sewage for daily removal plus about 70m³ for emergency storage of 2 days) will be provided.

Level sensors connected with alarm signalizing system will also be installed to monitor the storage volume of sewage storage tank to avoid overflow of effluent. A warning signal will be generated automatically to alert the manager when the flow in the tank reached a pre-set level, allowing sufficient time for arranging tanker service to tank away excessive treated effluent.

In addition, the storage tank will be equipped with deodourization (DO) unit. The ventilation exhaust of the tanker is proposed directing to the south of the proposed temporary RCHE which





Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly)
("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and
Proposed Excavation of Land in Association with the Proposed RCHE,

Lam Hau Tsuen, Yuen Long, New Territories

Traffic Impact Assessment Report

April 2022

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3.	EXISTING TRAFFIC CONDITIONS
4.	FUTURE TRAFFIC CONDITIONS
5.	TRAFFIC IMPACT ASSESSMENT
6.	SUMMARY AND CONCLUSIONS

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Figure 3.2	2022 Off-peak Traffic Flows
Figure 3.3	2022 Estimated Weekend Traffic Flows
Figure 3.4	2022 Observed Queue Length
Figure 4.1	2027 Reference Weekend Traffic Flows

Figure 5.1 2027 Design Weekend Traffic Flows

April 2022

APPENDICES

- Appendix A Junction Calculation Sheets
- Appendix B Confirmation from PlanD on the Planned Development via email dated 31 January 2022
- Appendix C CEDD's Improvement Proposal of Tong Yan San Tsuen Interchange
- Appendix D Topographic Survey Record

1. INTRODUCTION

1.1 Background

- 1.1.1 The Applicant intends to convert the Former Wa Fung School (part) into a temporary Residential Care Home for the Elderly (RCHE) with around 100 beds for a period of 10 years. The Former Wa Fung School is located at Lam Hau Tsuen, Yuen Long.
- 1.1.2 The location of the subject site is shown in **Figure 1.1**.
- 1.1.3 Ho Wang SPB Ltd. (hereinafter as "HWSPB") is commissioned as the traffic consultant on behalf of the Applicant to conduct a traffic impact assessment (TIA) study to support this planning application.

1.2 Study Objectives

- 1.2.1 The objectives of this TIA study are listed below with a view to reviewing the traffic and transport engineering feasibility for the proposed temporary RCHE development:
 - (a) Review and recommend on the car park and loading/unloading provisions for the development site;
 - (b) Review the internal traffic arrangements and the development access for the development site;
 - (c) Conduct vehicle traffic survey to record existing traffic conditions during AM and PM peak periods within the study area;
 - (d) Review the existing traffic condition and transport facilities in the vicinity of the development site;
 - (e) Estimate the development traffic generation and attraction; and traffic forecast based on the latest available 2016-Based TPEDM from the Planning Department's website and Annual Traffic Census (ATC) from the Transport Department; and
 - (f) Assess the likely traffic impacts generated by the proposed redevelopment site upon completion within the study area; and develop traffic improvement schemes to mitigate any adverse impact; if necessary.

1.3 Structure of the Report

- 1.3.1 Following this introductory chapter describes the background and study objective, this TIA report focuses on the presentation and elaboration of the following key areas:
 - Chapter 2 describes the proposed development schedule, vehicular access arrangements and the proposed internal transport facilities provisions;
 - Chapter 3 describes the baseline traffic surveys and the existing 2021 traffic conditions and junction performance in the vicinity;
 - Chapter 4 describes the traffic forecast methodology and future traffic conditions;
 - Chapter 5 presents the traffic assessment results for the reference and design scenarios, and to propose improvement measures to mitigate adverse traffic impact, if necessary; and
 - Chapter 6 summarizes and concludes the TIA study findings.

2. PROPOSED REDEVELOPMENT

2.1 Proposed Development Parameters

2.1.1 The proposed RCHE will provide about 100 beds and is tentatively in operation by 2024.

2.2 Proposed Internal Parking Provisions

- 2.2.1 There are no specific guidelines on internal parking provision in accordance with HKPSG for the proposed RCHE.
- 2.2.2 The proposed car parking and loading/unloading provisions for this proposed development are summarised in **Table 2.1**.

Table 2.1 Proposed Parking and Loading/Unloading Facilities Provisions for Development

Parking Spaces and Loading/Unloading Bays	Proposed
Car Parking Space (5m x 2.5m)	3
Loading/Unloading Bay for LGV (7m x 3.5m)	2

2.2.3 The above car parking and loading / unloading provisions are considered adequate to meet the end-user's requirements and operation needs.

2.3 Site Access Arrangement

- 2.3.1 The proposed vehicular access to the proposed RCHE is located at the west of the site which connects to a local access road adjoins Shan Ha Road with a 8.5m wide run-in/out. The site topographic survey record is enclosed in **Appendix D**.
- 2.3.2 Detailed swept path analysis shown in **Figure 2.1** demonstrated that there are no manoeuvre problems for the design vehicle (i.e. 7m LGV) manoeuvre from the local access road into our site.
- 2.3.3 Detailed swept path analysis shown in **Figure 2.2 and 2.3** also demonstrated that there are adequate manoeuvring spaces for emergency vehicles (i.e. 7m long Light Fire Appliance) to/from the proposed development site via Shan Ha Road.

3. EXISTING TRAFFIC CONDITIONS

3.1 Existing Road Networks

- 3.1.1 The local access road connecting the subject site and Shan Ha Road is an unnamed access road with width varied from 3m to 6m.
- 3.1.2 Shan Ha Road is a 2-way carriageway connecting Tong Yan San Tsuen Interchange which joining many district and local roads, includes Yuen Long Highway, Long Tin Road, Castle Peak Road, Shan Ha Road, Lam Yu Road, Town Park Road North, Yuen Long Tai Yuk Road and Ma Tong Road.
- 3.1.3 The Area of Influence (AOI) covers the 9 key junctions in the vicinity of the site as shown in **Figure 3.1**.

3.2 Public Transport Facilities

- 3.2.1 There is a GMB (Route No. 604) servicing within the 500m radius catchment area of this site.
- 3.2.2 Visitors and staff can commute to/from the site via this GMB service between Yuen Long Town Centre and Shan Ha Tsuen.

3.3 Baseline Traffic Surveys

Vehicular Survey

- 3.3.1 In consideration of the proposed site as a temporary RCHE development, the majority of the development traffic induced by the development are visiting trips which are normally generated/attracted during the visiting hours [i.e. off-peak hours (10:00-15:00)].
- 3.3.2 In order to assess the existing traffic conditions, vehicular count survey was carried out on 12 January 2022 (under normal school traffic condition without zoom classes and without work from home arrangement) during the off-peak period (10:00-15:00).
- 3.3.3 The worst off-peak hour of the existing local road network is identified as 12:45-13:45 hour.
- 3.3.4 The observed traffic flows for the 9 concerned junctions in 2022 during the worst weekday off-peak hour are presented in **Figure 3.2**.

3.3.5 It is noted that the peak traffic operation hours of RCHE usually happens in weekend. However, due to the pandemic in 2022, there is difficulty in carrying the traffic survey again. As such, the off-peak period traffic flows is reviewed based on the daily variation pattern in Annual Traffic Census (ATC) Station No. 5025 [Yuen Long Highway (from Tin Shui Wai West Int to Lam Tei Int)]. The daily variation shows that the traffic flows on Saturday is 15% higher than the traffic flows on weekdays. The estimated traffic flows during the weekend for the 9 concerned junctions in 2022 are presented in **Figure 3.3**.

Pedestrian Survey

3.3.6 A pedestrian count survey has been conducted on 11 January 2022 (<u>under normal school traffic condition without zoom classes and without work from home arrangement</u>) during the off-peak period (10:00-15:00). The observed pedestrian flows are summarized in **Table 3.1**.

Table 3.1 2022 Surveyed Pedestrian Flows

Location	2-way Peak 15 mins Pedestrian Flows (ped/15 mins) Off-Peak
Site Access Road Footpath	6

GMB Utilization Survey

3.3.7 A GMB utilization survey on GMB No. 604 has been conducted on 11 January 2022 (<u>under normal school traffic condition without zoom classes and without work from home arrangement</u>) during the off-peak period (10:00-15:00).

Traffic Queue Survey

3.3.8 A traffic queue survey has been conducted on 13 January 2022 (<u>under normal school traffic condition without zoom classes and without work from home arrangement</u>) during the off-peak period (10:00-15:00).

3.4 Existing Junction Performance

3.4.1 Based on the 2022 surveyed traffic flows, the junction capacity analysis for the 9 concerned junctions during the weekend peak period has been assessed. The results of the junction capacity analysis are summarized in **Table 3.2**.

Table 3.2 2022 Existing Junction Performance During the Weekend Peak Period

	Junction Location	Junction Type	Weekend Peak
J1	Unnamed Access Road / Shan Ha Road	Priority (DFC)	0.04
J2	Shan Ha Road / Tong Yan San Tsuen Interchange	Priority (DFC)	1.06
J 3	Slip Road from Long Tin Road Southbound / Slip Road from Shan Ha Road	Priority (DFC)	0.62
J 4	Slip Road Leading to Long Tin Road Northbound / Slip Road from Shan Ha Road	Priority (DFC)	1.18
J5)	Castle Peak Road - Ping Shan / Ma Wang Road / Long Tin Road	Signal (RC)	(104%)
<u>J6</u>	Shui Pin Wai Interchange	Signal (RC)	38%
J 7	Shan Ha Road / Town Park Road South	Priority (DFC)	0.77
J 8	Shan Ha Road / Lam Yu Road	Priority (DFC)	0.55
J 9	Slip Road from Shan Ha Road / Long Hon Road	Priority (DFC)	0.46

3.4.2 The results of the junction performance enclosed in **Appendix A** have concluded that all the 9 concerned junctions are having adequate junction capacity during weekend peak periods except J2 and J4 which will operate with marginal junction capacity.

3.5 Existing Footpath Performance

- 3.5.1 According to TPDM Volume 6 Chapter 10.4 Section 10.4.2, The Level of Service (LOS) is defined varied from A to F, with the best LOS 'A' and the worst LOS 'F'. The LOS 'C' is considered acceptable and LOS 'D' is barely acceptable with considerably likely occurrence of friction and interactions between pedestrians. LOS 'E' and 'F' are simply unacceptable.
- 3.5.2 The pedestrian flows for the concerned footpath during the off-peak hour period have been assessed and the performance are summarized in **Table 3.3**.

 Table 3.3
 2022 Existing Footpath Capacity Assessment

	2022 Existing			
Location	Off-Peak Flow	Flow Rate	LOS	
	(ped/15mins)	(ped/min/m)	LOS	
Site Access Road Footpath	6	0.8	A	

Note: The clear footpath width = 1.5m actual width -1.0m dead width = 0.5m.

3.5.3 The analysis results show that the pedestrian footpath is operating with ample capacity [LOS A] in the off-peak period.

3.6 Existing GMB Performance

3.6.1 The demand and occupancy for the GMB No. 604 during the off-peak hour periods have been assessed and the results are summarized in **Table 3.4**.

Table 3.4 2022 Existing GMB No. 604 Assessment

	Yuen Lo	ong Station B	ound	
Hour	Frequency	Capacity	Demand	Occupancy
11001	(veh/hr)	(pax/hr)	(pax/hr)	%
10:00-11:00	6	198	49	25%
11:00-12:00	4	134	30	22%
12:00-13:00	6	185	62	34%
13:00-14:00	3	86	62	72%
14:00-15:00	6	166	76	46%
	Shan l	Ha Tsuen Bou	ınd	
Hour	Frequency	Capacity	Demand	Occupancy
пош	(veh/hr)	(pax/hr)	(pax/hr)	%
10:00-11:00	6	166	40	24%
11:00-12:00	4	134	29	22%
12:00-13:00	7	220	70	32%
13:00-14:00	3	86	46	53%
14:00-15:00	6	220	88	40%

3.6.2 The survey results demonstrated that GMB No. 604 has adequate capacity currently.

3.7 Existing Queue Length Performance

3.7.1 The results of the queue length survey during the worst off-peak period (12:45-13:45) have are summarized in **Table 3.5** and presented in **Figure 3.4**.

Table 3.5 2022 Existing Queue Length Performance

			Average	Available
Junction	Queue	Location		Queuing
No.	No.	Location	Length	Length
			(m)	(m)
	Q1	Shan Ha Road SB	0	170
J2	Q2	Tong Yan San Tsuen Interchange EB	48	60
	Q3	Shan Ha Road NB	0	>300
J3	Q4	Slip Road from Shan Ha Road WB	0	70
J4	Q5	Slip Road from Shan Ha Road NB	5	170

3.7.2 The observed queue length analysis has demonstrated that there is adequate queuing space at the above road sections to accommodate the existing traffic queue under the existing traffic condition with no queuing problem.

4. FUTURE TRAFFIC CONDITIONS

4.1 Traffic Forecast Approach

- 4.1.1 This temporary RCHE is anticipated to be commenced in 2024. A design year is adopted 3 years after the commencement (i.e. 2027) to assess the impact of the development related traffic on the local road network.
- 4.1.2 The traffic forecast has been conducted based on the following data:
 - Historical trend data from the Annual Traffic Census (ATC) by Transport Department
 - 2016-based Territorial Population and Employment Data Matrix (TPEDM) planning data by Planning Department's Website
- 4.1.3 The historical traffic data of the surrounding road links are based on the Annual Average Daily Traffic (AADT) extracted from the "Annual Traffic Census" report issued by Transport Department. The relevant AADT data from 2016 to 2020 are summarized in **Table 4.1**.

Table 4.1 AADT at Counting Stations Extracted from Annual Traffic Census – 2016 to 2020

Stn No.	Road	From	То	2016	2017	20	18	2019	2020
5236	Castle Peak Rd - Ping Shan	Yuen Long Tai Yuk Rd	Ma Wang Rd	19,560	19,250	19,	070	20,510	19,660
6049	Castle Peak Rd - Ping Shan	Ping Ha Rd	Ma Wang Rd	27,500	24,910	21,	090	21,930	20,880
	All Stations Total		47,060	44,160	40,	160	42,440	40,540	
	Average Growth Rate (% p. a.)			-6.16%	-9.0	6%	5.0	68%	-4.48%
Overall Growth Rate (% p. a.) from 2016 to 2020				-3.5	50%				

4.1.4 The population and employment data of the Planning Data District are extracted from the 2016-based TPEDM issued by Planning Department's website. The relevant growth rates from 2016 to 2026 are summarized in **Table 4.2**.

 Table 4.2
 Population and Employment Forecast (TPEDM)

Planning Data District Data : Yuen Long						
Average Annual Growth	2016-2021	2021-2026				
Rate of Total Population and Employment (%)	+1.13%	+0.48%				

4.1.5 The annual growth rates obtained from ATC and TPEDM from 2016 to 2026 are summarized in **Table 4.3**.

Table 4.3 Summary of Annual Growth Rates obtained from ATC and TPEDM from 2016 to 2026

	Annual Growth Rate					
	2016-2020	2016-2020 2016-2021 2021-2026				
ATC	-3.50%					
TPEDM		+1.13%	+0.48%			

4.1.6 After reviewing the above AADT traffic data and future planning data forecast, it is considered to adopt an annual growth rate of +0.48% p.a. from 2022 to 2027 for the projection of the 2027 reference traffic flows for the traffic assessment.

4.2 Future Planned Developments

- 4.2.1 The traffic flows generated by adjacent potential developments in the vicinity have also been taken into account in the reference case scenario.
- 4.2.2 The planned developments in the vicinity are summarised in **Table 4.4.**
- 4.2.3 Planning Department's advice on the planned developments in the vicinity of the proposed development has been sought and Planning Department's confirmation via email dated 31/1/2022 is enclosed in **Appendix B**.

Table 4.4 Summary of Future Planned Developments in the Vicinity

Planned Development	Development Parameters	Estimated Population	Anticipated Intake Year
Yuen Long South Development	229,930m ² commercial GFA 484,110m ² industrial GFA	32,850 flats	First intake: 2028 Full intake: 2038
Hung Shui Kiu/Ha Tsuen New Development Area (HSK/HT NDA)	Area (HSK/HT Confinercial GFA		First intake: 2024 Full intake: 2037
Proposed Public Rental Housing Development at Ex-Long Bin Interim Housing	-	Phase 1: 3,080 flats Phase 2: 8,860 flats	Phase 1: 2024/2025 Phase 2: 2029/30-2030/31
Proposed Public Housing Development at Wang Chau Remaining Phases (WCRP)	-	13,000 flats	2033
Yuen Long Industrial Estate Extension	300,000m ² industrial GFA	-	2032/2033

- 4.2.4 The traffic generations of the above planned / committed developments will be taken into account in the reference case scenario traffic forecast for the TIA purpose.
- 4.2.5 The 2027 reference traffic flows are shown in **Figure 4.1**.

5. TRAFFIC IMPACT ASSESSMENT

5.1 Vehicular Generation and Attraction by the Proposed Development

5.1.1 The trip generations of this temporary RCHE development are estimated based on the trip rate of a reference similar project and are summarized in **Table 5.1**.

Table 5.1 Estimated Vehicular Trips upon Development

Proposed	AM Peak		PM Peak		
Development (100 beds)	Attraction	Generation	Attraction	Generation	
Adopted Trip Rate (1) (pcu/hr/beds)	0.0435	0.0435	0.0362	0.0362	
Estimated Vehicular Trips (pcu/hr)	4	4	4	4	

Note: (1) Adopted from in-house trip rate of reference project with similar facilities.

Reference Site		AM Peak		PM Peak	
		Att	Gen	Att	Gen
Hong Shui Garden of Aged	Traffic Generations (pcu/hr)	6	6	5	5
Company Limited, Tuen Mun (138 beds)	Vehicular Trip Rate (pcu/hr/beds)	0.435	0.0435	0.0362	0.0362

- 5.1.2 The proposed development will attract and generate 8 (i.e. 4+4) pcus in the AM peak hour and 8 (i.e. 4+4) pcus in the PM peak hour.
- 5.1.3 In view of the traffic condition in the vicinity of the site, management of the RCHE will control the development traffic within the off-peak hours (10:00-15:00) only to minimize the traffic impact onto the local road network.
- 5.1.4 As conservative assessment, the proposed development will be assumed to attract and generate 8 (4+4) pcus in the off-peak hours.
- 5.1.5 The 2027 design flows are shown in **Figures 5.1**.

5.2 Traffic Impact Assessments

Junction Capacity Performance

5.2.1 The assessments of the junction performance based on the 2027 reference and design scenarios are summarized in **Table 5.2**.

 Table 5.2
 Junction Capacity Assessment for Year 2027

Junction	Junction	Junction Type	2027 Reference	2027 Design
No	uncion	duiction Type	Weekend Peak	Weekend Peak
J1	Unnamed Access Road / Shan Ha Road	Priority (DFC)	0.04	0.05
J2	Shan Ha Road / Tong Yan San Tsuen Interchange	Priority (DFC)	1.09	1.10
J3)	Slip Road from Long Tin Road Southbound / Slip Road from Shan Ha Road	Priority (DFC)	0.64	0.64
(J4)	Slip Road Leading to Long Tin Road Northbound / Slip Road from Shan Ha Road	Priority (DFC)	(1.23)	(1.23)
J5)	Castle Peak Road - Ping Shan / Ma Wang Road / Long Tin Road	Signal (RC)	99%	99%
J6	Shui Pin Wai Interchange	Signal (RC)	35%	35%
J7	Shan Ha Road / Town Park Road South	Priority (DFC)	0.79	0.79
J8	Shan Ha Road / Lam Yu Road	Priority (DFC)	0.56	0.56
J 9	Slip Road from Shan Ha Road / Long Hon Road	Priority (DFC)	0.47	0.48

- 5.2.2 The results of the junction capacity analysis enclosed in **Appendix A** have indicated that all the 9 junctions will operate satisfactorily with adequate junction capacity in both 2027 reference and 2027 design scenarios except J2 and J4 with marginal capacity during the weekend peak period.
- 5.2.3 By 2027, J2 and J4 will operate with marginal junction capacity of 1.09 and 1.10 (Weekend) respectively under reference scenario (without development traffic). The results of the traffic assessment demonstrate that there will be minimal reduction in junction capacity for J2 and J4 compared with 2027 reference and design scenarios. This is mainly due to the background traffic growth but not the development traffic.
- 5.2.4 It is noted that CEDD has proposed junction improvement at the Tong Yan San Tsuen Interchange for the Yuen Long South (YLS) development. This junction improvement will be implemented before 2033 and will relieve the current traffic condition. The CEDD's improvement proposal is enclosed in **Appendix C**.

5.3 Pedestrian Generation and Attraction by the Proposed Development

5.3.1 The pedestrian trip generations of this temporary RCHE development are estimated based on the trip rate of a reference similar project and are summarized in **Table 5.3**.

 Table 5.3
 Estimated Pedestrian Trips upon Development

Proposed	AM	Peak	PM Peak		
Development (100 beds)	Attraction	Generation	Attraction	Generation	
Adopted Pedestrian Trip Rate ⁽¹⁾ (ped/hr/beds)	0.04	0.04	0.00	0.00	
Estimated Pedestrian Trips (ped/hr)	4	4	0	0	

Note: (1) Adopted from in-house trip rate of reference project with similar facilities.

Referen	AM Peak		PM Peak		
reference site		Att	Gen	Att	Gen
Yuen Yuen Home for the	Pedestrian Trips (ped/hr)	2	2	0	0
Aged (56 beds)	Pedestrian Trip Rate (ped/hr/beds)	0.04	0.04	0.00	0.00

- 5.3.2 The proposed development will attract and generate 8 (i.e. 4+4) ped in the AM peak hour and 0 (i.e. 0+0) ped in the PM peak hour.
- 5.3.3 The prime objective of this RCHE aims to provide residential care timely for those solitary elderlies in the community. The expected visitor for this RCHE is low. This proposed RCHE development will generate/attract 8 (4+4) pedestrian trips during the worst peak hour for conservative assessment.
- 5.4 Pedestrian Impact Assessment for Year 2027
- 5.4.1 The pedestrian assessment for the year 2027 is summarized in **Table 5.4**.

 Table 5.4
 2027 Footpath Capacity Analysis

	2027 Reference			2027 Design		
Location	Flow (ped/15 mins)	Flow Rate (ped/ min/m)	LOS	Flow (ped/15 mins)	Flow Rate (ped/ min/m)	LOS
Site Access Road Footpath ⁽¹⁾	6 ⁽²⁾	0.8	A	8	(1.07)	A

Note: (1) The clear footpath width = 1.5m actual width -1.0m dead width = 0.5m

(2) Adopted an annual growth rate of +0.48% p.a. from 2022 to 2027 for the projection of the 2027 reference pedestrian flow

5.4.2 The results of the pedestrian assessment demonstrated the concerned footpath will operate with adequate pedestrian capacity in design year 2027.

5.5 GMB Impact Assessment for Year 2027

5.5.1 It is assumed that 100% of visitors will be travelled by GMB. The anticipated GMB No. 604 occupancy in 2027 reference and design scenarios are summarized in **Table 5.5**.

Table 5.5 2027 GMB Occupancy Analysis

Peak Hour	2027 Reference			2027 Design		
(13:00-14:00)	Demand	Capacity	Occupancy	Demand	Capacity	Occupancy
	(pax/hr)	(pax/hr)	%	(pax/hr)	(pax/hr)	%
Yuen Long Station Bound	64 ⁽¹⁾	86	74%	68	86	79%
Shan Ha Tsuen Bound	47 ⁽¹⁾	86	55%	51	86	59%

Note: (1) Adopted an annual growth rate of +0.48% p.a. from 2022 to 2027 for the projection of the 2027 reference GMB demand

5.5.2 The results of the GMB occupancy analysis demonstrated the GMB No. 604 will operate with adequate capacity in design year 2027.

6. PROPOSED TRAFFIC MANAGEMENT IMPROVEMENT MEASURES

- 6.1.1 It is noted that the proposed RCHE will be a community-based operation by engaging local manpower in the area as its priority. Light bus service will be provided for scheduled point-to-point pick-up/drop-off for staffs and residents of this RCHE. It is therefore expected that most of the visitors and staff will commute to the RCHE by walking or public transport instead of private vehicle and taxi.
- 6.1.2 Traffic management measures are proposed to minimize the traffic impact at the nearby Tong Yan San Tsuen Interchange by regulating the visiting time for the visitors outside the AM/PM peak periods [i.e. 10:00-15:00 except emergency case]. This arrangement can eliminate traffic congestion during the peak hour period.

7. SUMMARY AND CONCLUSIONS

7.1 Summary

Proposed Development and Parking Provisions

- 7.1.1 The Applicant is proposed to develop a Residential Care Home for the Elderly (RCHE) with 100 beds (maximum).
- 7.1.2 There are no specific guidelines for parking provision in accordance with HKPSG for this kind of development. A total of 3 car parking spaces and 2 loading/unloading bays for LGV are proposed to satisfy the operation needs and requirement.

Existing Traffic Conditions

- 7.1.3 In consideration of the proposed site as a RCHE development, majority of the development traffic induced by the development are visiting trips which are generated and attracted during off-peak hours (i.e. 10:00-15:00).
- 7.1.4 The off-peak period traffic flows is reviewed based on the daily variation pattern in Annual Traffic Census (ATC) Station No. 5025 [Yuen Long Highway (from Tin Shui Wai West Int to Lam Tei Int)]. The daily variation shows that the traffic flows on Saturday is 15% higher than the traffic flows on weekdays.
- 7.1.5 The results of the junction capacities show that all the 9 concerned junctions are having adequate junction capacity during the weekend peak period except J2 and J4 with marginal junction capacity.

Future Traffic Conditions

- 7.1.6 It is anticipated that the site will be fully developed by 2024. A design year 2027 is adopted for the traffic assessment.
- 7.1.7 The 2027 traffic forecasts flows have been referred to the historical trend data from the ATC, the latest 2016-based TPEDM planning assumptions from PlanD's website and all planned and committed developments in the vicinity.

Traffic Impact Assessment

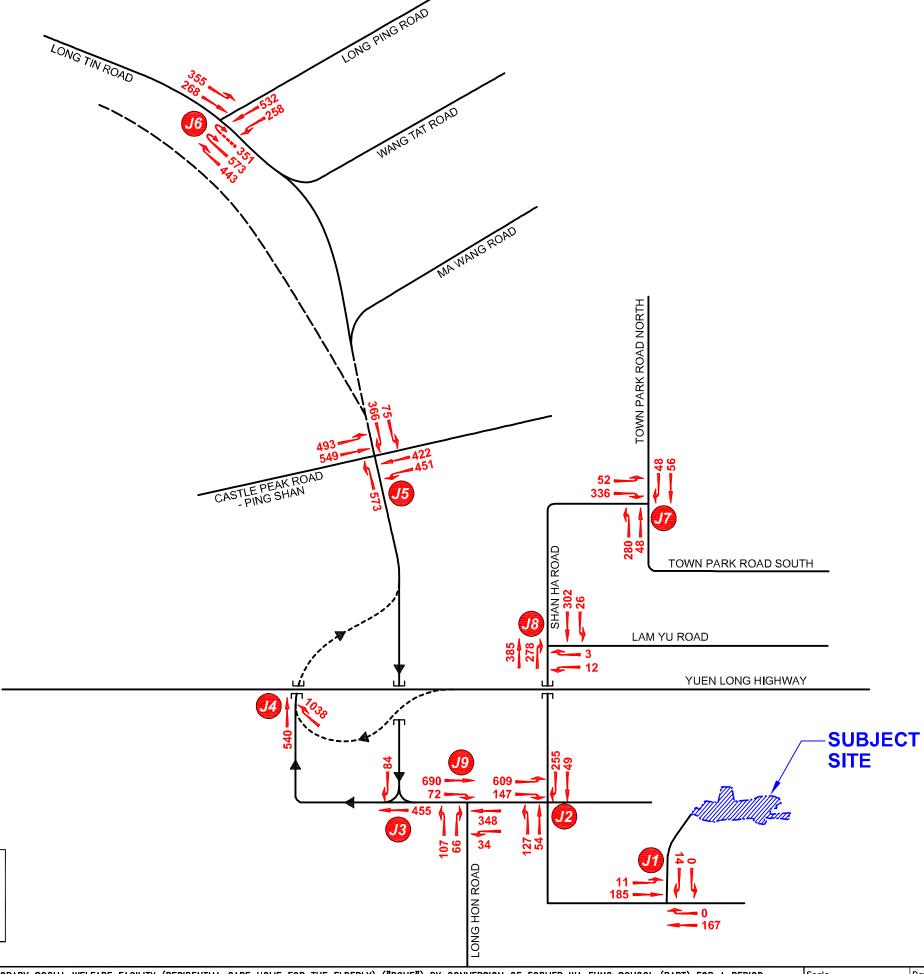
7.1.8 The proposed development will attract and generate 8 pcus in the off-peak hours as conservative assessment.

- 7.1.9 The results show that all the 9 junctions will operate satisfactorily with ample junction capacity in both 2027 reference and 2027 design scenarios during weekend peak period except J2 and J4 with marginal capacity. This is mainly due to the background traffic growth but not the development traffic.
- 7.1.10 It is noted that CEDD has proposed junction improvement at the Tong Yan San Tsuen Interchange for the Yuen Long South (YLS) development. This junction improvement will be implemented before 2033 and will relieve the current traffic condition.
- 7.1.11 Traffic management measures are proposed to minimize the traffic impact at the nearby Tong Yan San Tsuen Interchange by regulating the visiting time for the visitors (10:00-15:00). This arrangement can avoid traffic congestion during the AM/PM peak hour period.

7.2 Conclusion

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





LEGEND:

WORST OFF-PEAK (12:45 - 13:45) TRAFFIC FLOWS (PCU/HR)

HWSPB
Traffic & Transportation Consultants
Ho Wang SPB Limited

PROPOSED TEMPORARY SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) ("RCHE") BY CONVERSION OF FORMER WA FUNG SCHOOL (PART) FOR A PERIOD OF 10 YEARS AND PROPOSED EXCAVATION OF LAND IN ASSOCIATION WITH THE PROPOSED RCHE, LAM HAU TSUEN, YUEN LONG, NEW TERRITORIES

N. T. S.

OCT 2021 3.2

2022 OFF-PEAK TRAFFIC FLOWS

Project Title

Traffic & Transportation Consultants
Ho Wang SPB Limited

Project Title

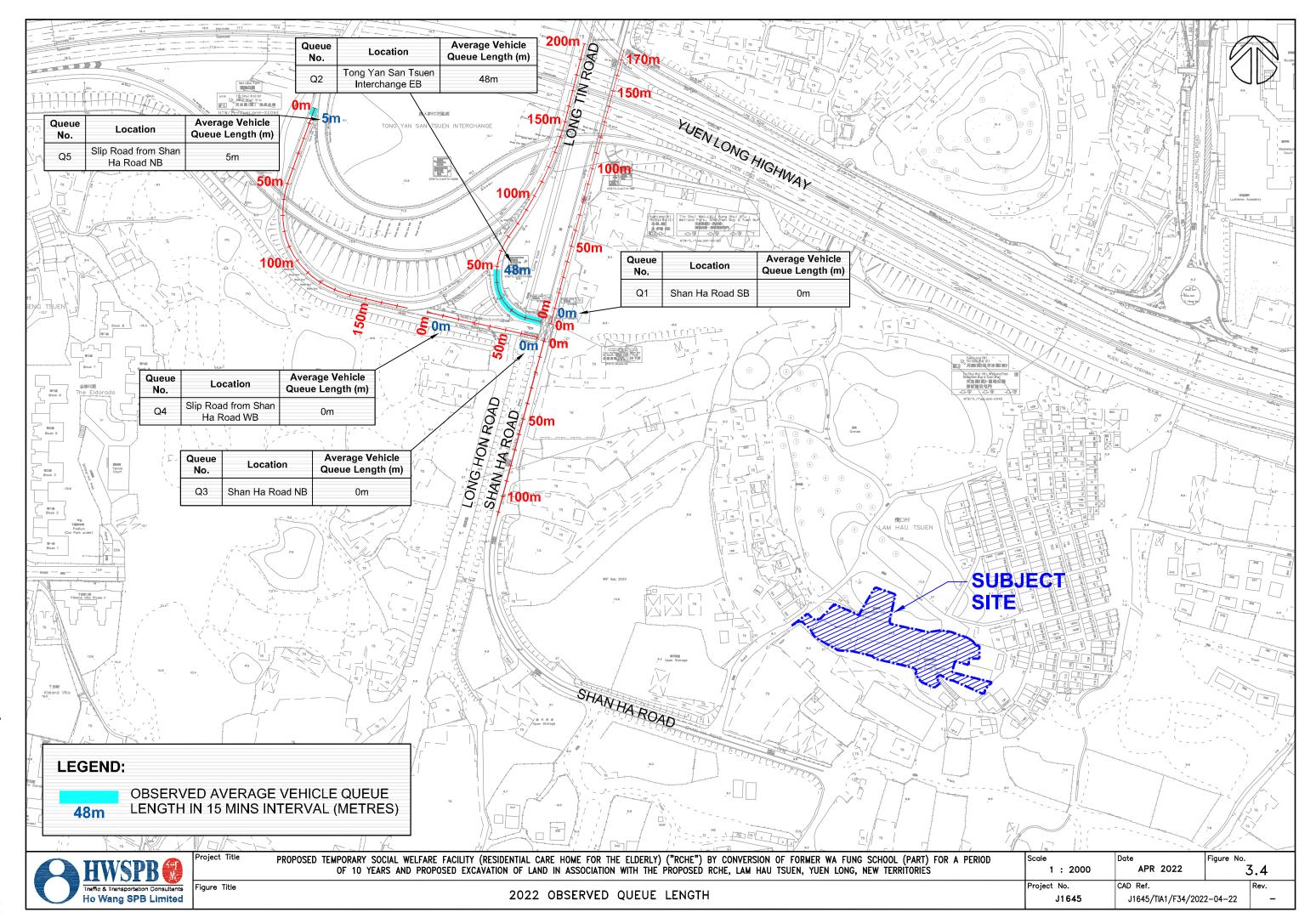
PROPOSED TEMPORARY SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) ("RCHE") BY CONVERSION OF FORMER WA FUNG SCHOOL (PART) FOR A PERIOD OF 10 YEARS AND PROPOSED EXCAVATION OF LAND IN ASSOCIATION WITH THE PROPOSED RCHE, LAM HAU TSUEN, YUEN LONG, NEW TERRITORIES

N. T. S. Project No. CAD Ref.

J1645

3.3 OCT 2021

2022 WEEKEND TRAFFIC FLOWS



Traffic & Transportation Consultants
Ho Wang SPB Limited

PROPOSED TEMPORARY SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) ("RCHE") BY CONVERSION OF FORMER WA FUNG SCHOOL (PART) FOR A PERIOD OF 10 YEARS AND PROPOSED EXCAVATION OF LAND IN ASSOCIATION WITH THE PROPOSED RCHE, LAM HAU TSUEN, YUEN LONG, NEW TERRITORIES Project Title

Figure No. OCT 2021

N. T. S. 4.1 Project No. CAD Ref.

Traffic & Transportation Consultants
Ho Wang SPB Limited

Project Title

PROPOSED TEMPORARY SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) ("RCHE") BY CONVERSION OF FORMER WA FUNG SCHOOL (PART) FOR A PERIOD OF 10 YEARS AND PROPOSED EXCAVATION OF LAND IN ASSOCIATION WITH THE PROPOSED RCHE, LAM HAU TSUEN, YUEN LONG, NEW TERRITORIES

N. T. S. OCT 2021

Project No. CAD Ref. J1645 J1645/TIA1/F51B/2022-04-20

5.1

APPENDIX A Junction Calculation Sheets

Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Unnamed Access Road / Shan Ha Road Ref. No.: J1 Weekend 2022 Weekend Scheme: Ref. No.: 2022 Job No.: J1645 Rev.: Year: ARM A: Shan Ha Road EB ARM B: Unnamed Access Road Shan Ha Road WB ARM C: Weekend Peal 193 Λ ARM C Weekend Pea 13 ARM A Weekend Pea 16 Minor ARM B GEOMETRY W 6.00 2.25 Major road width Lane widths w(b-a) 2.25 Central Reserve width Wcr 0.00 w(b-c) 2 Lane Minor Arm (Y/N) w(c-b) 3.00 Visibilities 30 D 0.74 Vr(b-a) Calculated VI(b-a) 25 Ε 0.80 30 F Vr(b-c) 0.86 30 Vr(c-b) 0.79 ANALYSIS Weekend Peak PEAK TRAFFIC FLOWS 193 q(c-a) q(c-b) 0 q(a-b) 13 214 q(a-c) q(b-a) 16 q(b-c) 0 0.00 f Factor CAPACITIES Q(b-a) 390 Q(b-c) 544 Q(c-b) 586 390 Q(b-ac) RFC's 0.041 b-a 0.000 b-c 0.000 c-b b-ac 0.041 Worst RFC 0.041 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))T.P.D.M.V.2.4 Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 Calculated by: Date: Apr-22 Checked by:

Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Shan Ha Road / Tong Yan San Tsuen Interchange Ref. No.: J2 Weekend 2022 Weekend Scheme: Ref. No.: 2022 Job No.: J1645 Rev. Year: ARM A: Shan Ha Road NB ARM B: Tong Tan San Tsuen Interchange Shan Ha Road SB ARM C: Weekend Pea 294 ARM C Weekend Pea 147 ARM A 703 170 Weekend Per Minor ARM B GEOMETRY W 7.00 6.00 Major road width Lane widths w(b-a) 0.00 Central Reserve width Wcr w(b-c) 6.00 2 Lane Minor Arm (Y/N) w(c-b) 3.50 Visibilities 150 D 1.33 Vr(b-a) Calculated VI(b-a) 250 Ε 1.25 F Vr(b-c) 150 0.91 0.76 Vr(c-b) 40 ANALYSIS Weekend Peak PEAK TRAFFIC FLOWS 57 q(c-a) q(c-b) 294 q(a-b) 147 62 q(a-c) 170 q(b-a) q(b-c) 703 f 0.81 Factor CAPACITIES Q(b-a) 622 Q(b-c) 893 Q(c-b) 629 823 Q(b-ac) RFC's 0.273 b-a 0.787 b-c c-b 0.467 b-ac 1.061 Worst RFC 1.061 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))T.P.D.M.V.2.4 Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 Calculated by: Date: Apr-22 Checked by:

Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Slip Road from Long Tin Road Southbound / Slip Road from Shan Ha Road Ref. No.: 2022 Weekend Scheme: Ref. No.: 2022 Job No.: J1645 Rev.: Year: ARM A: Slip Road from Long Tin Road Southbound Slip Road from Shan Ha Road ARM B: Weekend Pea ARM A 525 Weekend Per Minor ARM B GEOMETRY W 9.00 5.50 Major road width Lane widths w(b-a) Central Reserve width Wcr 0.00 w(b-c) 5.50 2 Lane Minor Arm (Y/N) w(c-b) 0.00 Visibilities 120 D 1.07 Vr(b-a) Calculated VI(b-a) 0 Ε 1.17 120 F Vr(b-c) 0.59 0.69 Vr(c-b) 0 ANALYSIS Weekend Peak PEAK TRAFFIC FLOWS 0 q(c-a) q(c-b) 0 q(a-b) 0 97 q(a-c) 0 q(b-a) q(b-c) 525 f 1.00 Factor CAPACITIES Q(b-a) 644 Q(b-c) 846 Q(c-b) 422 Q(b-ac) 846 RFC's 0.000 b-a 0.621 b-c 0.000 c-b b-ac 0.621 Worst RFC 0.621 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))T.P.D.M.V.2.4 Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 Calculated by: Date: Apr-22 Checked by:

Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Slip Road Leading to Long Tin Road Northbound / Slip Road from Shan Ha Road Ref. No.: 2022 Weekend Scheme: Ref. No.: 2022 Job No.: J1645 Rev.: Year: ARM A: Slip Road Leading to Long Tin Road Northbound Slip Road from Shan Ha Road ARM B: Weekend Pea 1198 ARM A 623 Weekend Per Minor ARM B GEOMETRY W 11.00 5.00 Major road width Lane widths w(b-a) Central Reserve width Wcr 0.00 w(b-c) 5.00 2 Lane Minor Arm (Y/N) w(c-b) 0.00 Visibilities 0 D 0.91 Vr(b-a) Calculated VI(b-a) 0 Ε 1.11 105 F Vr(b-c) 0.59 Vr(c-b) 0 0.62 ANALYSIS Weekend Peak PEAK TRAFFIC FLOWS 0 q(c-a) q(c-b) 0 q(a-b) 0 1198 q(a-c) q(b-a) 0 q(b-c) 623 f 1.00 Factor CAPACITIES Q(b-a) 326 Q(b-c) 527 Q(c-b) 278 Q(b-ac) 527 RFC's 0.000 b-a 1.182 b-c c-b 0.000 b-ac 1.182 Worst RFC 1.182 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))T.P.D.M.V.2.4 Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 Calculated by: Date: Apr-22 Checked by:

Traffic Signal Junction Calculation Sheet

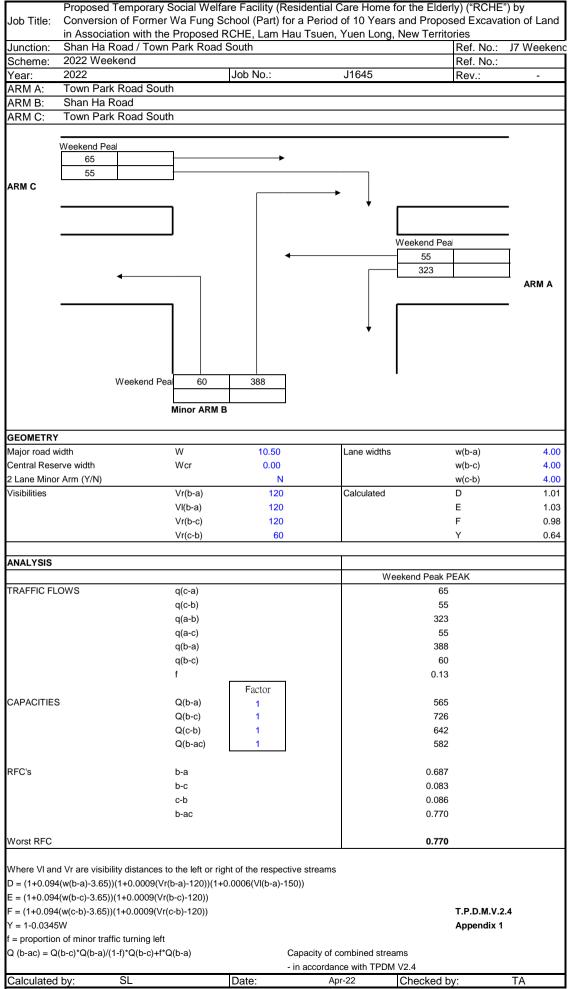


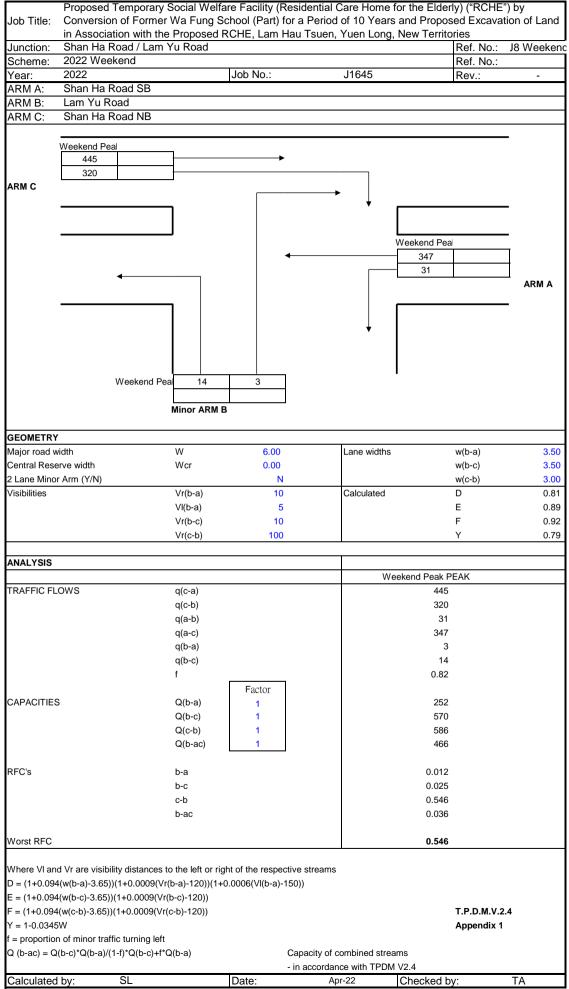
Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Job Title: Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Castle Peak Road - Ping Shan / Ma Wang Road / Long Tin Road Ref. No.: J5 Weekend Scheme: 2022 Weekend Ref. No.: 2022 Job No.: J1645 Rev.: Peak Hour Traffic Flows (pcu/hr) Weekend 633 520 1(LRT) ---12(LRT) 11p 3 11 3 8 2 14 2 3 4 3 Weekend Peak Lane Wide No. No. Rad. Rad. Grad Site Turning Saturation Flow Approach / Phase Oppo L(m) (m) R(m) (%) Pro. (f) (pcu/hr) Flow Crit. 3.50 100 1870 569 0.304 AC 3.50 1965 569 0.290 4210 0.150 2 3.50 633 AB 2 3.50 4210 633 0.150 ΑB 2055 487 0.237 3.00 AB 100 1710 520 0.304 3.00 12.5 3.00 4110 352 0.086 3.00 1840 157 0.086 Critical Ped. Phase Stage Width Across Min. GM Min. FGM Lost Time Note Crit. 5p \mathbf{C} 10 19 AB 15 6р 7p В 11 1(LRT) 1940 + 100 x (W - 3.25) Check Critical Phase 4,3 2,1(LRT),3 Nearside Lane: 10,7p 0.390 2080 + 100 x (W - 3.25) 0.304 0.236 Sum of y values, Y Other Lanes: 24 29 Lost time, L 14 Gradient & Radius: -42 x (gradient in %) 120 Opposed Traffic -230 Cycle Time, C 120 120 Turning Proportion: x 1 / (1 + 1.5 f/R)Practical Y, Y_{pr} 0.795 0.720 0.683 Practical Y (Ypr): 0.9 x (1 - L/C) Reserve Capacity, R.C. (%) 104% 189% Reserve Capacity (RC): $(Y_{pr}/Y - 1) \times 100\%$ In accordance with TPDM - Volume 4.2.4 Calculated by: Date: Apr-2022 Checked by

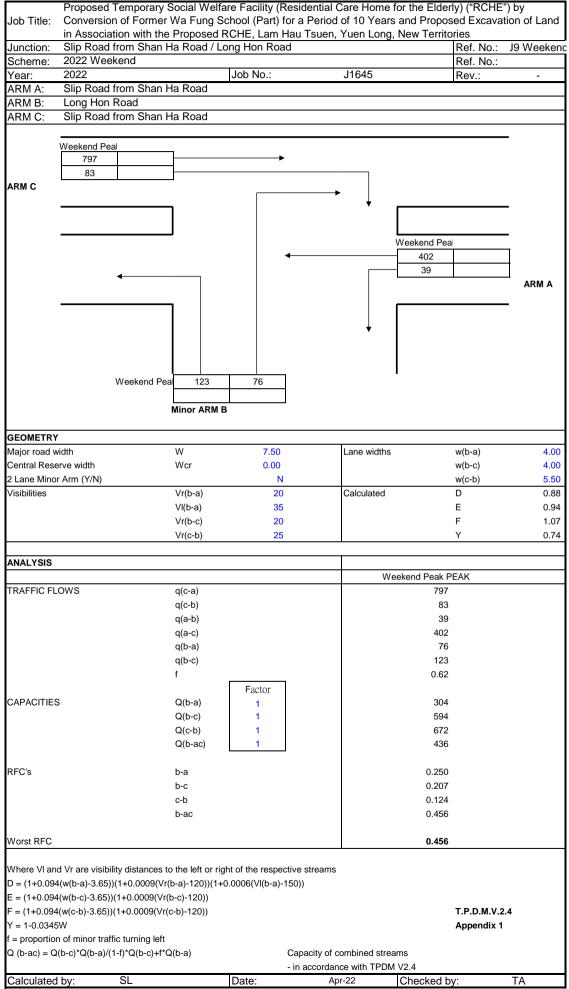
Traffic Signal Junction Calculation Sheet

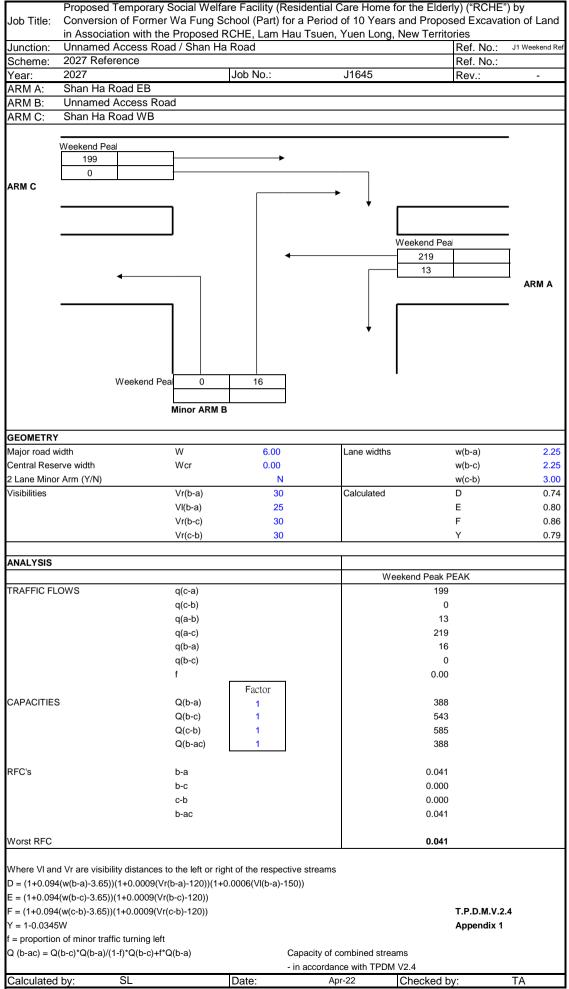


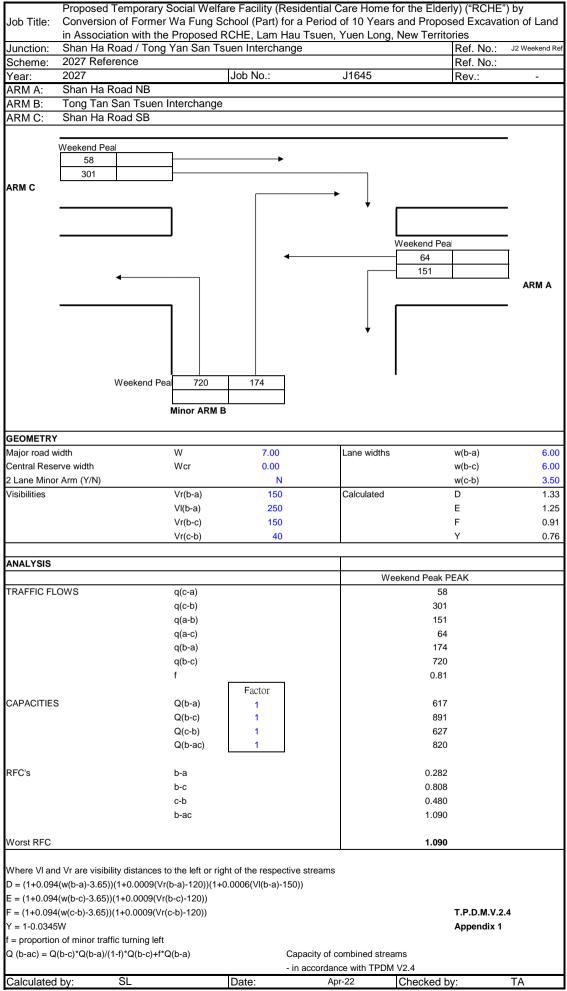
Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Job Title: Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Shui Pin Wai Interchange Ref. No.: J6 Weekend Scheme: 2022 Weekend Ref. No.: 2022 Job No.: J1645 Year: Rev.: Peak Hour Traffic Flows (pcu/hr) Weekend 410 LONG PING ROAD 朗屏路 298 3 4 3 3 3 3 3 5 4 3 Weekend Peak Lane Wide No. No. Rad. Rad. Grad. Site Turning Saturation Flow Approach / Phase Near Oppo L(m) (%) (m) R(m) Pro. (f) (pcu/hr) Flow Crit. $\downarrow\downarrow\downarrow\downarrow$ В 3.50 6315 309 0.049 BCD 2 3.50 175 4035 410 0.102 CD 4150 0.148 2 614 3.20 C 30 100 1845 298 0.162 3.20 D 5.00 100 4510 405 0.090 0.193 4.00 2155 415 4.00 75 2005 386 0.193 4.00 1925 371 0.193 Critical Ped. Phase Stage Width Across Min. GM Min. FGM Lost Time Note Crit. Check Critical Phase 2,1,4,3 2,1,5 Nearside Lane: 1940 + 100 x (W - 3.25) 0.493 0.390 2080 + 100 x (W - 3.25) Sum of y values, Y Other Lanes: 29 18 Gradient & Radius: Lost time, L -42 x (gradient in %) 120 Opposed Traffic -230 Cycle Time, C 120 Turning Proportion: x 1 / (1 + 1.5 f/R)Practical Y, Y_{pr} 0.683 0.765 Practical Y (Ypr): 0.9 x (1 - L/C) Reserve Capacity, R.C. (%) 38% Reserve Capacity (RC): $(Y_{pr}/Y - 1) \times 100\%$ In accordance with TPDM - Volume 4.2.4 Calculated by: Date: Apr-2022 Checked by:

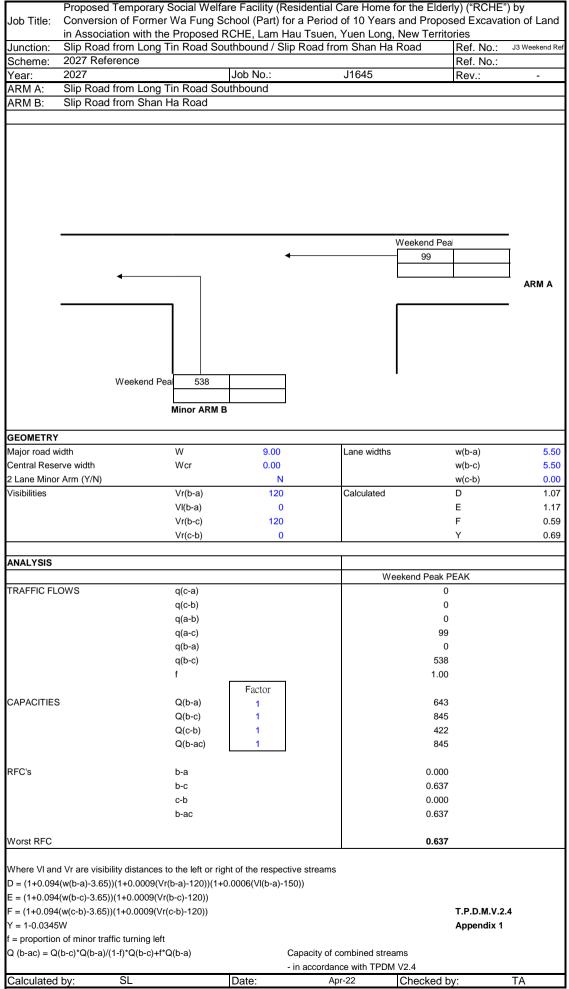


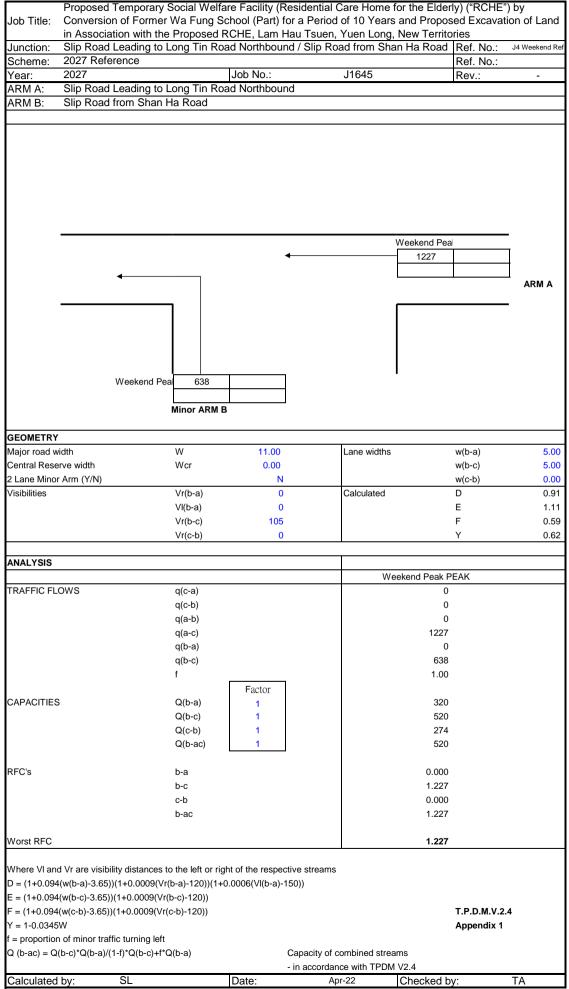












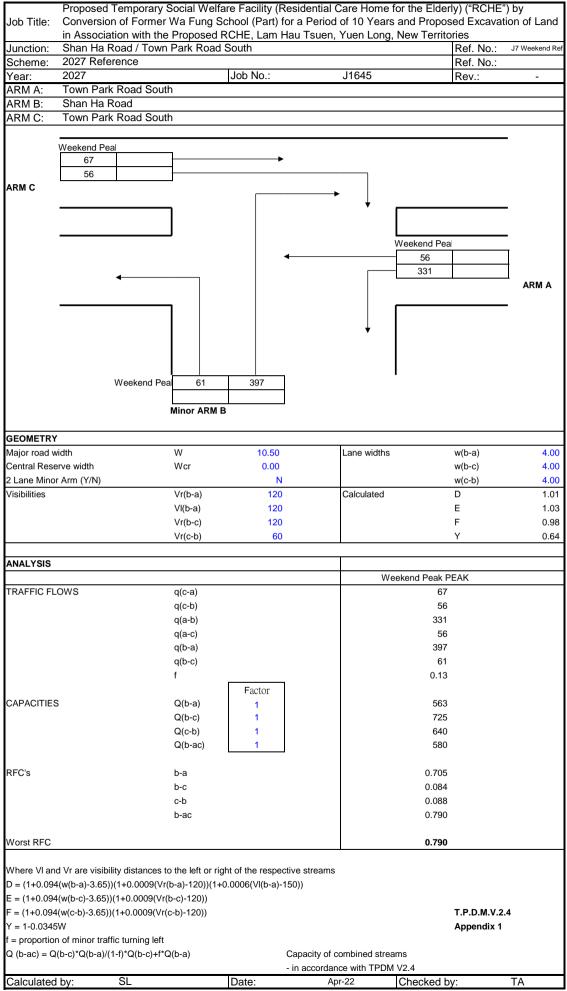
Traffic Signal Junction Calculation Sheet

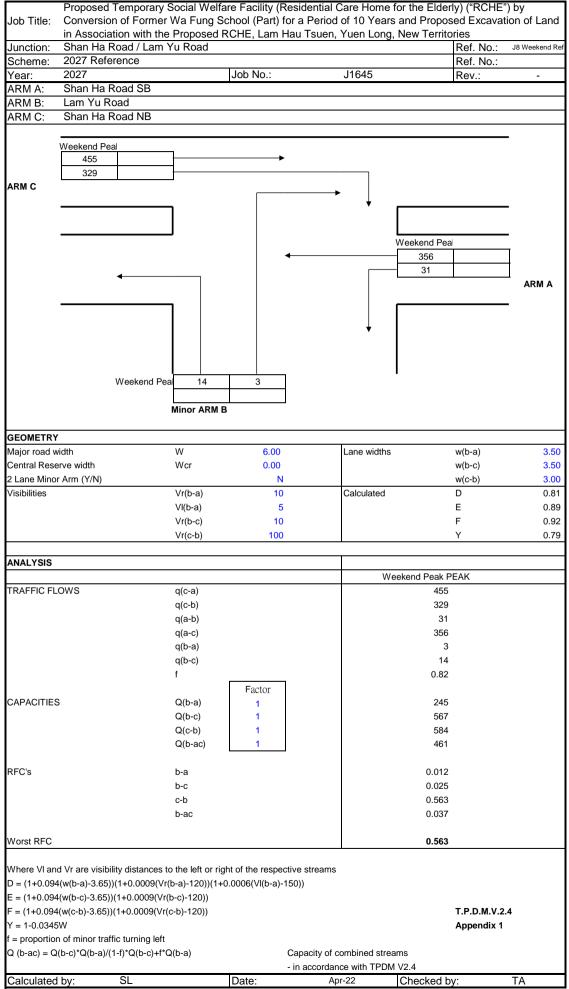


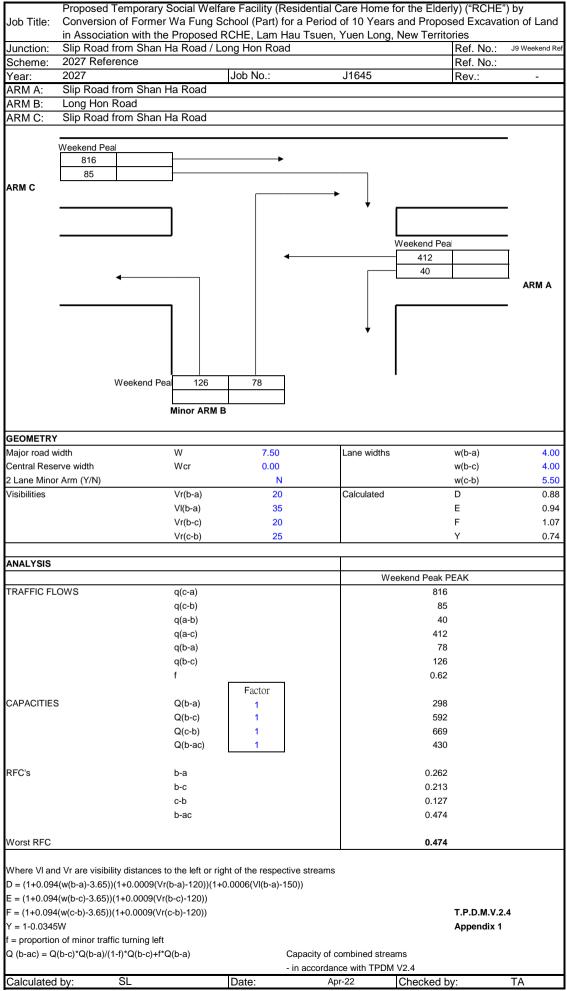
Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Job Title: Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Castle Peak Road - Ping Shan / Ma Wang Road / Long Tin Road Ref. No.: J5 Weekend Rei Scheme: 2027 Reference Ref. No.: 2027 Job No.: J1645 Rev. Peak Hour Traffic Flows (pcu/hr) Weekend 533 1(LRT) ---12(LRT) 11p 3 11 3 8 2 14 2 3 4 3 Weekend Peak Lane Wide No. No. Rad. Rad. Grad Site Turning Saturation Flow Approach / Phase Oppo L(m) (m) R(m) (%) Pro. (f) (pcu/hr) Flow Crit. 3.50 100 1870 583 0.312 AC 3.50 1965 583 0.297 4210 0.154 2 3.50 648 AB 2 3.50 4210 648 0.154 ΑB 2055 499 0.243 3.00 AB 100 1710 533 0.312 3.00 12.5 3.00 4110 360 0.088 3.00 1840 161 0.088 Critical Ped. Phase Stage Width Across Min. GM Min. FGM Lost Time Note Crit. 5p \mathbf{C} 10 19 AB 15 6р 7p В 11 1(LRT) Check Critical Phase 4,3 2,1(LRT),3 Nearside Lane: 1940 + 100 x (W - 3.25) 10,7p 0.399 2080 + 100 x (W - 3.25) 0.312 0.242 Sum of y values, Y Other Lanes: 24 29 Lost time, L 14 Gradient & Radius: -42 x (gradient in %) 120 Opposed Traffic -230 Cycle Time, C 120 120 Turning Proportion: x 1 / (1 + 1.5 f/R)Practical Y, Y_{pr} 0.795 0.720 0.683 Practical Y (Ypr): 0.9 x (1 - L/C) Reserve Capacity, R.C. (%) 99% 131% 183% Reserve Capacity (RC): $(Y_{pr}/Y - 1) \times 100\%$ In accordance with TPDM - Volume 4.2.4 Calculated by: Date: Apr-2022

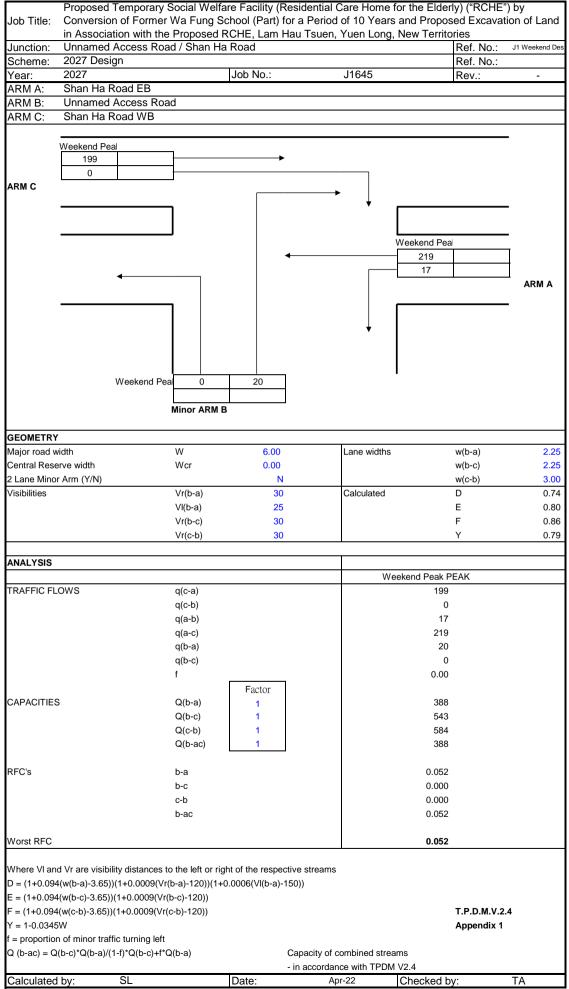
Traffic Signal Junction Calculation Sheet

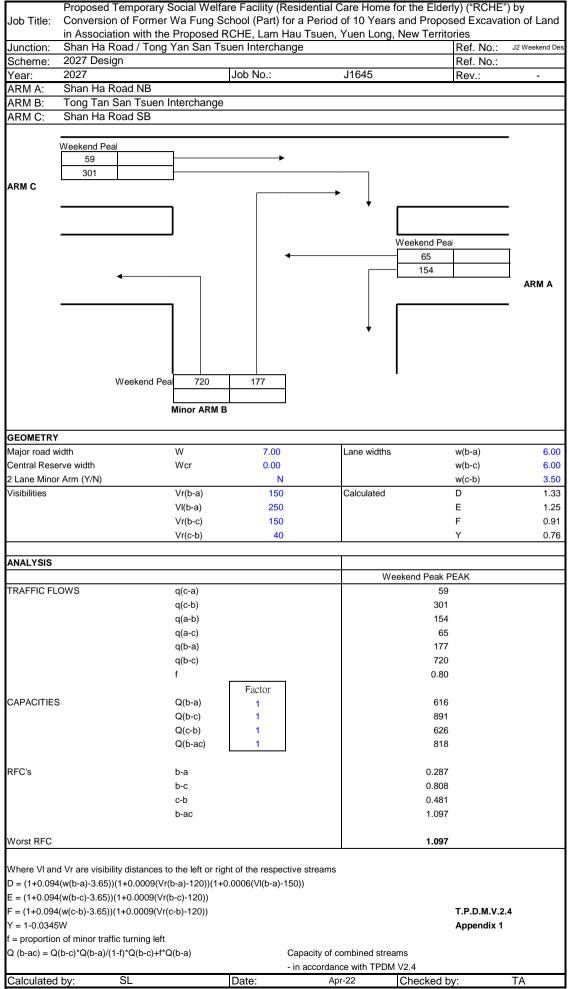
Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Job Title: Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Shui Pin Wai Interchange Ref. No.: J6 Weekend Rei Scheme: 2027 Reference Ref. No.: 2027 Job No.: J1645 Year: Rev.: Peak Hour Traffic Flows (pcu/hr) Weekend 420 LONG PING ROAD 朗屏路 523 629 305 3 4 3 3 3 3 5 4 3 3 Weekend Peak Lane Wide No. No. Rad. Rad. Grad. Site Turning Saturation Flow Approach / Phase Near Oppo L(m) (%) (m) R(m) Pro. (f) (pcu/hr) Flow Crit. $\downarrow\downarrow\downarrow\downarrow$ В 3.50 6315 316 0.050 BCD 2 3.50 175 4035 420 0.104 CD 4150 0.152 2 629 3.20 C 30 100 1845 305 0.165 3.20 D 5.00 100 4510 415 0.092 0.197 4.00 2155 425 4.00 75 2005 395 0.197 4.00 1925 380 0.197 Critical Ped. Phase Stage Width Across Min. GM Min. FGM Lost Time Note Crit. Check Critical Phase 2,1,4,3 2,1,5 Nearside Lane: 1940 + 100 x (W - 3.25) 0.505 0.399 2080 + 100 x (W - 3.25) Sum of y values, Y Other Lanes: 29 18 Gradient & Radius: Lost time, L -42 x (gradient in %) 120 Opposed Traffic -230 Cycle Time, C 120 Turning Proportion: x 1 / (1 + 1.5 f/R)Practical Y, Y_{pr} 0.683 0.765 Practical Y (Ypr): 0.9 x (1 - L/C) Reserve Capacity, R.C. (%) 35% 92% Reserve Capacity (RC): $(Y_{pr}/Y - 1) \times 100\%$ In accordance with TPDM - Volume 4.2.4 Calculated by: Date: Apr-2022

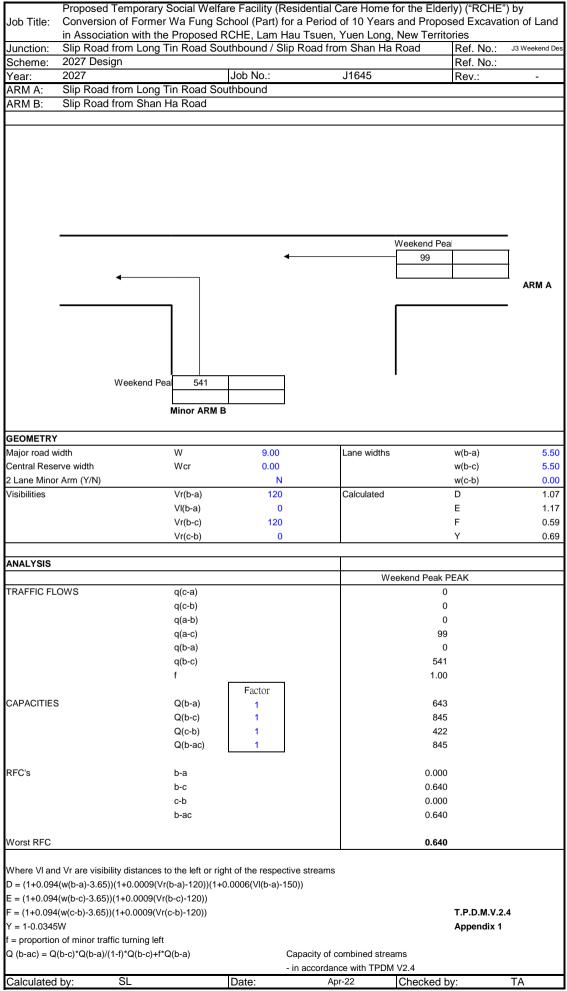


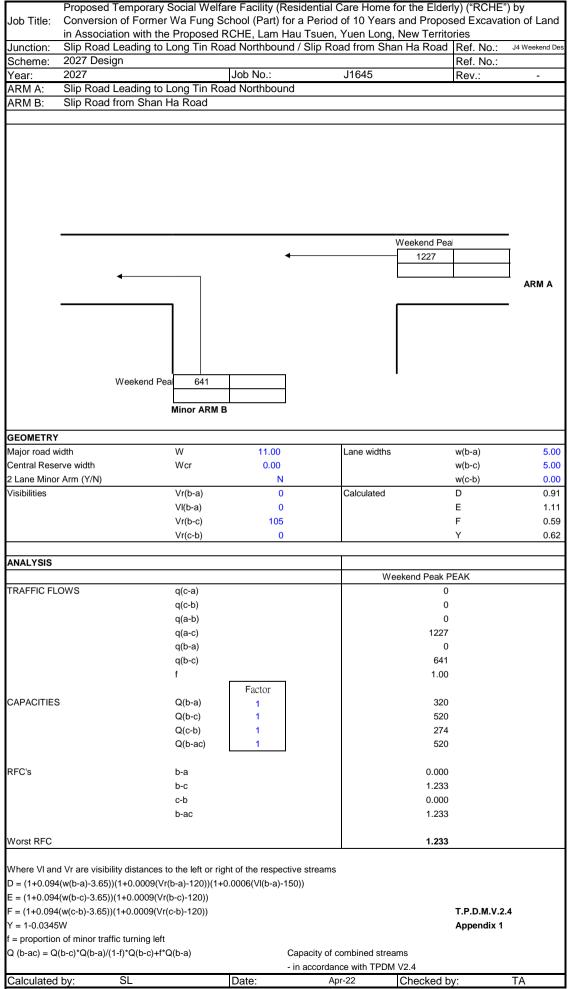












Traffic Signal Junction Calculation Sheet

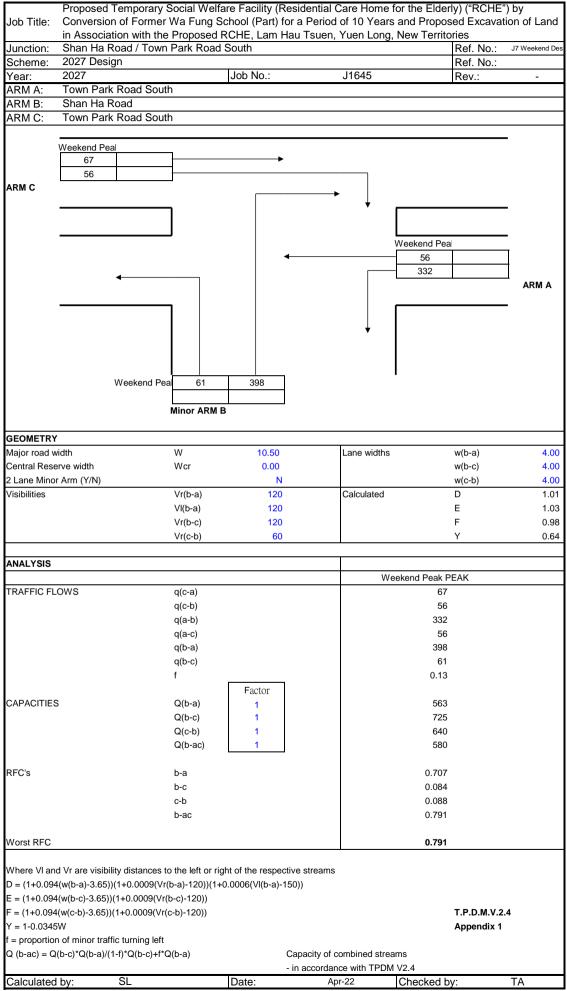


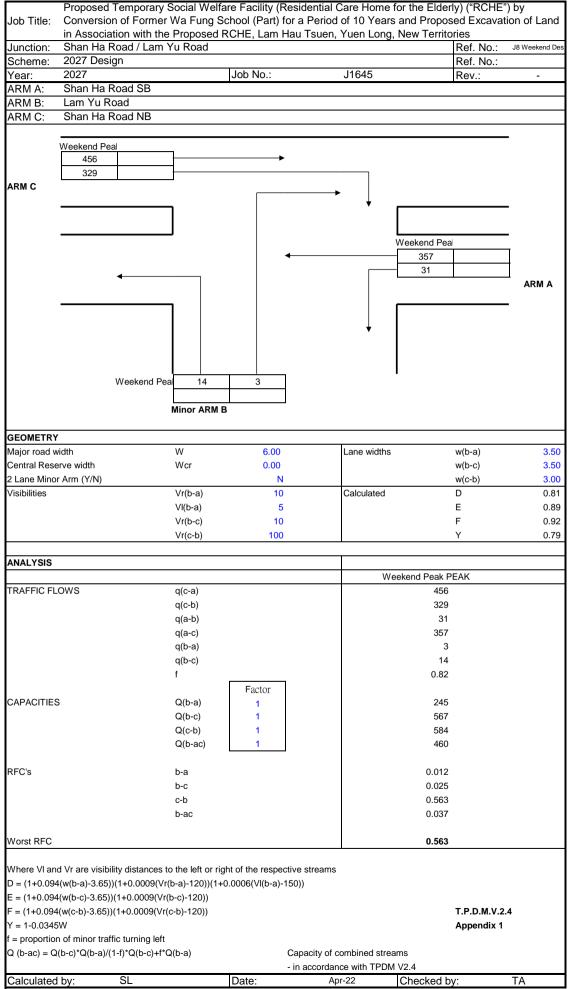
Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Job Title: Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Castle Peak Road - Ping Shan / Ma Wang Road / Long Tin Road Ref. No.: J5 Weekend Des Scheme: 2027 Design Ref. No.: 2027 Job No.: J1645 Rev.: Peak Hour Traffic Flows (pcu/hr) Weekend 534 1(LRT) ---12(LRT) 11p 3 11 3 8 2 14 2 3 4 3 Weekend Peak Lane Wide No. No. Rad. Rad. Grad Site Turning Saturation Flow Approach / Phase Oppo L(m) (m) R(m) (%) Pro. (f) (pcu/hr) Flow Crit. 3.50 100 1870 583 0.312 AC 3.50 1965 583 0.297 4210 0.154 2 3.50 648 AB 2 3.50 4210 648 0.154 ΑB 2055 499 0.243 3.00 AB 100 1710 534 0.312 3.00 12.5 3.00 4110 360 0.088 3.00 1840 161 0.088 Critical Ped. Phase Stage Width Across Min. GM Min. FGM Lost Time Note Crit. 5p \mathbf{C} 10 19 AB 15 6р 7p В 11 1(LRT) Check Critical Phase 4,3 2,1(LRT),3 Nearside Lane: 1940 + 100 x (W - 3.25) 10,7p 0.400 2080 + 100 x (W - 3.25) 0.312 0.242 Sum of y values, Y Other Lanes: 24 29 Lost time, L 14 Gradient & Radius: -42 x (gradient in %) 120 Opposed Traffic -230 Cycle Time, C 120 120 Turning Proportion: x 1 / (1 + 1.5 f/R)Practical Y, Y_{pr} 0.795 0.720 0.683 Practical Y (Ypr): 0.9 x (1 - L/C) Reserve Capacity, R.C. (%) 99% 131% 183% Reserve Capacity (RC): $(Y_{pr}/Y - 1) \times 100\%$ In accordance with TPDM - Volume 4.2.4 Apr-2022 Calculated by: Date:

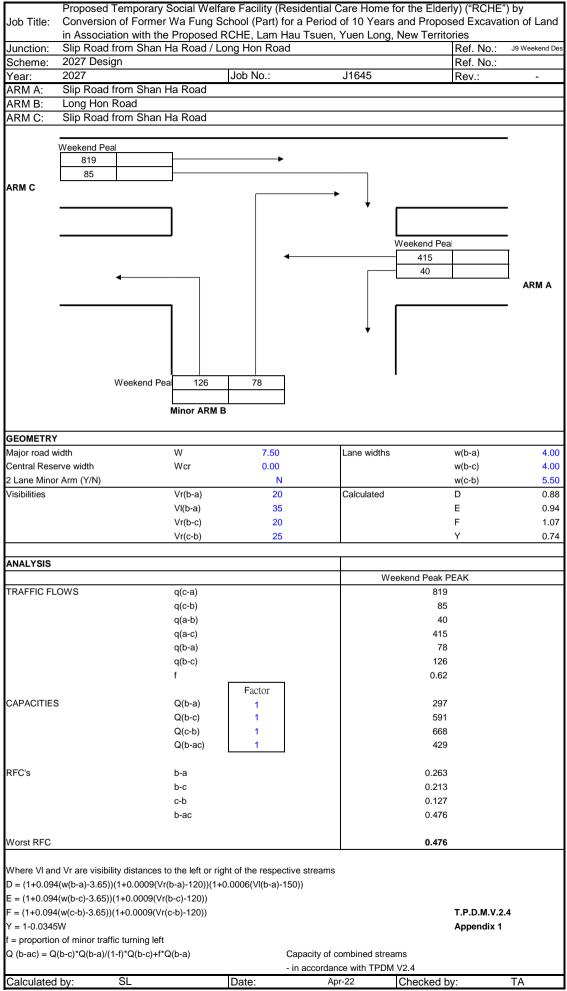
Traffic Signal Junction Calculation Sheet



Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Job Title: Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Shui Pin Wai Interchange Ref. No.: J6 Weekend De Scheme: 2027 Design Ref. No.: 2027 Job No.: J1645 Year: Rev.: Peak Hour Traffic Flows (pcu/hr) Weekend LONG PING ROAD 朗屏路 523 629 305 3 4 3 3 3 3 3 5 4 3 Weekend Peak Lane Wide No. No. Rad. Rad. Grad. Site Turning Saturation Flow Approach / Phase Near Oppo L(m) (%) (m) R(m) Pro. (f) (pcu/hr) Flow Crit. $\downarrow\downarrow\downarrow\downarrow$ В 3.50 6315 316 0.050 BCD 2 3.50 175 4035 420 0.104 CD 4150 0.152 2 629 3.20 C 30 100 1845 305 0.165 3.20 D 5.00 100 4510 416 0.092 0.197 4.00 2155 425 4.00 75 2005 395 0.197 4.00 1925 380 0.197 Critical Ped. Phase Stage Width Across Min. GM Min. FGM Lost Time Note Crit. Check Critical Phase 2,1,4,3 2,1,5 Nearside Lane: 1940 + 100 x (W - 3.25) 0.505 0.399 2080 + 100 x (W - 3.25) Sum of y values, Y Other Lanes: 29 18 Gradient & Radius: Lost time, L -42 x (gradient in %) 120 Opposed Traffic -230 Cycle Time, C 120 Turning Proportion: x 1 / (1 + 1.5 f/R)Practical Y, Y_{pr} 0.683 0.765 Practical Y (Ypr): 0.9 x (1 - L/C) Reserve Capacity, R.C. (%) 35% 92% Reserve Capacity (RC): $(Y_{pr}/Y - 1) \times 100\%$ In accordance with TPDM - Volume 4.2.4 Calculated by: Date: Apr-2022







APPENDIX B

Confirmation from PlanD on the Planned Development via email dated 31 January 2022

Samuel Lo

寄件者:ocmwong@pland.gov.hk寄件日期:2022年1-31日 3:50 PM

收件者: Wilson Wong

副本: ansoncheung@adrg.com.hk; kimchan; 'Samuel Lo'

主旨: Re: [A/YL-TYST/1132] [ADRG/Lam Hau] Enquiry on planning assumptions (TD comment (j))

Dear Wilson,

I refer to your preceding emails with an enclosed letter dated 17.1.2022 (Your Ref.: YL-LH/PA/GCSE/21-11) requesting the information of the planned developments in the vicinity of the proposed development under planning application No. A/YL-TYST/1132.

Based on the location plan attached to your email dated 19.1.2022, we would like to confirm the planned developments listed in the summary list enclosed in your letter is generally in line with the current development in the area and please see below for our comment on the Yuen Long Industrial Estate Extension:

- The GFA should be 300,000 sq.m and the project will be completed tentatively in 2032/33.

Regards,

Ophelia WONG

Tuen Mun & Yuen Long West District Planning Office

Planning Department

Tel.: 2158 6298 Fax.: 2489 9711

From: Wilson Wong < wiwong@visionplanning.com.hk >

To: Ophelia Wong < ocmwong@pland.gov.hk >

Cc: kimchan < kimchan@visionplanning.com.hk >, 'Samuel Lo' < samuello@howangspb.com >, ansoncheung@adrg.com.hk

Date: 19/01/2022 17:03

Subject: Re: [A/YL-TYST/1132] [ADRG/Lam Hau] Enquiry on planning assumptions (TD comment (j))

Dear Ophelia,

Please find the AOI boundary with a radius of 500m from the concerned junctions marked on the attached plan (500m radius of concerned junctions.jpg) for your reference. Thanks!

Best Regards, Wilson Wong

Vision Planning Consultants Ltd.

D: 2566 7031 | T: 2566 9988 | F: 2566 9978

From: Wilson Wong [mailto:wiwong@visionplanning.com.hk]

Sent: Monday, January 17, 2022, 6:53 PM **To:** Ophelia Wong socmwong@pland.gov.hk>

Cc: 'Samuel Lo' samuello@howangspb.com, <a href="mailto:ansanged-nashed-nas

<kimchan@visionplanning.com.hk>

Subject: [A/YL-TYST/1132] [ADRG/Lam Hau] Enquiry on planning assumptions (TD comment (j))

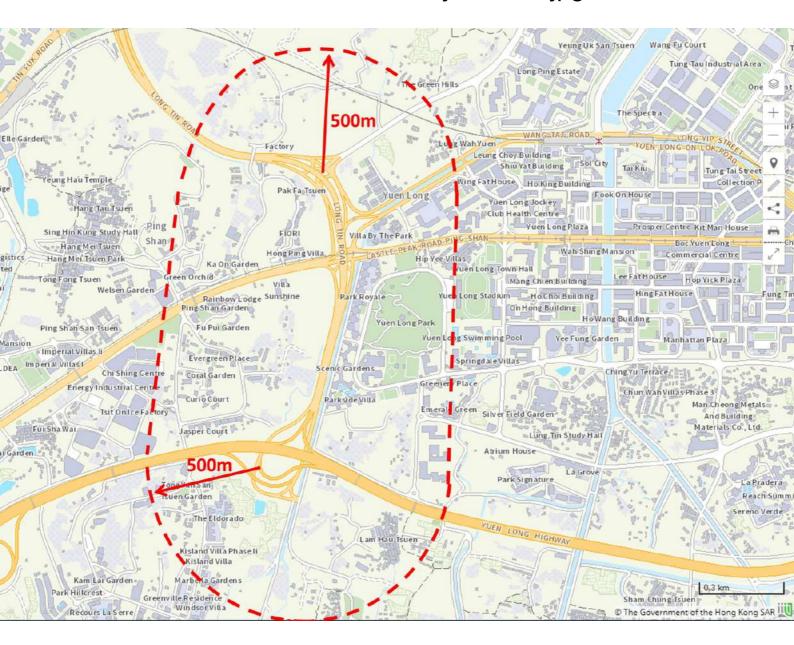
Dear Ophelia,

As per TD's comment (j) on the report of TIA submitted under Application No. A/YL-TYST/1132, please find attached a letter seeking PlanD's confirmation on the relevant planned developments in the vicinity of the application site.

Should you have any questions, please feel free to contact me. Thanks.

Best Regards,
Wilson Wong
Vision Planning Consultants Ltd.
D: 2566 7031 | T: 2566 9988 | F: 2566 9978

500m radius of concerned junctions.jpg





VISION PLANNING CONSULTANTS LTD. 弘域城市規劃顧問有限公司

Our Ref: YL-LH/PA/GCSE/21-11 Your Ref: TPB/A/YL-TYST/1132

Date: 17 January, 2022

Ms. WONG, Ophelia
Tuen Mun and Yuen Long West
District Planning Office,
Planning Department,
14/F, Sha Tin Government Offices,
1 Sheung Wo Che Road,
Sha Tin, N.T.

Dear Ms. WONG,

Proposed Temporary 'Social Welfare Facility' (Residential Care Home for the Elderly) ("RCHE") for a Period of 10 Years and Excavation of Land in Government Land in D.D. 120, Lam Hau Tsuen, Yuen Long, New Territories – Enquiry on planning assumptions

We refer to the request of the Transport Department in its comment (j) on the report of TIA submitted under Application No. A/YL-TYST/1132: "the applicant should seek Planning Department's advice on the planning assumptions and provide the written record from Planning Department for our review". In this connection, the project traffic consultant, Ho Wang SPB Limited ("HWSPB"), has identified all relevant planned developments in the vicinity of the application site, and we would like to seek your kind assistance to confirm whether there are any other planned developments not included in the summary list provided in HWSPB's letter (Attachment A).

Should you have any queries with regards to the above, please do not hesitate to contact our Mr. Wilson WONG or the undersigned at 2566 9988.

Thank you very much for your kind attention.

Yours faithfully, for and on behalf of

VISION PLANNING CONSULTANTS LTD.

Kim On CHAN Managing Director

Encl. [KC/WW]

[YL-LH/PA/GCSE/21-05] c.c Project Team

TM&YLW DPO (Attn.: Ms. Ophelia WONG)

By email By email



By Email



Ho Wang SPB Limited 何黃交通顧問有限公司

香港上環蘇杭街41 - 47號蘇杭商業大廈5樓

5 Floor, So Hong Commercial Building, 41 - 47 Jervois Street, Sheung Wan, Hong Kong Tel: (852) 2865 0090 Fax: (852) 2866 4332 E-mail: info@howangspb.com

BY EMAIL (ocmwong@pland.gov.hk)

17 January 2022

Our reference: J1645/5

Planning Department District Planning Branch New Territories District Planning Division Tuen Mun and Yuen Long West District Planning Office 14/F, Sha Tin Government Offices, 1 Sheung Wo Che Road, Sha Tin, N.T.

Attention: Ms. WONG Cheuk Man, Ophelia (Asst Town Plnr/Yuen Long West 1)

Dear Ms. Wong,

Planning Application No. A/YL-TYST/1132 - Temporary RCHE for a Period of 10 Years PlanD's Confirmation on the Adopted Planning Assumptions for Traffic Forecast

We refer to the Transport Department's comment item (j) on the TIA report of this captioned planning application dated 28/12/2021 and requested HWSPB to seek PlanD's confirmation on the future planned developments adopted in the traffic forecast for TIA (Design year: 2027) and EIA (Design year: 2039) studies.

We have summarised the adopted planned developments in the vicinity of the site based on the public available information for your review/confirmation.

Planned Development	Development Parameters	Estimated Population	Anticipated Intake Year
Yuen Long South Development	229,930m ² commercial GFA 484,110m ² industrial GFA	32,850 flats	First intake: 2028 Full intake: 2038
Hung Shui Kiu/Ha Tsuen New Development Area (HSK/HT NDA)	2,000,000m ² commercial GFA 4,300,000m ² industrial GFA	61,000 flats	First intake: 2024 Full intake: 2037
Proposed Public Rental Housing Development at Ex- Long Bin Interim Housing		Phase 1: 3,080 flats Phase 2: 8,860 flats	Phase 1: 2024/2025 Phase 2: 2029/30- 2030/31
Proposed Public Housing Development at Wang Chau Remaining Phases (WCRP)	æ:	13,000 flats	2033
Yuen Long Industrial Estate Extension	291,545m² industrial GFA		2026/2027

Cont'd/...2

BEng (Hons) MSc MHKIE MCIHT



传 眞: (86) 21-5465 6573



Page 2 (17 January 2022) Our reference: J1645/5 Planning Department Ms. WONG Cheuk Man, Ophelia

We would be grateful if you could kindly confirm whether the above planned developments are accurate.

We wish to thank you for your kind assistance and should you have any queries, please feel free to contact the undersigned or our Mr. Tommy Lam at 2865-0090.

Yours sincerely, For and on behalf of Ho Wang SPB Limited

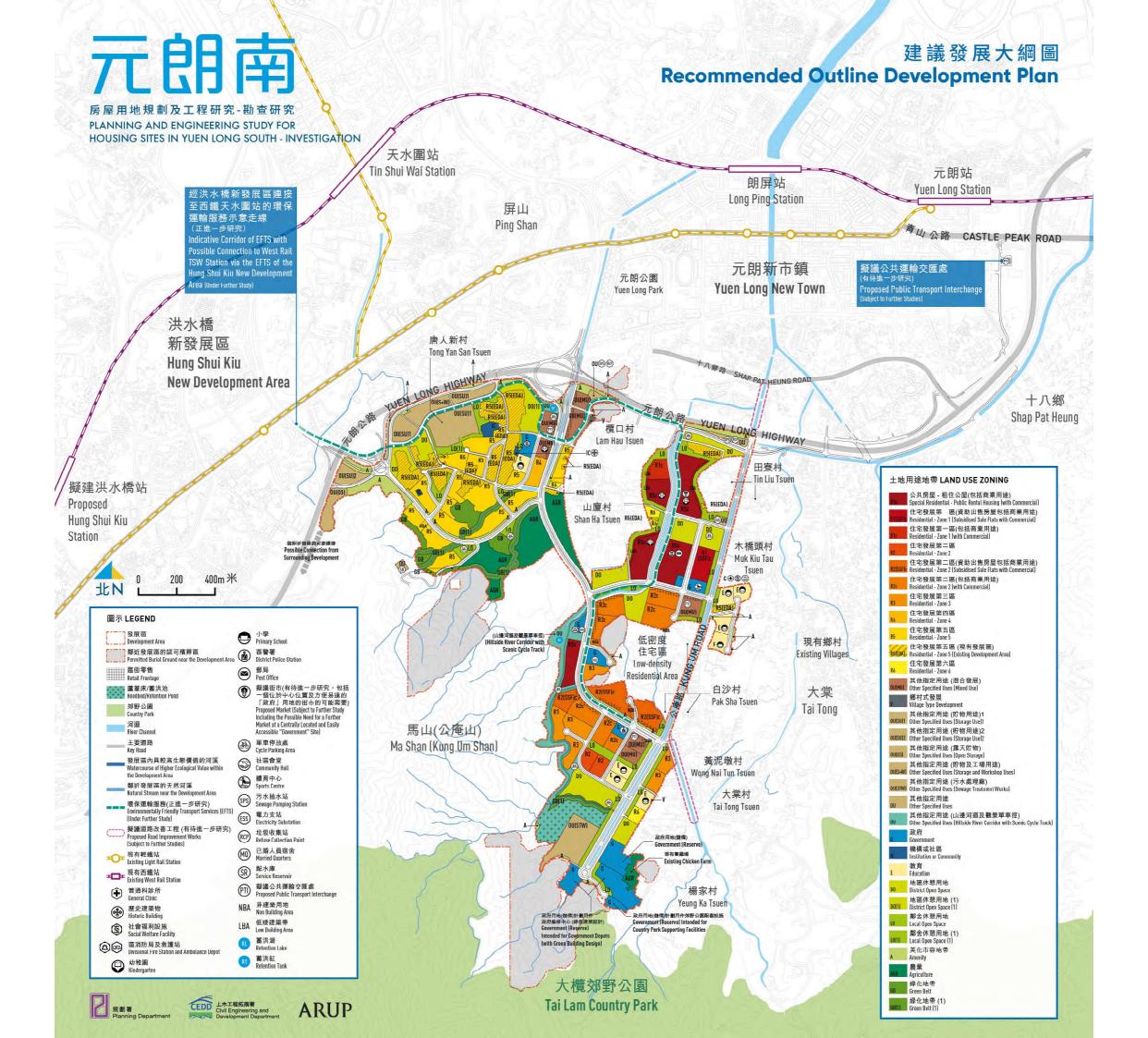
Tinson Leung

Deputy Executive Director

JW/TL/TA/SL/my Encl.

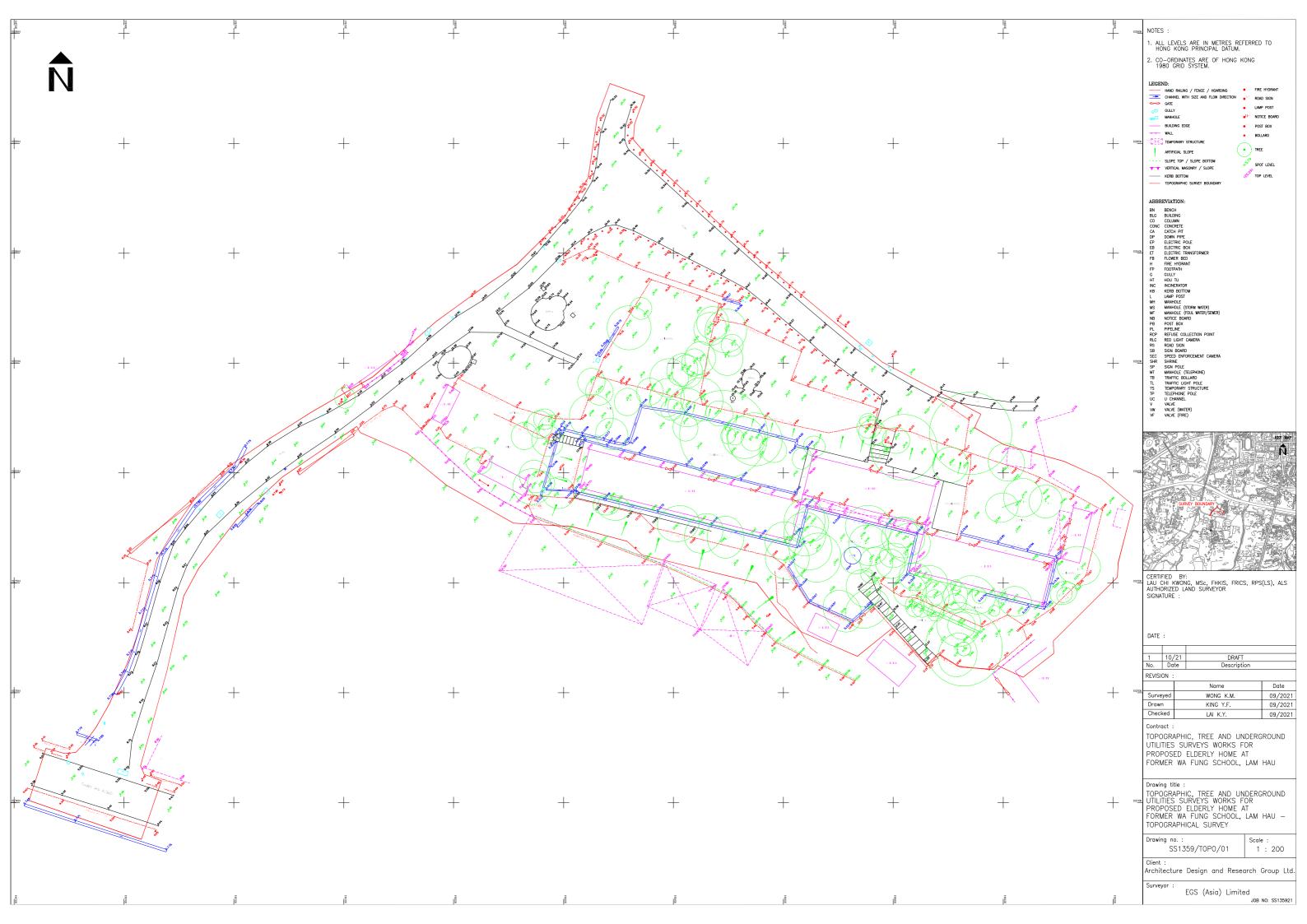
APPENDIX C

CEDD's Improvement Proposal of Tong Yan San Tsuen Interchange



APPENDIX D

Topographic Survey Record





VISION PLANNING CONSULTANTS LTD. 弘域城市規劃顧問有限公司

Our Ref: YL-LH/PA/GCSE/21-19 Your Ref: TPB/A/YL-TYST/1132

Date: 18 May, 2022

The Secretary. Town Planning Board, c/o Town Planning Board Section, Planning Department, 15/F, North Point Government Offices, 333 Java Road, North Point, RECEIVE By Email and Hand

7077 MAY 18 Р 2: ЦВ

TOWN PLANNING BOARD

Dear Sirs,

Hong Kong.

Proposed Temporary 'Social Welfare Facility' (Residential Care Home for the Elderly) ("RCHE") for a Period of 10 Years and Excavation of Land in Government Land in D.D. 120, Lam Hau Tsuen, Yuen Long, New **Territories** – Further Information

On behalf of the Applicant, we submit herewith for the consideration of the Town Planning Board ("TPB") a total of 8 copies of Responses-to-Comments ("R-to-C") Table, dated 17.5.2022, which incorporates a revised report of the Traffic Impact Assessment (Annex A) to respond to further comments raised by the Transport Department on the captioned application.

Should you have any queries with regards to the above, please do not hesitate to contact our Mr. Wilson WONG or the undersigned at 2566 9988.

Thank you very much for your kind attention.

Yours faithfully. for and on behalf of

VISION PLANNING CONSULTANTS LTD.

Kim Ön CHAN Managing Director

Encl. [KC/WW]

[YL-LH/PA/GCSE/21-19] [FI03]

Project Team

TM&YLW DPO

(Attn.: Ms. Ophelia WONG)

By email By email



Planning Application No. A/YL-TYST/1132

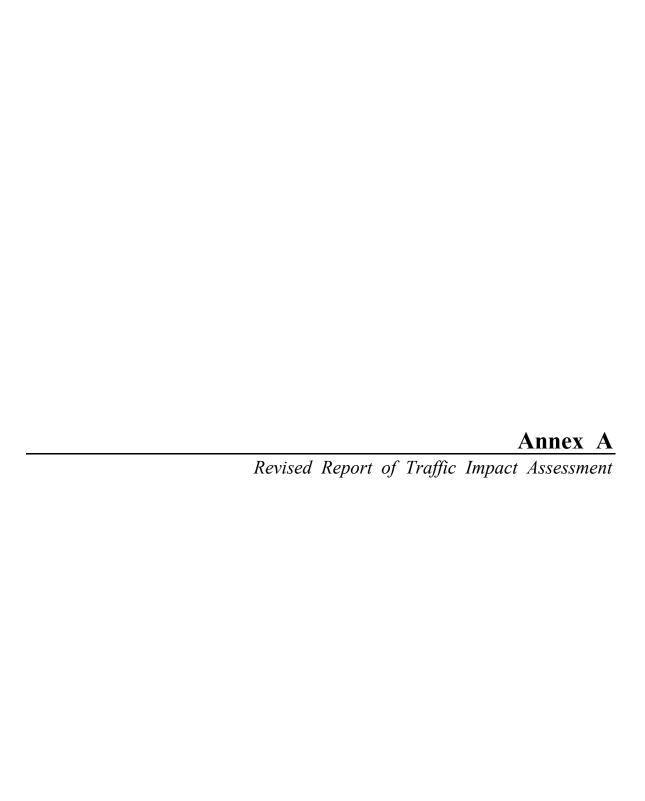
Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) for a Period of 10 Years and Excavation of Land in Government Land in D.D. 120, Lam Hau Tsuen, Yuen Long, New Territories (Former Wa Fung School (Part))

Response to Comments (RtC)

Issue: FI3 / Issue Date: 17/5/2022

No.	Departmental Comments	Responses
L.	From: Transport Department Contact: Miss Grace FOK Tel: 2399 2565	
L1.	1. RtoC item K2: Please clarify the parking provision for the light bus service;	As confirmed by the applicant, the management will hire a light bus service for scheduled point-to-point pick-up/drop-off staffs and residents of this RCHE who require medical care only. These pick-up/drop-off activities will be confined within the site. These light bus services will be scheduled with advanced booking. Vehicles will be deployed from the service provider's depot. Therefore, the light bus will not be parked within our site. On-site light bus parking is therefore not necessary.
L2.	 RtoC items K4, K7 and K8: a. The topographic survey record did not show any information about the dimension of the existing run-in/out. Pls provide a layout plan showing the actual site dimension of the proposed run-in/out at Shan Ha Road and the road section of the Shan Ha Road adjacent to the run-in/out; 	Noted. The enclosed layout plan with site photos showing the actual site dimension of the proposed run-in/out at Shan Ha Road and the road section of the Shan Ha Road adjacent to the run-in/out are enclosed in Appendix D of the revised TIA (Annex A) for your reference.
L3.	a. The swept path on figure no. 2.2 showed that the vehicle needed to drive on the double white line. Therefore, the swept path failed;	Noted. Please refer to the revised swept path showing that the vehicle will not drive on the double white line. Please refer to revised Figure 2.2 (Rev. A).
L4.	3. Please demonstrate how you work out the 15% addition of traffic volume from the ATC data when estimating the weekend traffic. No such details were found in section 3.4.1;	There is a typo which the 15% addition of traffic volume should be 10% instead. The above estimation was forecasted based on the daily variation pattern in Annual Traffic Census (ATC) Station No. 5008 [Kau Yuk Rd (from Yuen Long Tai Yuk Rd to Yuen Long Hong Lok Rd)], the percentage of average traffic flows on Saturday is 107 and that of Wednesday is 97, therefore a 10% addition of flows [(107-97)/97*100%] is adopted. The details were elaborated in section 3.3.5 and the diagram showing the daily variation pattern of ATC Station No. 5008 is enclosed in Appendix E.

No.	Depar	tmental Comments	Responses
L5.	4.	Para. 5.2.3: In view of the situation you have found out, any additional traffic should not be induced to J2 and J4 regardless of how much traffic would be induced by the proposed development. Instead, you should review if there would be future improvement works at the concerned junctions. As such, please review.	According to the Recommended Outline Development Plan (RODP) of "Planning and Engineering Study for Housing Sites in Yuen Long South – Investigation", Tong Yan San Tsuen Interchange (includes J2 and J4) will be improved for the developments of housing sites in Yuen Long South by CEDD before 2033. As shown in the RODP enclosed in Appendix C, J2 will be no longer exist and will be replaced by a new signalized junction, in addition the existing J4 priority junction will be converted into free flow traffic arrangement. The proposed development traffic could be absorbed by the CEDD's improvement scheme.





Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly)
("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Years and
Proposed Excavation of Land in Association with the Proposed RCHE,

Lam Hau Tsuen, Yuen Long, New Territories

Traffic Impact Assessment Report

May 2022

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3.	EXISTING TRAFFIC CONDITIONS
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May 2022

APPENDICES

- Appendix A Junction Calculation Sheets
- Appendix B Confirmation from PlanD on the Planned Development via email dated 31 January 2022
- Appendix C CEDD's Improvement Proposal of Tong Yan San Tsuen Interchange
- Appendix D Layout Plan of the Proposed Run-in/out at Shan Ha Road
- Appendix E Daily Variation Pattern of ATC Station No. 5008

1. INTRODUCTION

1.1 Background

- 1.1.1 The Applicant intends to convert the Former Wa Fung School (part) into a temporary Residential Care Home for the Elderly (RCHE) with around 100 beds for a period of 10 years. The Former Wa Fung School is located at Lam Hau Tsuen, Yuen Long.
- 1.1.2 The location of the subject site is shown in **Figure 1.1**.
- 1.1.3 Ho Wang SPB Ltd. (hereinafter as "HWSPB") is commissioned as the traffic consultant on behalf of the Applicant to conduct a traffic impact assessment (TIA) study to support this planning application.

1.2 Study Objectives

- 1.2.1 The objectives of this TIA study are listed below with a view to reviewing the traffic and transport engineering feasibility for the proposed temporary RCHE development:
 - (a) Review and recommend on the car park and loading/unloading provisions for the development site;
 - (b) Review the internal traffic arrangements and the development access for the development site;
 - (c) Conduct vehicle traffic survey to record existing traffic conditions during AM and PM peak periods within the study area;
 - (d) Review the existing traffic condition and transport facilities in the vicinity of the development site;
 - (e) Estimate the development traffic generation and attraction; and traffic forecast based on the latest available 2016-Based TPEDM from the Planning Department's website and Annual Traffic Census (ATC) from the Transport Department; and
 - (f) Assess the likely traffic impacts generated by the proposed redevelopment site upon completion within the study area; and develop traffic improvement schemes to mitigate any adverse impact; if necessary.

1.3 Structure of the Report

- 1.3.1 Following this introductory chapter describes the background and study objective, this TIA report focuses on the presentation and elaboration of the following key areas:
 - Chapter 2 describes the proposed development schedule, vehicular access arrangements and the proposed internal transport facilities provisions;
 - Chapter 3 describes the baseline traffic surveys and the existing 2021 traffic conditions and junction performance in the vicinity;
 - Chapter 4 describes the traffic forecast methodology and future traffic conditions;
 - Chapter 5 presents the traffic assessment results for the reference and design scenarios, and to propose improvement measures to mitigate adverse traffic impact, if necessary; and
 - Chapter 6 summarizes and concludes the TIA study findings.

2. PROPOSED REDEVELOPMENT

2.1 Proposed Development Parameters

2.1.1 The proposed RCHE will provide about 100 beds and is tentatively in operation by 2024.

2.2 Proposed Internal Parking Provisions

- 2.2.1 There are no specific guidelines on internal parking provision in accordance with HKPSG for the proposed RCHE.
- 2.2.2 The proposed car parking and loading/unloading provisions for this proposed development are summarised in **Table 2.1**.

Table 2.1 Proposed Parking and Loading/Unloading Facilities Provisions for Development

Parking Spaces and Loading/Unloading Bays	Proposed
Car Parking Space (5m x 2.5m)	3
Loading/Unloading Bay for LGV (7m x 3.5m)	2

2.2.3 The above car parking and loading / unloading provisions are considered adequate to meet the end-user's requirements and operation needs.

2.3 Site Access Arrangement

- 2.3.1 The proposed vehicular access to the proposed RCHE is located at the west of the site which connects to a local access road adjoins Shan Ha Road with a 11.5m wide run-in/out. The site measurement record is enclosed in **Appendix D**.
- 2.3.2 Detailed swept path analysis shown in **Figure 2.1** demonstrated that there are no manoeuvre problems for the design vehicle (i.e. 7m LGV) manoeuvre from the local access road into our site.
- 2.3.3 Detailed swept path analysis shown in **Figure 2.2 and 2.3** also demonstrated that there are adequate manoeuvring spaces for emergency vehicles (i.e. 7m long Light Fire Appliance) to/from the proposed development site via Shan Ha Road.

3. EXISTING TRAFFIC CONDITIONS

3.1 Existing Road Networks

- 3.1.1 The local access road connecting the subject site and Shan Ha Road is an unnamed access road with width varied from 3m to 6m.
- 3.1.2 Shan Ha Road is a 2-way carriageway connecting Tong Yan San Tsuen Interchange which joining many district and local roads, includes Yuen Long Highway, Long Tin Road, Castle Peak Road, Shan Ha Road, Lam Yu Road, Town Park Road North, Yuen Long Tai Yuk Road and Ma Tong Road.
- 3.1.3 The Area of Influence (AOI) covers the 9 key junctions in the vicinity of the site as shown in **Figure 3.1**.

3.2 Public Transport Facilities

- 3.2.1 There is a GMB (Route No. 604) servicing within the 500m radius catchment area of this site.
- 3.2.2 Visitors and staff can commute to/from the site via this GMB service between Yuen Long Town Centre and Shan Ha Tsuen.

3.3 Baseline Traffic Surveys

Vehicular Survey

- 3.3.1 In consideration of the proposed site as a temporary RCHE development, the majority of the development traffic induced by the development are visiting trips which are normally generated/attracted during the visiting hours [i.e. off-peak hours (10:00-15:00)].
- 3.3.2 In order to assess the existing traffic conditions, vehicular count survey was carried out on 12 January 2022 (under normal school traffic condition without zoom classes and without work from home arrangement) during the off-peak period (10:00-15:00).
- 3.3.3 The worst off-peak hour of the existing local road network is identified as 12:45-13:45 hour.
- 3.3.4 The observed traffic flows for the 9 concerned junctions in 2022 during the worst weekday off-peak hour are presented in **Figure 3.2**.

3.3.5 It is noted that the peak traffic operation hours of RCHE usually happens in weekend. However, due to the pandemic in 2022, there is difficulty in carrying the traffic survey again. As such, the off-peak period traffic flows is reviewed based on the daily variation pattern in Annual Traffic Census (ATC) Station No. 5008 [Kau Yuk Rd (from Yuen Long Tai Yuk Rd to Yuen Long Hong Lok Rd)]. The daily variation pattern in **Appendix E** shows that the traffic flows on Saturday is 107 and that of Wednesday is 97, therefore a 10% addition of flows [(107-97)/97*100%] is adopted. The estimated traffic flows during the weekend for the 9 concerned junctions in 2022 are presented in **Figure 3.3**.

Pedestrian Survey

3.3.6 A pedestrian count survey has been conducted on 11 January 2022 (<u>under normal school traffic condition without zoom classes and without work from home arrangement</u>) during the off-peak period (10:00-15:00). The observed pedestrian flows are summarized in **Table 3.1**.

Table 3.1 2022 Surveyed Pedestrian Flows

Location	2-way Peak 15 mins Pedestrian Flows (ped/15 mins) Off-Peak
Site Access Road Footpath	6

GMB Utilization Survey

3.3.7 A GMB utilization survey on GMB No. 604 has been conducted on 11 January 2022 (<u>under normal school traffic condition without zoom classes and without work from home arrangement</u>) during the off-peak period (10:00-15:00).

Traffic Queue Survey

3.3.8 A traffic queue survey has been conducted on 13 January 2022 (<u>under normal school traffic condition without zoom classes and without work from home arrangement</u>) during the off-peak period (10:00-15:00).

3.4 Existing Junction Performance

3.4.1 Based on the 2022 surveyed traffic flows, the junction capacity analysis for the 9 concerned junctions during the weekend peak period has been assessed. The results of the junction capacity analysis are summarized in **Table 3.2**.

Junction Location Junction Type Weekend Peak J1 Unnamed Access Road / Shan Ha Road Priority (DFC) 0.04 J2 Shan Ha Road / Tong Yan San Tsuen Interchange Priority (DFC) 1.01 Slip Road from Long Tin Road Southbound / Slip J3 Priority (DFC) 0.59 Road from Shan Ha Road Slip Road Leading to Long Tin Road Northbound / J4 Priority (DFC) 1.10 Slip Road from Shan Ha Road Castle Peak Road - Ping Shan / Ma Wang Road / J5 Signal (RC) 114% Long Tin Road J6 Shui Pin Wai Interchange Signal (RC) 45% J7 Shan Ha Road / Town Park Road South Priority (DFC) 0.73 J8 Shan Ha Road / Lam Yu Road Priority (DFC) 0.52 J9 Slip Road from Shan Ha Road / Long Hon Road Priority (DFC) 0.43

Table 3.2 2022 Existing Junction Performance During the Weekend Peak Period

3.4.2 The results of the junction performance enclosed in **Appendix A** have concluded that all the 9 concerned junctions are having adequate junction capacity during weekend peak periods except J2 and J4 which will operate with marginal junction capacity.

3.5 Existing Footpath Performance

- 3.5.1 According to TPDM Volume 6 Chapter 10.4 Section 10.4.2, The Level of Service (LOS) is defined varied from A to F, with the best LOS 'A' and the worst LOS 'F'. The LOS 'C' is considered acceptable and LOS 'D' is barely acceptable with considerably likely occurrence of friction and interactions between pedestrians. LOS 'E' and 'F' are simply unacceptable.
- 3.5.2 The pedestrian flows for the concerned footpath during the off-peak hour period have been assessed and the performance are summarized in **Table 3.3**.

 Table 3.3
 2022 Existing Footpath Capacity Assessment

	2	2022 Existing			
Location	Off-Peak Flow (ped/15mins)	Flow Rate (ped/min/m)	LOS		
Site Access Road Footpath	6	0.8	A		

Note: The clear footpath width = 1.5m actual width - 1.0m dead width = 0.5m.

3.5.3 The analysis results show that the pedestrian footpath is operating with ample capacity [LOS A] in the off-peak period.

3.6 Existing GMB Performance

3.6.1 The demand and occupancy for the GMB No. 604 during the off-peak hour periods have been assessed and the results are summarized in **Table 3.4**.

Table 3.4 2022 Existing GMB No. 604 Assessment

Yuen Long Station Bound						
Hour	Frequency (veh/hr)	Capacity (pax/hr)	Demand (pax/hr)	Occupancy %		
10:00-11:00	6	198	49	25%		
11:00-12:00	4	134	30	22%		
12:00-13:00	6	185	62	34%		
13:00-14:00	3	86	62	72%		
14:00-15:00	6	166	76	46%		
	Shan 1	Ha Tsuen Bou	ınd			
Hour	Frequency	Capacity	Demand	Occupancy		
11001	(veh/hr)	(pax/hr)	(pax/hr)	%		
10:00-11:00	6	166	40	24%		
11:00-12:00	4	134	29	22%		
12:00-13:00	7	220	70	32%		
13:00-14:00	3	86	46	53%		
14:00-15:00	6	220	88	40%		

3.6.2 The survey results demonstrated that GMB No. 604 has adequate capacity currently.

3.7 Existing Queue Length Performance

3.7.1 The results of the queue length survey during the worst off-peak period (12:45-13:45) have are summarized in **Table 3.5** and presented in **Figure 3.4**.

 Table 3.5
 2022 Existing Queue Length Performance

			Average	Available
Junction	Queue	Location	Queue	Queuing
No.	No.	Location	Length	Length
			(m)	(m)
	Q1	Shan Ha Road SB	0	170
J2	Q2	Tong Yan San Tsuen Interchange EB	48	60
	Q3	Shan Ha Road NB	0	>300
J3	Q4	Slip Road from Shan Ha Road WB	0	70
J4	Q5	Slip Road from Shan Ha Road NB	5	170

3.7.2 The observed queue length analysis has demonstrated that there is adequate queuing space at the above road sections to accommodate the existing traffic queue under the existing traffic condition with no queuing problem.

4. FUTURE TRAFFIC CONDITIONS

4.1 Traffic Forecast Approach

- 4.1.1 This temporary RCHE is anticipated to be commenced in 2024. A design year is adopted 3 years after the commencement (i.e. 2027) to assess the impact of the development related traffic on the local road network.
- 4.1.2 The traffic forecast has been conducted based on the following data:
 - Historical trend data from the Annual Traffic Census (ATC) by Transport Department
 - 2016-based Territorial Population and Employment Data Matrix (TPEDM) planning data by Planning Department's Website
- 4.1.3 The historical traffic data of the surrounding road links are based on the Annual Average Daily Traffic (AADT) extracted from the "Annual Traffic Census" report issued by Transport Department. The relevant AADT data from 2016 to 2020 are summarized in **Table 4.1**.

Table 4.1 AADT at Counting Stations Extracted from Annual Traffic Census – 2016 to 2020

Stn No.	Road	From	То	2016	2017	20	18	2019	2020
5236	Castle Peak Rd - Ping Shan	Yuen Long Tai Yuk Rd	Ma Wang Rd	19,560	19,250	19,	070	20,510	19,660
6049	Castle Peak Rd - Ping Shan	Ping Ha Rd	Ma Wang Rd	27,500	24,910	21,	090	21,930	20,880
	All Stations Total			47,060	44,160	40,	160	42,440	40,540
Average Growth Rate (% p. a.)			-6.16%	-9.)6%	5.0	68%	-4.48%	
Overall Growth Rate (% p. a.) from 2016 to 2020			-	-3.5	50%		-		

4.1.4 The population and employment data of the Planning Data District are extracted from the 2016-based TPEDM issued by Planning Department's website. The relevant growth rates from 2016 to 2026 are summarized in **Table 4.2**.

 Table 4.2
 Population and Employment Forecast (TPEDM)

Planning Data District Data : Yuen Long						
Average Annual Growth	2016-2021	2021-2026				
Rate of Total Population and Employment (%)	+1.13%	+0.48%				

4.1.5 The annual growth rates obtained from ATC and TPEDM from 2016 to 2026 are summarized in **Table 4.3**.

Table 4.3 Summary of Annual Growth Rates obtained from ATC and TPEDM from 2016 to 2026

	Annual Growth Rate					
	2016-2020	6-2020 2016-2021 2021-2026				
ATC	-3.50%					
TPEDM		+1.13%	+0.48%			

4.1.6 After reviewing the above AADT traffic data and future planning data forecast, it is considered to adopt an annual growth rate of +0.48% p.a. from 2022 to 2027 for the projection of the 2027 reference traffic flows for the traffic assessment.

4.2 Future Planned Developments

- 4.2.1 The traffic flows generated by adjacent potential developments in the vicinity have also been taken into account in the reference case scenario.
- 4.2.2 The planned developments in the vicinity are summarised in **Table 4.4.**
- 4.2.3 Planning Department's advice on the planned developments in the vicinity of the proposed development has been sought and Planning Department's confirmation via email dated 31/1/2022 is enclosed in **Appendix B**.

Table 4.4 Summary of Future Planned Developments in the Vicinity

Planned Development	Development Parameters	Estimated Population	Anticipated Intake Year
Yuen Long South Development	229,930m ² commercial GFA 484,110m ² industrial GFA	32,850 flats	First intake: 2028 Full intake: 2038
Hung Shui Kiu/Ha Tsuen New Development Area (HSK/HT NDA) 2,000,000m commercial G 4,300,000m industrial GF		61,000 flats	First intake: 2024 Full intake: 2037
Proposed Public Rental Housing Development at Ex-Long Bin Interim Housing	-	Phase 1: 3,080 flats Phase 2: 8,860 flats	Phase 1: 2024/2025 Phase 2: 2029/30-2030/31
Proposed Public Housing Development at Wang Chau Remaining Phases (WCRP)	-	13,000 flats	2033
Yuen Long Industrial Estate Extension	300,000m ² industrial GFA	-	2032/2033

- 4.2.4 The traffic generations of the above planned / committed developments will be taken into account in the reference case scenario traffic forecast for the TIA purpose.
- 4.2.5 The 2027 reference traffic flows are shown in **Figure 4.1**.

5. TRAFFIC IMPACT ASSESSMENT

5.1 Vehicular Generation and Attraction by the Proposed Development

5.1.1 The trip generations of this temporary RCHE development are estimated based on the trip rate of a reference similar project and are summarized in **Table 5.1**.

Table 5.1 Estimated Vehicular Trips upon Development

Proposed	AM	Peak	PM Peak		
Development (100 beds)	Attraction Generation		Attraction	Generation	
Adopted Trip Rate (1) (pcu/hr/beds)	0.0435	0.0435	0.0362	0.0362	
Estimated Vehicular Trips (pcu/hr)	4	4	4	4	

Note: (1) Adopted from in-house trip rate of reference project with similar facilities.

Reference Site		AM Peak		PM Peak	
		Att	Gen	Att	Gen
Hong Shui Garden of Aged Company Limited, Tuen	Traffic Generations (pcu/hr)	6	6	5	5
Mun (138 beds)	Vehicular Trip Rate (pcu/hr/beds)	0.435	0.0435	0.0362	0.0362

- 5.1.2 The proposed development will attract and generate 8 (i.e. 4+4) pcus in the AM peak hour and 8 (i.e. 4+4) pcus in the PM peak hour.
- 5.1.3 In view of the traffic condition in the vicinity of the site, management of the RCHE will control the development traffic within the off-peak hours (10:00-15:00) only to minimize the traffic impact onto the local road network.
- 5.1.4 As conservative assessment, the proposed development will be assumed to attract and generate 8 (4+4) pcus in the off-peak hours.
- 5.1.5 The 2027 design flows are shown in **Figures 5.1**.

5.2 Traffic Impact Assessments

Junction Capacity Performance

5.2.1 The assessments of the junction performance based on the 2027 reference and design scenarios are summarized in **Table 5.2**.

Table 5.2 Junction Capacity Assessment for Year 2027

Junction	Junction	Junction Type	2027 Reference	2027 Design
No	Gunction	sunction Type	Weekend Peak	Weekend Peak
J1	Unnamed Access Road / Shan Ha Road	Priority (DFC)	0.04	0.05
J2	Shan Ha Road / Tong Yan San Tsuen Interchange	Priority (DFC)	(1.03)	1.04
Ј3	Slip Road from Long Tin Road Southbound / Slip Road from Shan Ha Road	Priority (DFC)	0.61	0.61
J4	Slip Road Leading to Long Tin Road Northbound / Slip Road from Shan Ha Road	Priority (DFC)	1.14	(1.14)
J5	Castle Peak Road - Ping Shan / Ma Wang Road / Long Tin Road	Signal (RC)	109%	108%
J6	Shui Pin Wai Interchange	Signal (RC)	42%	42%
J7	Shan Ha Road / Town Park Road South	Priority (DFC)	0.75	0.75
Ј8	Shan Ha Road / Lam Yu Road	Priority (DFC)	0.53	0.53
J9	Slip Road from Shan Ha Road / Long Hon Road	Priority (DFC)	0.44	0.45

- 5.2.2 The results of the junction capacity analysis enclosed in **Appendix A** have indicated that all the 9 junctions will operate satisfactorily with adequate junction capacity in both 2027 reference and 2027 design scenarios except J2 and J4 with marginal capacity during the weekend peak period.
- 5.2.3 By 2027, J2 and J4 will operate with marginal junction capacity of 1.03 and 1.14 (Weekend) respectively under reference scenario (without development traffic).
- 5.2.4 According to the Recommended Outline Development Plan (RODP) of "Planning and Engineering Study for Housing Sites in Yuen Long South Investigation", Tong Yan San Tsuen Interchange (includes J2 and J4) will be improved for the developments of housing sites in Yuen Long South by CEDD before 2033. As shown in the RODP enclosed in **Appendix C**, J2 will be no longer exist and will be replaced by a new signalized junction, in addition the existing J4 priority junction will be converted into free flow traffic arrangement. The proposed development traffic could be absorbed by the CEDD's improvement scheme.

5.3 Pedestrian Generation and Attraction by the Proposed Development

5.3.1 The pedestrian trip generations of this temporary RCHE development are estimated based on the trip rate of a reference similar project and are summarized in **Table 5.3**.

 Table 5.3
 Estimated Pedestrian Trips upon Development

Proposed	AM	Peak	PM Peak		
Development (100 beds)	Attraction Generation		Attraction	Generation	
Adopted Pedestrian Trip Rate ⁽¹⁾ (ped/hr/beds)	0.04	0.04	0.00	0.00	
Estimated Pedestrian Trips (ped/hr)	4	4	0	0	

Note: (1) Adopted from in-house trip rate of reference project with similar facilities.

Reference Site		AM Peak		PM Peak	
		Att	Gen	Att	Gen
Yuen Yuen Home for the Aged (56 beds)	Pedestrian Trips (ped/hr)	2	2	0	0
	Pedestrian Trip Rate (ped/hr/beds)	0.04	0.04	0.00	0.00

- 5.3.2 The proposed development will attract and generate 8 (i.e. 4+4) ped in the AM peak hour and 0 (i.e. 0+0) ped in the PM peak hour.
- 5.3.3 The prime objective of this RCHE aims to provide residential care timely for those solitary elderlies in the community. The expected visitor for this RCHE is low. This proposed RCHE development will generate/attract 8 (4+4) pedestrian trips during the worst peak hour for conservative assessment.

5.4 Pedestrian Impact Assessment for Year 2027

5.4.1 The pedestrian assessment for the year 2027 is summarized in **Table 5.4**.

Table 5.4 2027 Footpath Capacity Analysis

	2027 Reference			2027 Design			
Location	Flow (ped/15 mins)	Flow Rate (ped/ min/m)	LOS	Flow (ped/15 mins)	Flow Rate (ped/ min/m)	LOS	
Site Access Road Footpath ⁽¹⁾	6 ⁽²⁾	0.8	A	8	1.07	A	

Note: (1) The clear footpath width = 1.5m actual width -1.0m dead width = 0.5m

5.4.2 The results of the pedestrian assessment demonstrated the concerned footpath will operate with adequate pedestrian capacity in design year 2027.

⁽²⁾ Adopted an annual growth rate of +0.48% p.a. from 2022 to 2027 for the projection of the 2027 reference pedestrian flow

5.5 GMB Impact Assessment for Year 2027

5.5.1 It is assumed that 100% of visitors will be travelled by GMB. The anticipated GMB No. 604 occupancy in 2027 reference and design scenarios are summarized in **Table 5.5**.

Table 5.5 2027 GMB Occupancy Analysis

Peak Hour (13:00-14:00)	2027 Reference			2027 Design			
	Demand (pax/hr)	Capacity (pax/hr)	Occupancy %	Demand (pax/hr)	Capacity (pax/hr)	Occupancy %	
Yuen Long Station Bound	64 ⁽¹⁾	86	74%	68	86	79%	
Shan Ha Tsuen Bound	47 ⁽¹⁾	86	55%	51	86	59%	

Note: (1) Adopted an annual growth rate of +0.48% p.a. from 2022 to 2027 for the projection of the 2027 reference GMB demand

5.5.2 The results of the GMB occupancy analysis demonstrated the GMB No. 604 will operate with adequate capacity in design year 2027.

6. PROPOSED TRAFFIC MANAGEMENT IMPROVEMENT MEASURES

- 6.1.1 It is noted that the proposed RCHE will be a community-based operation by engaging local manpower in the area as its priority. Light bus service will be provided for scheduled point-to-point pick-up/drop-off for staffs and residents of this RCHE. It is therefore expected that most of the visitors and staff will commute to the RCHE by walking or public transport instead of private vehicle and taxi.
- 6.1.2 Traffic management measures are proposed to minimize the traffic impact at the nearby Tong Yan San Tsuen Interchange by regulating the visiting time for the visitors outside the AM/PM peak periods [i.e. 10:00-15:00 except emergency case]. This arrangement can eliminate traffic congestion during the peak hour period.

7. SUMMARY AND CONCLUSIONS

7.1 Summary

Proposed Development and Parking Provisions

- 7.1.1 The Applicant is proposed to develop a Residential Care Home for the Elderly (RCHE) with 100 beds (maximum).
- 7.1.2 There are no specific guidelines for parking provision in accordance with HKPSG for this kind of development. A total of 3 car parking spaces and 2 loading/unloading bays for LGV are proposed to satisfy the operation needs and requirement.

Existing Traffic Conditions

- 7.1.3 In consideration of the proposed site as a RCHE development, majority of the development traffic induced by the development are visiting trips which are generated and attracted during off-peak hours (i.e. 10:00-15:00).
- 7.1.4 The off-peak period traffic flows is reviewed based on the daily variation pattern in Annual Traffic Census (ATC) Station No. 5008 [Kau Yuk Rd (from Yuen Long Tai Yuk Rd to Yuen Long Hong Lok Rd)]. The daily variation shows that the traffic flows on Saturday is 10% higher than the traffic flows on weekdays.
- 7.1.5 The results of the junction capacities show that all the 9 concerned junctions are having adequate junction capacity during the weekend peak period except J2 and J4 with marginal junction capacity.

Future Traffic Conditions

- 7.1.6 It is anticipated that the site will be fully developed by 2024. A design year 2027 is adopted for the traffic assessment.
- 7.1.7 The 2027 traffic forecasts flows have been referred to the historical trend data from the ATC, the latest 2016-based TPEDM planning assumptions from PlanD's website and all planned and committed developments in the vicinity.

Traffic Impact Assessment

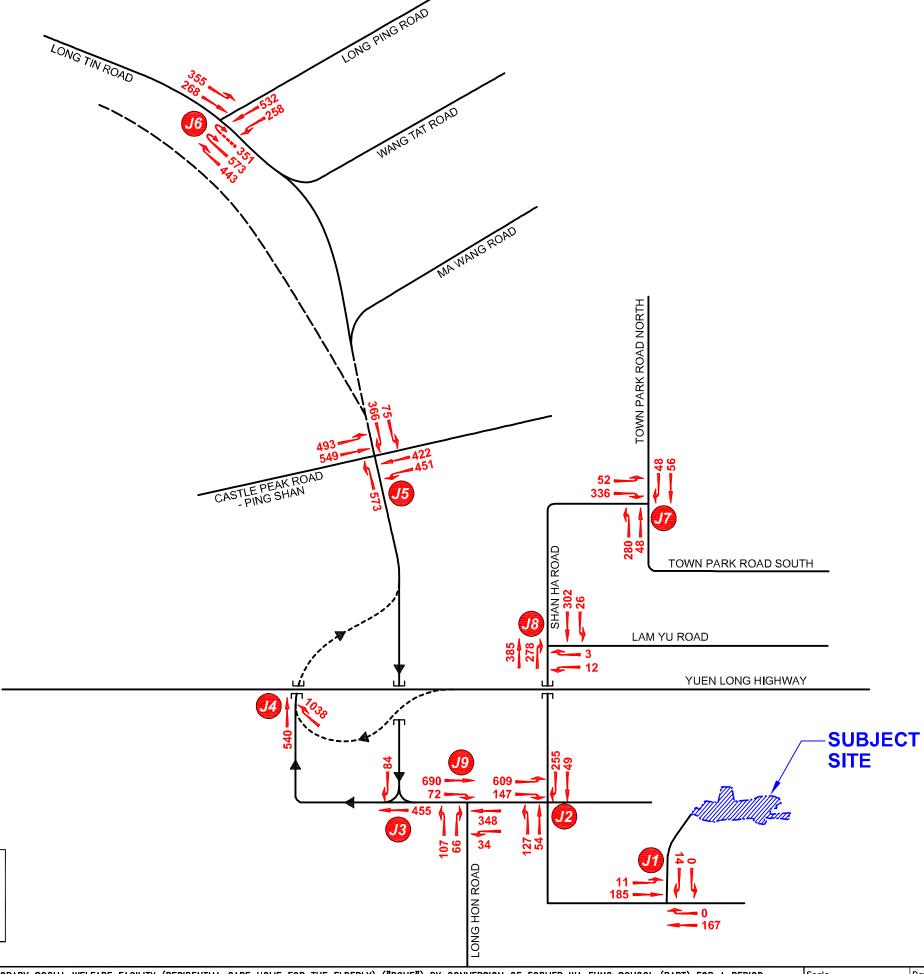
7.1.8 The proposed development will attract and generate 8 pcus in the off-peak hours as conservative assessment.

- 7.1.9 The results show that all the 9 junctions will operate satisfactorily with ample junction capacity in both 2027 reference and 2027 design scenarios during weekend peak period except J2 and J4 with marginal capacity.
- 7.1.10 It is noted that CEDD has proposed junction improvement at the Tong Yan San Tsuen Interchange for the Yuen Long South (YLS) development. This junction improvement will be implemented before 2033 and will relieve the current traffic condition.
- 7.1.11 Traffic management measures are proposed to minimize the traffic impact at the nearby Tong Yan San Tsuen Interchange by regulating the visiting time for the visitors (10:00-15:00). This arrangement can avoid traffic congestion during the AM/PM peak hour period.

7.2 Conclusion

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





LEGEND:

WORST OFF-PEAK (12:45 - 13:45) TRAFFIC FLOWS (PCU/HR)

HWSPB
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Ho Wang SPB Limited

PROPOSED TEMPORARY SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) ("RCHE") BY CONVERSION OF FORMER WA FUNG SCHOOL (PART) FOR A PERIOD OF 10 YEARS AND PROPOSED EXCAVATION OF LAND IN ASSOCIATION WITH THE PROPOSED RCHE, LAM HAU TSUEN, YUEN LONG, NEW TERRITORIES

N. T. S.

OCT 2021 3.2

2022 OFF-PEAK TRAFFIC FLOWS

Project Title

WEEKEND TRAFFIC FLOWS (PCU/HR)



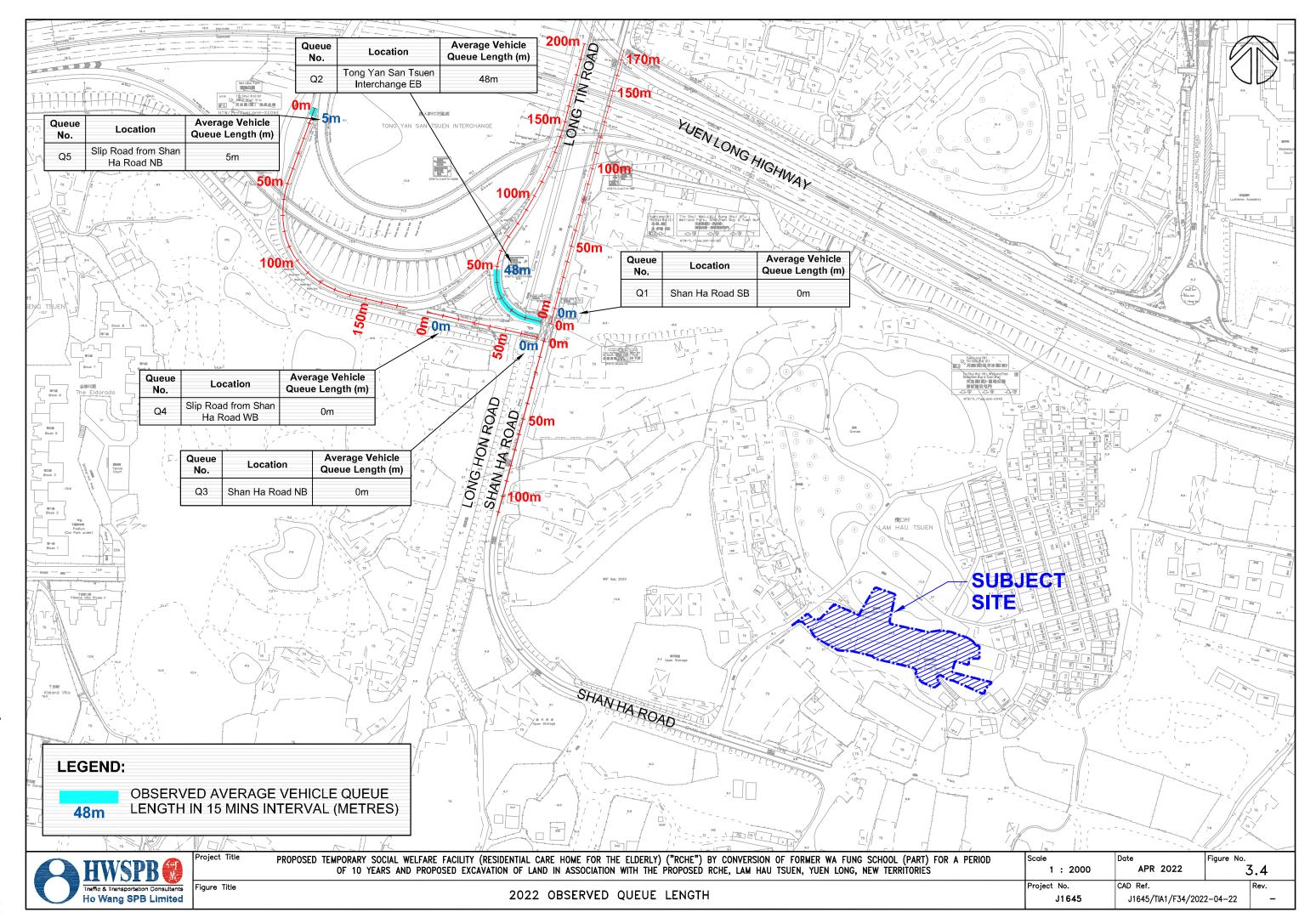
PROPOSED TEMPORARY SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) ("RCHE") BY CONVERSION OF FORMER WA FUNG SCHOOL (PART) FOR A PERIOD OF 10 YEARS AND PROPOSED EXCAVATION OF LAND IN ASSOCIATION WITH THE PROPOSED RCHE, LAM HAU TSUEN, YUEN LONG, NEW TERRITORIES

N. T. S. OCT 2021 Project No.

CAD Ref. J1645

Project Title

3.3



Traffic & Transportation Consultants
Ho Wang SPB Limited

Project Title

PROPOSED TEMPORARY SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) ("RCHE") BY CONVERSION OF FORMER WA FUNG SCHOOL (PART) FOR A PERIOD OF 10 YEARS AND PROPOSED EXCAVATION OF LAND IN ASSOCIATION WITH THE PROPOSED RCHE, LAM HAU TSUEN, YUEN LONG, NEW TERRITORIES

N. T. S. Project No.

J1645

Figure No. OCT 2021 4.1 CAD Ref.

J1645/TIA1/F41C/2022-05-05

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PROPOSED TEMPORARY SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) ("RCHE") BY CONVERSION OF FORMER WA FUNG SCHOOL (PART) FOR A PERIOD OF 10 YEARS AND PROPOSED EXCAVATION OF LAND IN ASSOCIATION WITH THE PROPOSED RCHE, LAM HAU TSUEN, YUEN LONG, NEW TERRITORIES Project Title

N. T. S. OCT 2021 Project No.

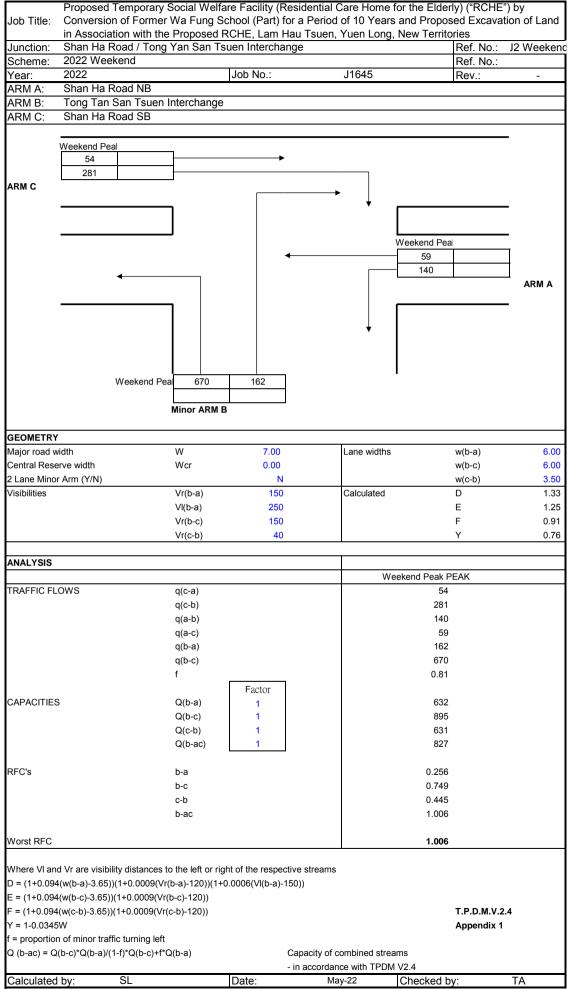
2027 DESIGN WEEKEND TRAFFIC FLOWS

CAD Ref. J1645 J1645/TIA1/F51C/2022-05-05

5.1

APPENDIX A Junction Calculation Sheets

Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Unnamed Access Road / Shan Ha Road Ref. No.: J1 Weekend 2022 Weekend Scheme: Ref. No.: 2022 Job No.: J1645 Rev. Year: ARM A: Shan Ha Road EB ARM B: Unnamed Access Road Shan Ha Road WB ARM C: Weekend Peal 184 ٥ ARM C Weekend Pea 12 ARM A Weekend Pea 15 Minor ARM B GEOMETRY Major road width W 6.00 2.25 Lane widths w(b-a) 0.00 2 25 Central Reserve width Wcr w(b-c) 2 Lane Minor Arm (Y/N) w(c-b) 3.00 Visibilities 30 D 0.74 Vr(b-a) Calculated VI(b-a) 25 Ε 0.80 30 F Vr(b-c) 0.86 30 0.79 Vr(c-b) ANALYSIS Weekend Peak PEAK TRAFFIC FLOWS 184 q(c-a) q(c-b) 0 q(a-b) 12 204 q(a-c) 15 q(b-a) q(b-c) 0 f 0.00 Factor CAPACITIES Q(b-a) 394 Q(b-c) 546 Q(c-b) 589 394 Q(b-ac) RFC's 0.038 b-a 0.000 b-c 0.000 c-b b-ac 0.038 Worst RFC 0.038 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))T.P.D.M.V.2.4 Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 May-22 Calculated by: Date: Checked by:



Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Slip Road from Long Tin Road Southbound / Slip Road from Shan Ha Road Ref. No.: J3 Weekend 2022 Weekend Scheme: Ref. No.: 2022 Job No.: J1645 Rev. Year: ARM A: Slip Road from Long Tin Road Southbound Slip Road from Shan Ha Road ARM B: Weekend Pea ARM A Weekend Pea 501 Minor ARM B GEOMETRY W 9.00 Lane widths 5.50 Major road width w(b-a) 0.00 Central Reserve width Wcr w(b-c) 5.50 2 Lane Minor Arm (Y/N) w(c-b) 0.00 Visibilities 120 D 1.07 Vr(b-a) Calculated VI(b-a) 0 Ε 1.17 120 F Vr(b-c) 0.59 0.69 Vr(c-b) 0 ANALYSIS Weekend Peak PEAK TRAFFIC FLOWS 0 q(c-a) q(c-b) 0 q(a-b) 0 92 q(a-c) 0 q(b-a) q(b-c) 501 f 1.00 Factor CAPACITIES Q(b-a) 645 Q(b-c) 847 Q(c-b) 423 847 Q(b-ac) RFC's 0.000 b-a 0.591 b-c 0.000 c-b b-ac 0.591 Worst RFC 0.591 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))T.P.D.M.V.2.4 Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 May-22 Calculated by: Date: Checked by:

Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Slip Road Leading to Long Tin Road Northbound / Slip Road from Shan Ha Road Ref. No.: 2022 Weekend Scheme: Ref. No.: 2022 Job No.: J1645 Rev.: Year: ARM A: Slip Road Leading to Long Tin Road Northbound Slip Road from Shan Ha Road ARM B: Weekend Pea 1142 ARM A 594 Weekend Pea Minor ARM B GEOMETRY W 11.00 5.00 Major road width Lane widths w(b-a) Central Reserve width Wcr 0.00 w(b-c) 5.00 2 Lane Minor Arm (Y/N) w(c-b) 0.00 Visibilities 0 D 0.91 Vr(b-a) Calculated VI(b-a) 0 Ε 1.11 105 F Vr(b-c) 0.59 0.62 Vr(c-b) 0 ANALYSIS Weekend Peak PEAK TRAFFIC FLOWS 0 q(c-a) q(c-b) 0 q(a-b) 0 1142 q(a-c) q(b-a) 0 q(b-c) 594 f 1.00 Factor CAPACITIES Q(b-a) 338 Q(b-c) 541 Q(c-b) 285 Q(b-ac) 541 RFC's 0.000 b-a 1.098 b-c 0.000 c-b b-ac 1.098 Worst RFC 1.098 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))T.P.D.M.V.2.4 Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 May-22 Calculated by: Date: Checked by:

Traffic Signal Junction Calculation Sheet



Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Job Title: Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Castle Peak Road - Ping Shan / Ma Wang Road / Long Tin Road Ref. No.: J5 Weekend Scheme: 2022 Weekend Ref. No.: 2022 Job No.: J1645 Rev.: Peak Hour Traffic Flows (pcu/hr) Weekend 496 630 1(LRT) -12(LRT) 11p 3 11 3 8 2 14 2 3 4 3 Weekend Peak Lane Wide No. No. Rad. Rad. Grad Site Turning Saturation Flow Approach / Phase Oppo L(m) (m) R(m) (%) Pro. (f) (pcu/hr) Flow Crit. 3.50 100 1870 542 0.290 AC 3.50 1965 542 0.276 4210 0.143 2 3.50 604 AB 2 3.50 4210 604 0.143 ΑB 2055 464 0.226 3.00 AB 100 1710 496 0.290 3.00 12.5 3.00 4110 336 0.082 3.00 1840 150 0.082 Critical Ped. Phase Stage Width Across Min. GM Min. FGM Lost Time Note Crit. 5p \mathbf{C} 10 19 AB 6р 7p В 11 1(LRT) 1940 + 100 x (W - 3.25) Check Critical Phase 4,3 2,1(LRT),3 Nearside Lane: 10,7p 0.372 0.290 2080 + 100 x (W - 3.25) 0.225 Sum of y values, Y Other Lanes: 24 29 14 Lost time, L Gradient & Radius: -42 x (gradient in %) 120 Opposed Traffic -230 Cycle Time, C 120 120 Turning Proportion: x 1 / (1 + 1.5 f/R)Practical Y, Y_{pr} 0.795 0.720 0.683 Practical Y (Ypr): 0.9 x (1 - L/C) Reserve Capacity, R.C. (%) 114% 203% Reserve Capacity (RC): $(Y_{pr}/Y - 1) \times 100\%$ In accordance with TPDM - Volume 4.2.4 Calculated by: Date: May-2022 Checked by

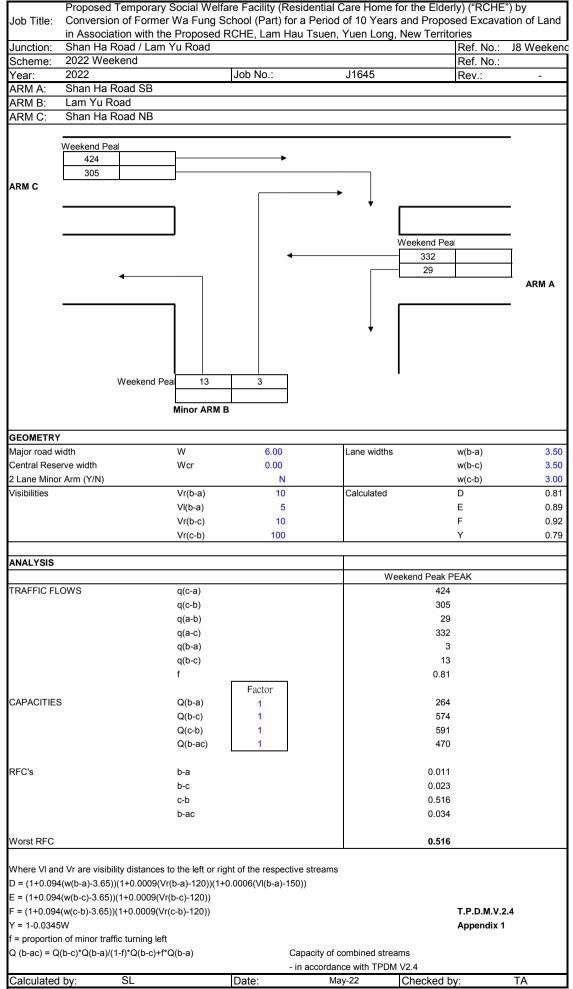
Traffic Signal Junction Calculation Sheet



Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Job Title: Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Shui Pin Wai Interchange Ref. No.: J6 Weekend Scheme: 2022 Weekend Ref. No.: 2022 Job No.: J1645 Year: Rev.: Peak Hour Traffic Flows (pcu/hr) Weekend LONG PING ROAD 朗屏路 630 585 284 3 4 3 3 3 3 5 4 3 3 Weekend Peak Lane Wide No. No. Rad. Rad. Grad. Site Turning Saturation Flow Approach / Phase Near Oppo L(m) (%) (m) R(m) Pro. (f) (pcu/hr) Flow Crit. $\downarrow\downarrow\downarrow\downarrow$ В 3.50 6315 295 0.047 BCD 2 3.50 175 4035 391 0.097 CD 4150 585 0.141 2 3.20 С 30 100 1845 284 0.154 3.20 D 5.00 100 4510 386 0.086 4.00 2155 396 0.184 4.00 75 2005 368 0.184 4.00 1925 353 0.184 Critical Ped. Phase Stage Width Across Min. GM Min. FGM Lost Time Note Crit. Check Critical Phase 2,1,4,3 2,1,5 Nearside Lane: 1940 + 100 x (W - 3.25) 0.470 2080 + 100 x (W - 3.25) 0.371 Sum of y values, Y Other Lanes: 29 18 Gradient & Radius: Lost time, L -42 x (gradient in %) 120 Opposed Traffic -230 Cycle Time, C 120 Turning Proportion: x 1 / (1 + 1.5 f/R)Practical Y, Y_{pr} 0.683 0.765 Practical Y (Ypr): 0.9 x (1 - L/C) Reserve Capacity, R.C. (%) 45% Reserve Capacity (RC): $(Y_{pr}/Y - 1) \times 100\%$ In accordance with TPDM - Volume 4.2.4 Calculated by: Date: May-2022 Checked by:

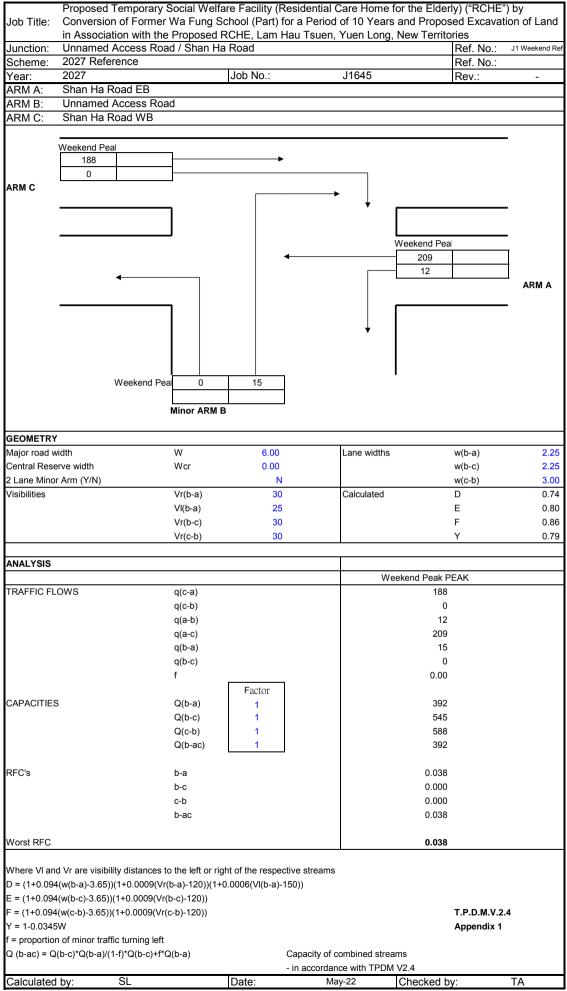


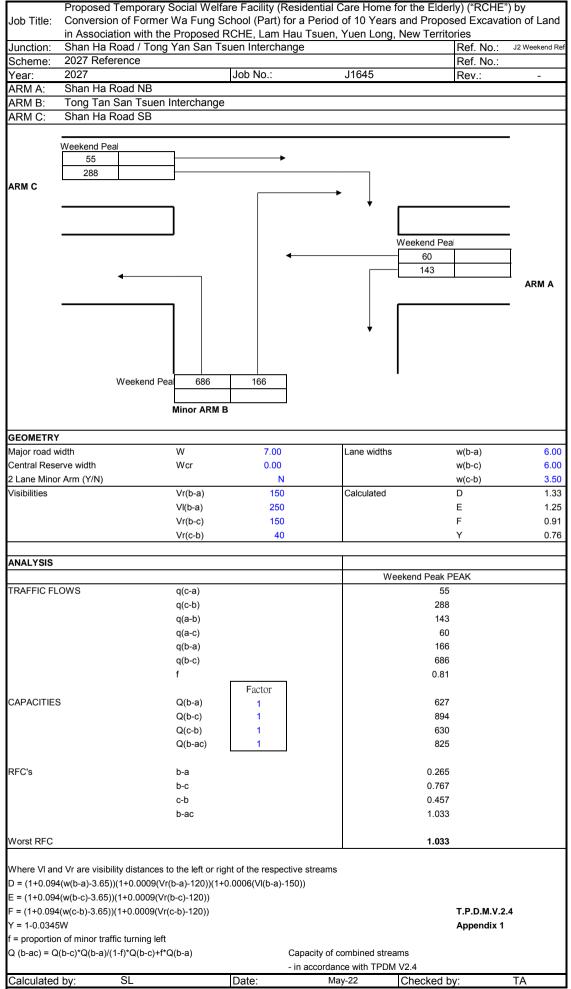
Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Shan Ha Road / Town Park Road South Ref. No.: J7 Weekend 2022 Weekend Scheme: Ref. No.: 2022 Job No.: J1645 Rev. Year: ARM A: Town Park Road South Shan Ha Road ARM B: Town Park Road South ARM C: Weekend Peal 62 53 ARM C Weekend Pea 308 ARM A Weekend Pea 370 Minor ARM B GEOMETRY W 10.50 4.00 Major road width Lane widths w(b-a) Central Reserve width Wcr 0.00 w(b-c) 4.00 2 Lane Minor Arm (Y/N) w(c-b) 4.00 Visibilities 120 D 1.01 Vr(b-a) Calculated VI(b-a) 120 Ε 1.03 F Vr(b-c) 120 0.98 60 0.64 Vr(c-b) ANALYSIS Weekend Peak PEAK TRAFFIC FLOWS 62 q(c-a) q(c-b) 53 q(a-b) 308 53 q(a-c) 370 q(b-a) q(b-c) 57 f 0.13 Factor CAPACITIES Q(b-a) 568 Q(b-c) 728 Q(c-b) 646 Q(b-ac) 585 RFC's 0.651 b-a 0.078 b-c 0.082 c-b b-ac 0.730 Worst RFC 0.730 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))T.P.D.M.V.2.4 Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 May-22 Calculated by: Date: Checked by:

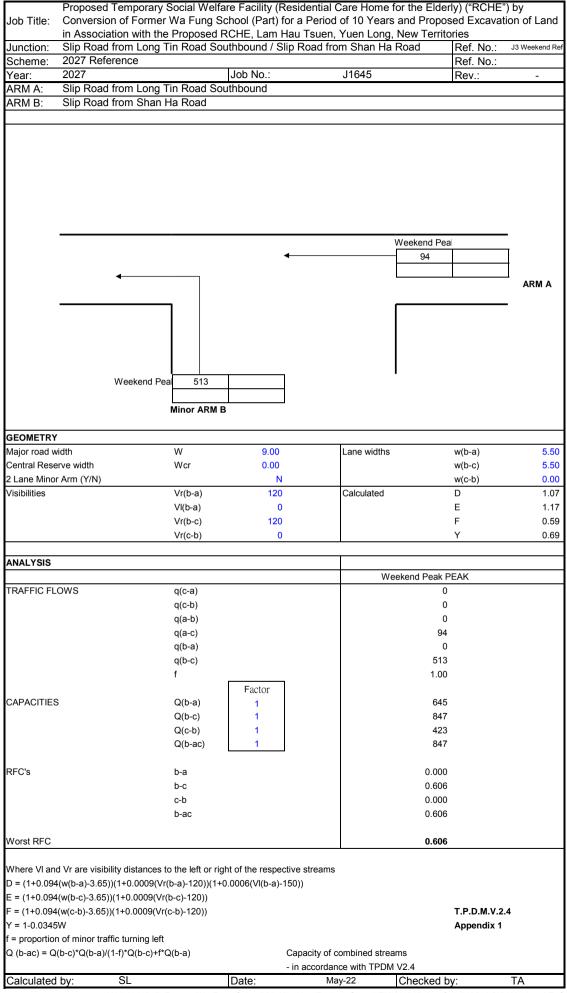


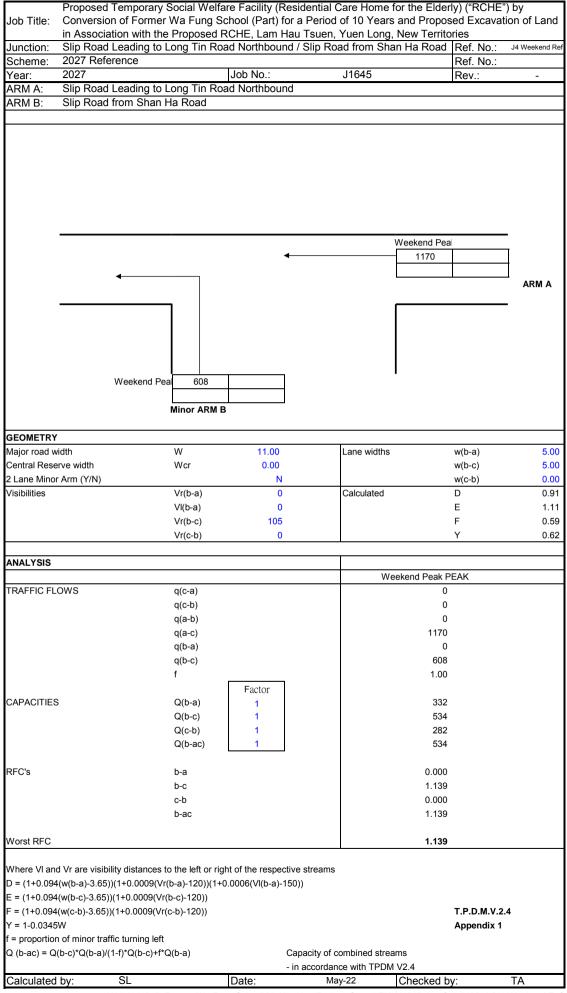


Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Job Title: Conversion of Former Wa Fung School (Part) for a Period of 10 Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Slip Road from Shan Ha Road / Long Hon Road Ref. No.: J9 Weekend 2022 Weekend Scheme: Ref. No.: 2022 Job No.: J1645 Rev. Year: ARM A: Slip Road from Shan Ha Road ARM B: Long Hon Road Slip Road from Shan Ha Road ARM C: Weekend Peal 759 79 ARM C Weekend Pea 37 ARM A 117 73 Weekend Pea Minor ARM B GEOMETRY W 7.50 4.00 Major road width Lane widths w(b-a) 0.00 Central Reserve width Wcr w(b-c) 4.00 2 Lane Minor Arm (Y/N) w(c-b) 5.50 Visibilities 20 D 0.88 Vr(b-a) Calculated VI(b-a) 35 Е 0.94 20 F Vr(b-c) 1.07 25 Vr(c-b) 0.74 ANALYSIS Weekend Peak PEAK TRAFFIC FLOWS 759 q(c-a) q(c-b) 79 q(a-b) 37 384 q(a-c) 73 q(b-a) q(b-c) 117 f 0.62 Factor CAPACITIES Q(b-a) 315 Q(b-c) 599 Q(c-b) 678 Q(b-ac) 445 RFC's 0.232 b-a 0.195 b-c 0.117 c-b b-ac 0.427 Worst RFC 0.427 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))T.P.D.M.V.2.4 Y = 1-0.0345W Appendix 1 = 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 - in accordance with TPDM V2.4 May-22 Calculated by: Date: Checked by:









Traffic Signal Junction Calculation Sheet

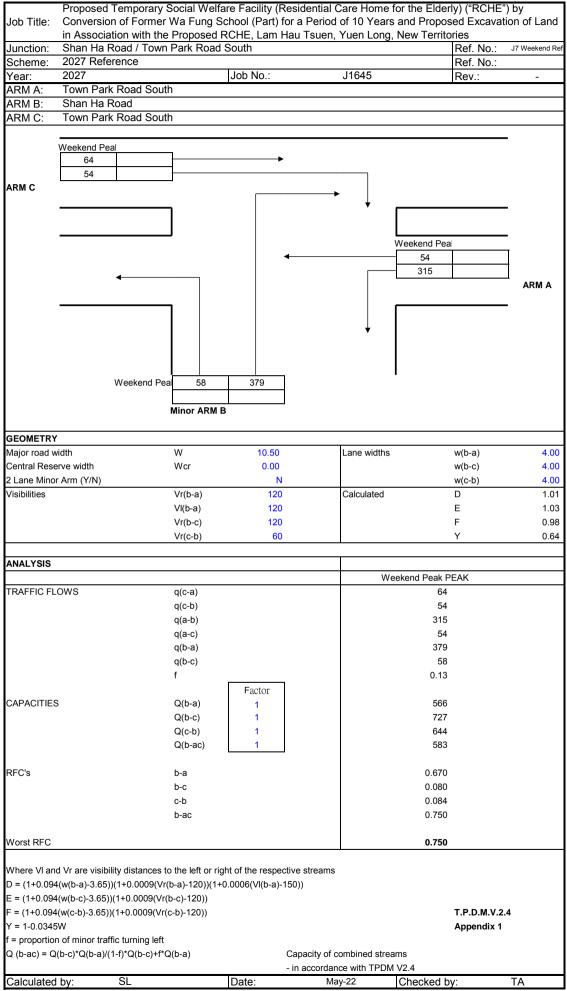


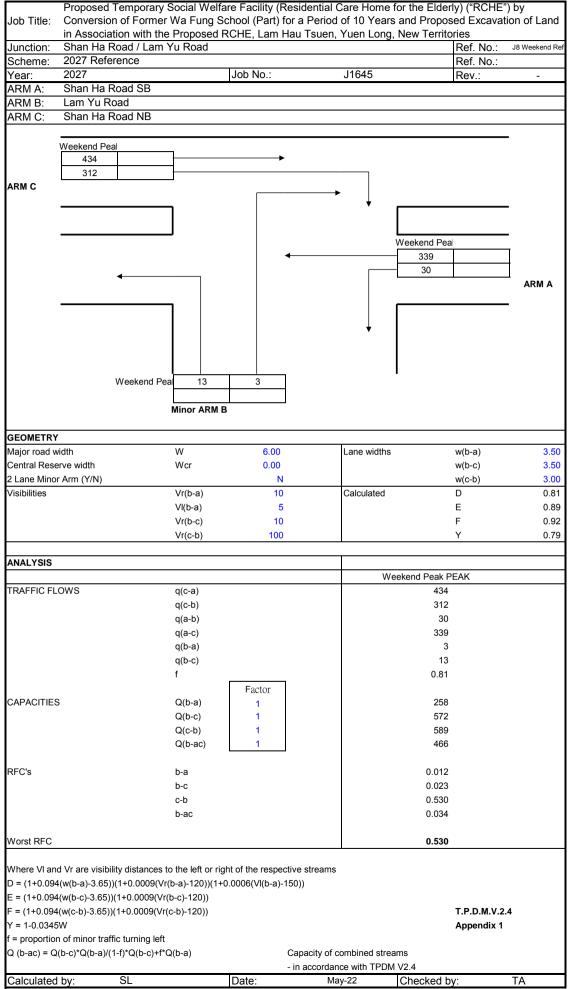
Proposed Temporary Social Welfare Facility (Residential Care Home for the Elderly) ("RCHE") by Conversion of Former Wa Fung School (Part) for a Period of 10 Job Title: Years and Proposed Excavation of Land in Association with the Proposed RCHE, Lam Hau Tsuen, Yuen Long, New Territories Junction: Castle Peak Road - Ping Shan / Ma Wang Road / Long Tin Road Ref. No.: J5 Weekend Rei Scheme: 2027 Reference Ref. No.: 2027 Job No.: J1645 Rev. Peak Hour Traffic Flows (pcu/hr) Weekend 508 1(LRT) -12(LRT) 11p 3 11 3 8 2 14 2 3 4 3 Weekend Peak Lane Wide No. No. Rad. Rad. Grad Site Turning Saturation Flow Approach / Phase Oppo L(m) (m) R(m) (%) Pro. (f) (pcu/hr) Flow Crit. 3.50 100 1870 555 0.297 AC 3.50 1965 555 0.282 4210 0.147 2 3.50 619 AB 2 3.50 4210 619 0.147 ΑB 2055 475 0.231 3.00 AB 100 1710 508 0.297 3.00 12.5 3.00 4110 344 0.084 3.00 1840 154 0.084 Critical Ped. Phase Stage Width Across Min. GM Min. FGM Lost Time Note Crit. 5p \mathbf{C} 10 19 AB 15 6р 7p В 11 1(LRT) Check Critical Phase 4,3 2,1(LRT),3 Nearside Lane: 1940 + 100 x (W - 3.25) 10,7p 0.381 0.297 2080 + 100 x (W - 3.25) 0.231 Sum of y values, Y Other Lanes: 24 29 Lost time, L 14 Gradient & Radius: -42 x (gradient in %) 120 Opposed Traffic -230 Cycle Time, C 120 120 Turning Proportion: x 1 / (1 + 1.5 f/R)Practical Y, Y_{pr} 0.795 0.720 0.683 Practical Y (Ypr): 0.9 x (1 - L/C) Reserve Capacity, R.C. (%) 109% 143% Reserve Capacity (RC): $(Y_{pr}/Y - 1) \times 100\%$ In accordance with TPDM - Volume 4.2.4 Calculated by: Date: May-2022

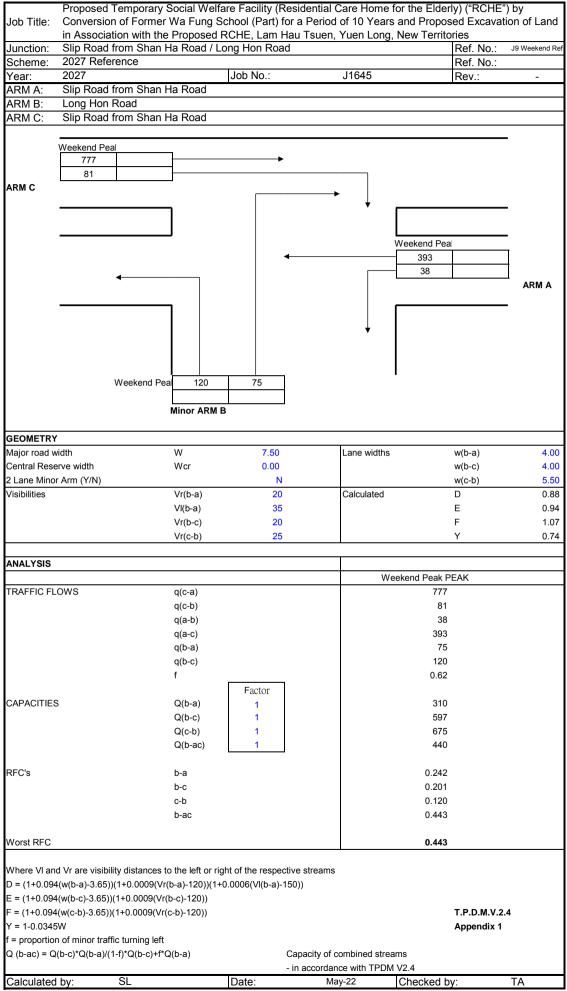
Traffic Signal Junction Calculation Sheet

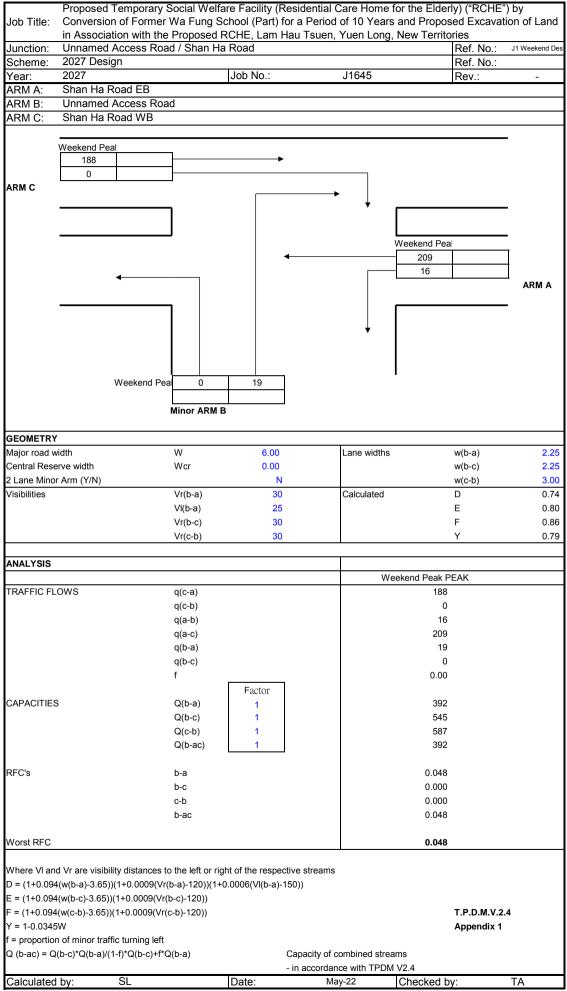


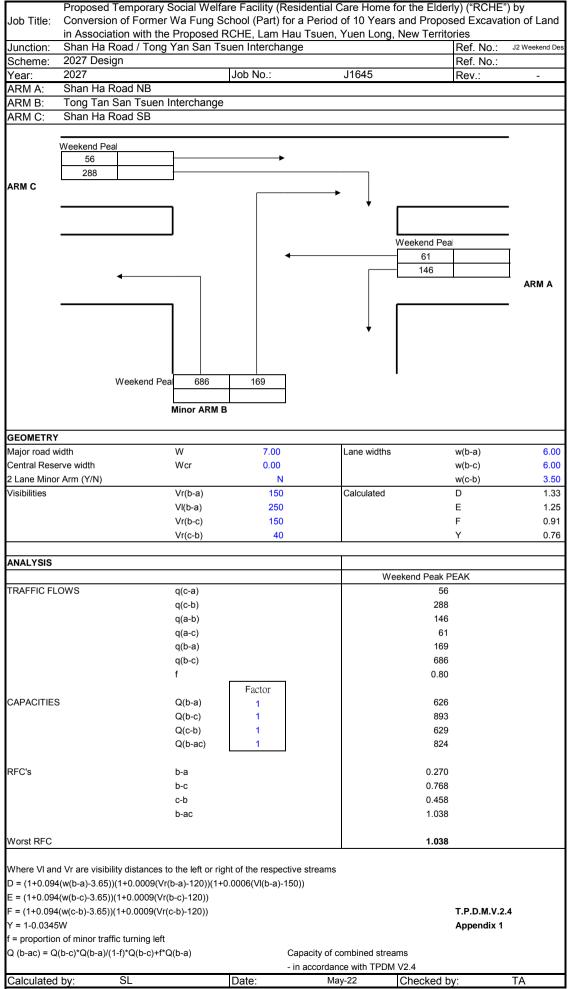
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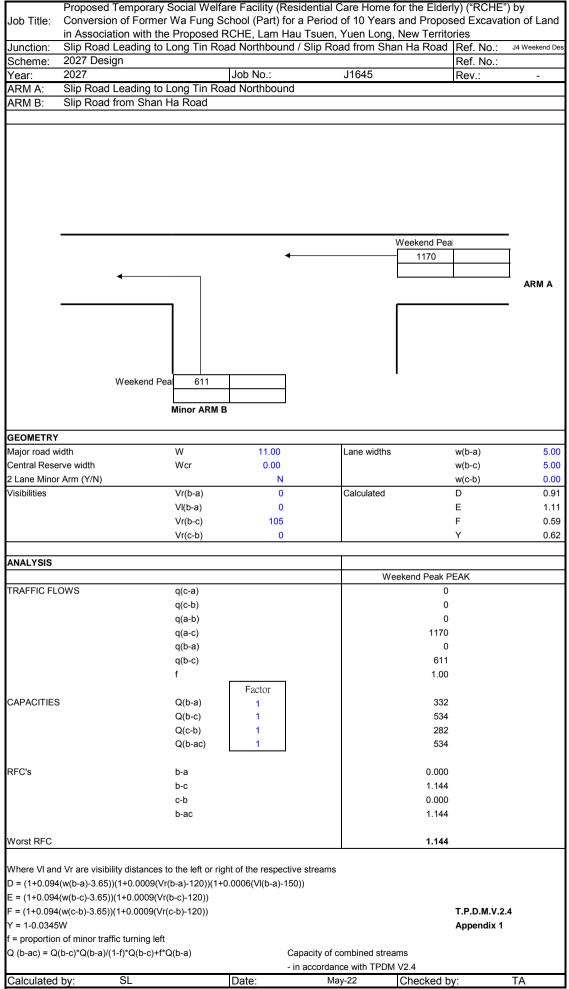








Job Title:	Conversion of Forr	mer Wa Fung S	School (Part) f	or a Period	of 10 Years	and Propos	ed Excavation	•
	in Association with	the Proposed	RCHE, Lam I	lau Tsuen, `	Yuen Long,	New Territo		
Junction:	Slip Road from Lor	ng Tin Road So	outhbound / S	lip Road fror	m Shan Ha	Road		J3 Weekend Des
Scheme:	2027 Design						Ref. No.:	
Year:	2027		Job No.:		J1645		Rev.:	-
ARM A:	Slip Road from Lor	ng Tin Road So	outhbound					
ARM B:	Slip Road from Sha	an Ha Road						
	•							
	★			◀		Weekend Pea 94		ARM A
	Weekend	d Pea 516 Minor ARM	В					
GEOMETRY Major road v		W	0.00	1	Lane widths		w(b-2)	E EO
Major road v Central Rese			9.00		Lane widths		w(b-a)	5.50
		Wcr	0.00				w(b-c)	5.50
2 Lane Mino	n Allii (T/N)	\/m/ln -\	N 120		Calardat - d		w(c-b)	0.00
Visibilities		Vr(b-a)	120		Calculated		D	1.07
		VI(b-a)	0				E	1.17
		Vr(b-c)	120				F	0.59
		Vr(c-b)	0				Υ	0.69
ANAL VEIC					_			
ANALYSIS					We	ekend Peak P	EAK	
TRAFFIC FL	_OWS	q(c-a)			****	0		
	- · · -	q(c-b)				0		
		q(c-b) q(a-b)				0		
		q(a-c)				94		
		q(b-a)				0		
		q(b-c)				516		
		f		1		1.00		
<u> </u>	_	_	Factor					
CAPACITIES	S	Q(b-a)	1			645		
		Q(b-c)	1			847		
		Q(c-b)	1			423		
		Q(b-ac)	1			847		
RFC's		b-a				0.000		
		b-c				0.609		
		c-b				0.000		
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Worst RFC						0.609		
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-	4(w(c-b)-3.65))(1+0.0009						T.P.D.M.V.2.4	
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	n of minor traffic turning	left						
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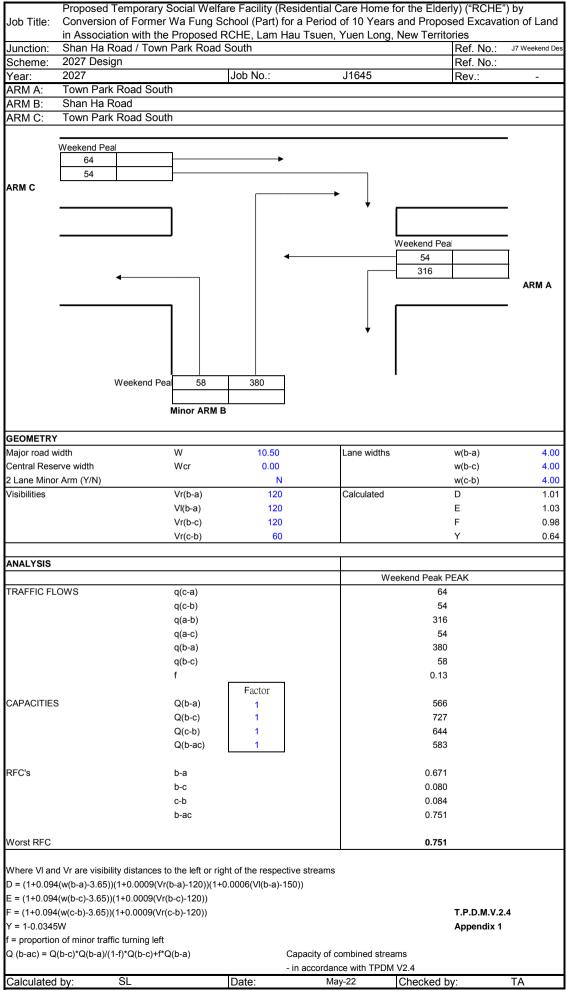
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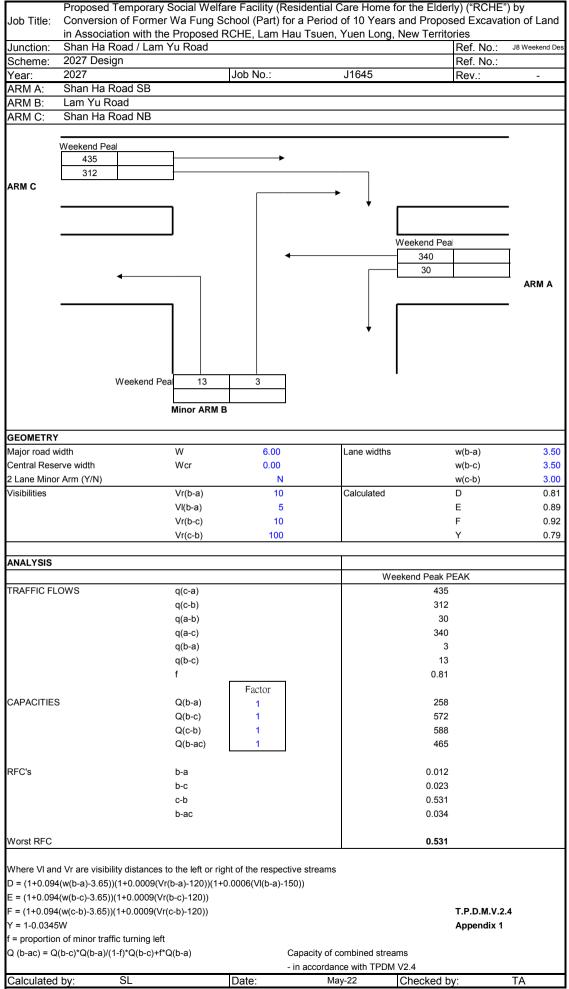


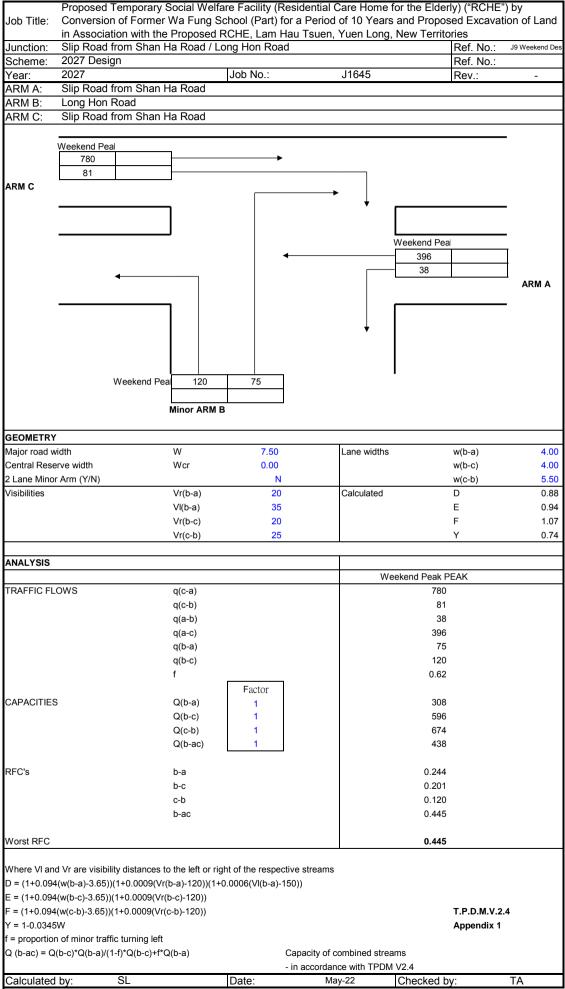
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Traffic Signal Junction Calculation Sheet

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APPENDIX B

Confirmation from PlanD on the Planned Development via email dated 31 January 2022

Samuel Lo

寄件者:ocmwong@pland.gov.hk寄件日期:2022年1-31日 3:50 PM

收件者: Wilson Wong

副本: ansoncheung@adrg.com.hk; kimchan; 'Samuel Lo'

主旨: Re: [A/YL-TYST/1132] [ADRG/Lam Hau] Enquiry on planning assumptions (TD comment (j))

Dear Wilson,

I refer to your preceding emails with an enclosed letter dated 17.1.2022 (Your Ref.: YL-LH/PA/GCSE/21-11) requesting the information of the planned developments in the vicinity of the proposed development under planning application No. A/YL-TYST/1132.

Based on the location plan attached to your email dated 19.1.2022, we would like to confirm the planned developments listed in the summary list enclosed in your letter is generally in line with the current development in the area and please see below for our comment on the Yuen Long Industrial Estate Extension:

- The GFA should be 300,000 sq.m and the project will be completed tentatively in 2032/33.

Regards,

Ophelia WONG

Tuen Mun & Yuen Long West District Planning Office

Planning Department

Tel.: 2158 6298 Fax.: 2489 9711

From: Wilson Wong < wiwong@visionplanning.com.hk >

To: Ophelia Wong < ocmwong@pland.gov.hk >

Cc: kimchan < kimchan@visionplanning.com.hk >, 'Samuel Lo' < samuello@howangspb.com >, ansoncheung@adrg.com.hk

Date: 19/01/2022 17:03

Subject: Re: [A/YL-TYST/1132] [ADRG/Lam Hau] Enquiry on planning assumptions (TD comment (j))

Dear Ophelia,

Please find the AOI boundary with a radius of 500m from the concerned junctions marked on the attached plan (500m radius of concerned junctions.jpg) for your reference. Thanks!

Best Regards, Wilson Wong

Vision Planning Consultants Ltd.

D: 2566 7031 | T: 2566 9988 | F: 2566 9978

From: Wilson Wong [mailto:wiwong@visionplanning.com.hk]

Sent: Monday, January 17, 2022, 6:53 PM **To:** Ophelia Wong socmwong@pland.gov.hk>

Cc: 'Samuel Lo' samuello@howangspb.com, <a href="mailto:ansanged-nashed-nas

<kimchan@visionplanning.com.hk>

Subject: [A/YL-TYST/1132] [ADRG/Lam Hau] Enquiry on planning assumptions (TD comment (j))

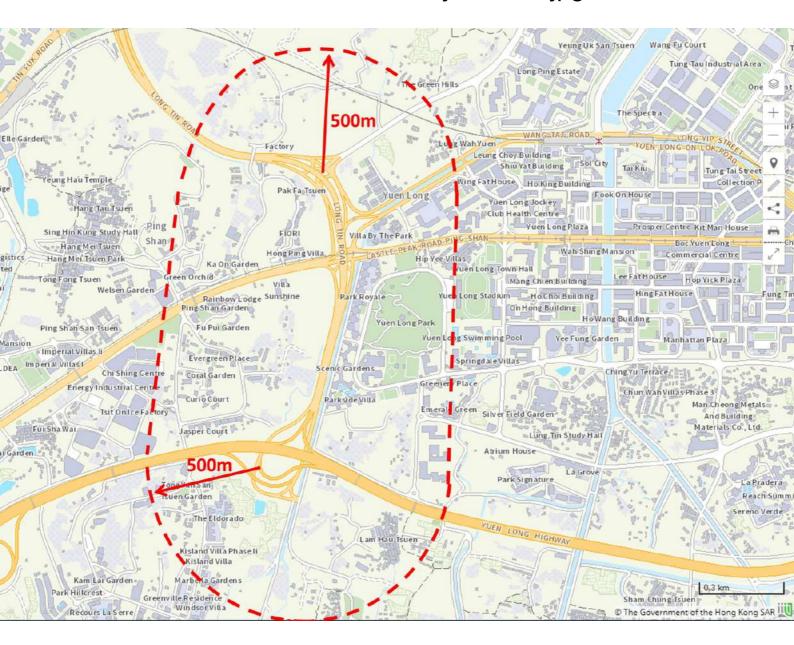
Dear Ophelia,

As per TD's comment (j) on the report of TIA submitted under Application No. A/YL-TYST/1132, please find attached a letter seeking PlanD's confirmation on the relevant planned developments in the vicinity of the application site.

Should you have any questions, please feel free to contact me. Thanks.

Best Regards,
Wilson Wong
Vision Planning Consultants Ltd.
D: 2566 7031 | T: 2566 9988 | F: 2566 9978

500m radius of concerned junctions.jpg





VISION PLANNING CONSULTANTS LTD. 弘域城市規劃顧問有限公司

Our Ref: YL-LH/PA/GCSE/21-11 Your Ref: TPB/A/YL-TYST/1132

Date: 17 January, 2022

Ms. WONG, Ophelia
Tuen Mun and Yuen Long West
District Planning Office,
Planning Department,
14/F, Sha Tin Government Offices,
1 Sheung Wo Che Road,
Sha Tin, N.T.

Dear Ms. WONG,

Proposed Temporary 'Social Welfare Facility' (Residential Care Home for the Elderly) ("RCHE") for a Period of 10 Years and Excavation of Land in Government Land in D.D. 120, Lam Hau Tsuen, Yuen Long, New Territories – Enquiry on planning assumptions

We refer to the request of the Transport Department in its comment (j) on the report of TIA submitted under Application No. A/YL-TYST/1132: "the applicant should seek Planning Department's advice on the planning assumptions and provide the written record from Planning Department for our review". In this connection, the project traffic consultant, Ho Wang SPB Limited ("HWSPB"), has identified all relevant planned developments in the vicinity of the application site, and we would like to seek your kind assistance to confirm whether there are any other planned developments not included in the summary list provided in HWSPB's letter (Attachment A).

Should you have any queries with regards to the above, please do not hesitate to contact our Mr. Wilson WONG or the undersigned at 2566 9988.

Thank you very much for your kind attention.

Yours faithfully, for and on behalf of

VISION PLANNING CONSULTANTS LTD.

Kim On CHAN Managing Director

Encl. [KC/WW]

[YL-LH/PA/GCSE/21-05] c.c Project Team

TM&YLW DPO (Attn.: Ms. Ophelia WONG)

By email By email



By Email



Ho Wang SPB Limited 何黃交通顧問有限公司

香港上環蘇杭街41 - 47號蘇杭商業大廈5樓

5 Floor, So Hong Commercial Building, 41 - 47 Jervois Street, Sheung Wan, Hong Kong Tel: (852) 2865 0090 Fax: (852) 2866 4332 E-mail: info@howangspb.com

BY EMAIL (ocmwong@pland.gov.hk)

17 January 2022

Our reference: J1645/5

Planning Department District Planning Branch New Territories District Planning Division Tuen Mun and Yuen Long West District Planning Office 14/F, Sha Tin Government Offices, 1 Sheung Wo Che Road, Sha Tin, N.T.

Attention: Ms. WONG Cheuk Man, Ophelia (Asst Town Plnr/Yuen Long West 1)

Dear Ms. Wong,

Planning Application No. A/YL-TYST/1132 - Temporary RCHE for a Period of 10 Years PlanD's Confirmation on the Adopted Planning Assumptions for Traffic Forecast

We refer to the Transport Department's comment item (j) on the TIA report of this captioned planning application dated 28/12/2021 and requested HWSPB to seek PlanD's confirmation on the future planned developments adopted in the traffic forecast for TIA (Design year: 2027) and EIA (Design year: 2039) studies.

We have summarised the adopted planned developments in the vicinity of the site based on the public available information for your review/confirmation.

Planned Development	Development Parameters	Estimated Population	Anticipated Intake Year
Yuen Long South Development	229,930m ² commercial GFA 484,110m ² industrial GFA	32,850 flats	First intake: 2028 Full intake: 2038
Hung Shui Kiu/Ha Tsuen New Development Area (HSK/HT NDA)	2,000,000m ² commercial GFA 4,300,000m ² industrial GFA	61,000 flats	First intake: 2024 Full intake: 2037
Proposed Public Rental Housing Development at Ex- Long Bin Interim Housing		Phase 1: 3,080 flats Phase 2: 8,860 flats	Phase 1: 2024/2025 Phase 2: 2029/30- 2030/31
Proposed Public Housing Development at Wang Chau Remaining Phases (WCRP)	æ:	13,000 flats	2033
Yuen Long Industrial Estate Extension	291,545m² industrial GFA		2026/2027

Cont'd/...2

BEng (Hons) MSc MHKIE MCIHT



传 眞: (86) 21-5465 6573



Page 2 (17 January 2022) Our reference: J1645/5 Planning Department Ms. WONG Cheuk Man, Ophelia

We would be grateful if you could kindly confirm whether the above planned developments are accurate.

We wish to thank you for your kind assistance and should you have any queries, please feel free to contact the undersigned or our Mr. Tommy Lam at 2865-0090.

Yours sincerely, For and on behalf of Ho Wang SPB Limited

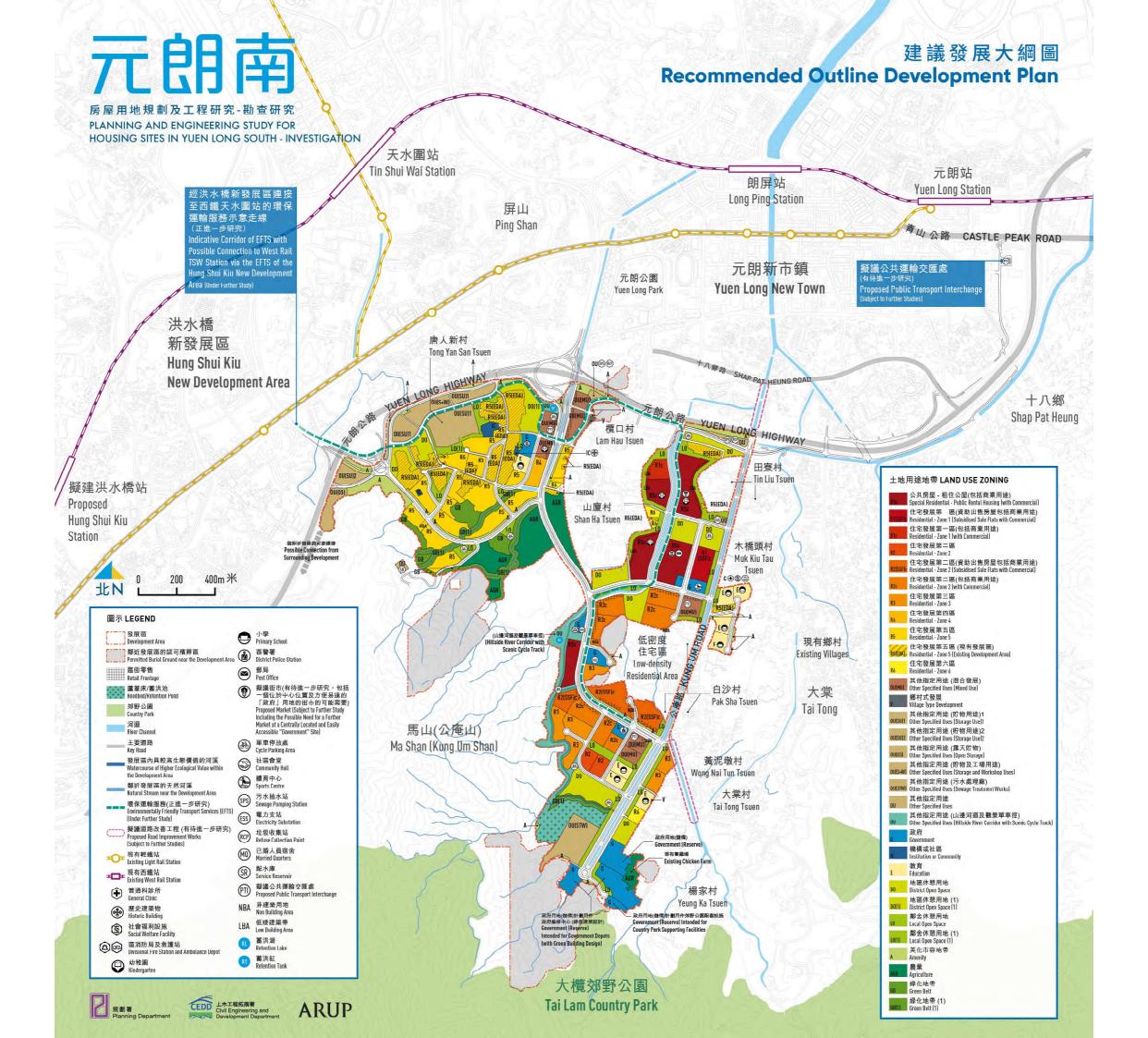
Tinson Leung

Deputy Executive Director

JW/TL/TA/SL/my Encl.

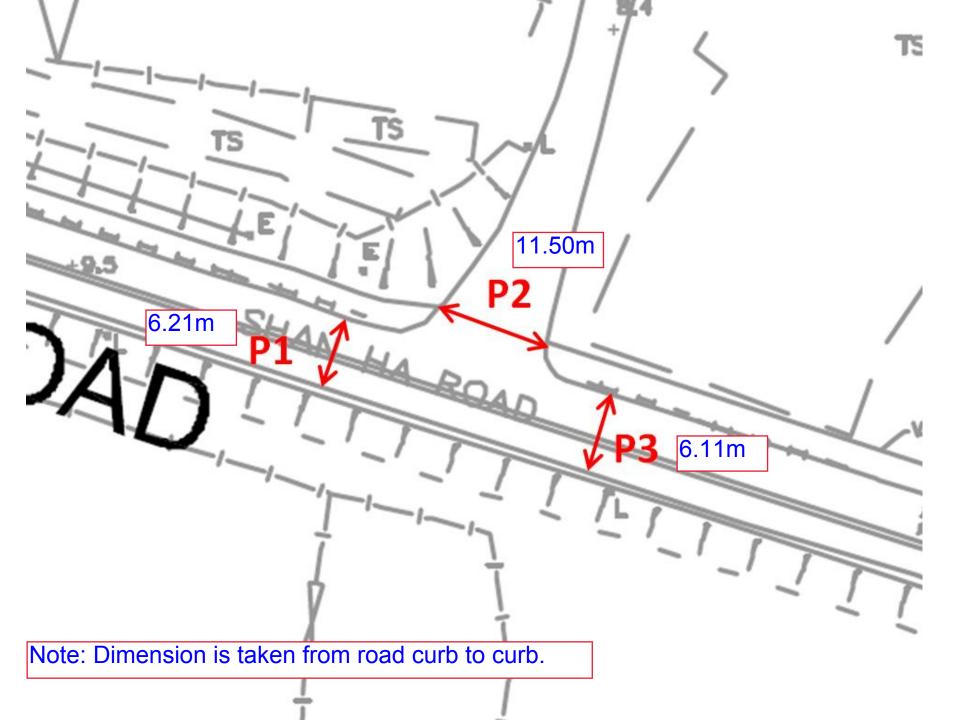
APPENDIX C

CEDD's Improvement Proposal of Tong Yan San Tsuen Interchange



APPENDIX D

Layout Plan of the Proposed Run-in/out at Shan Ha Road





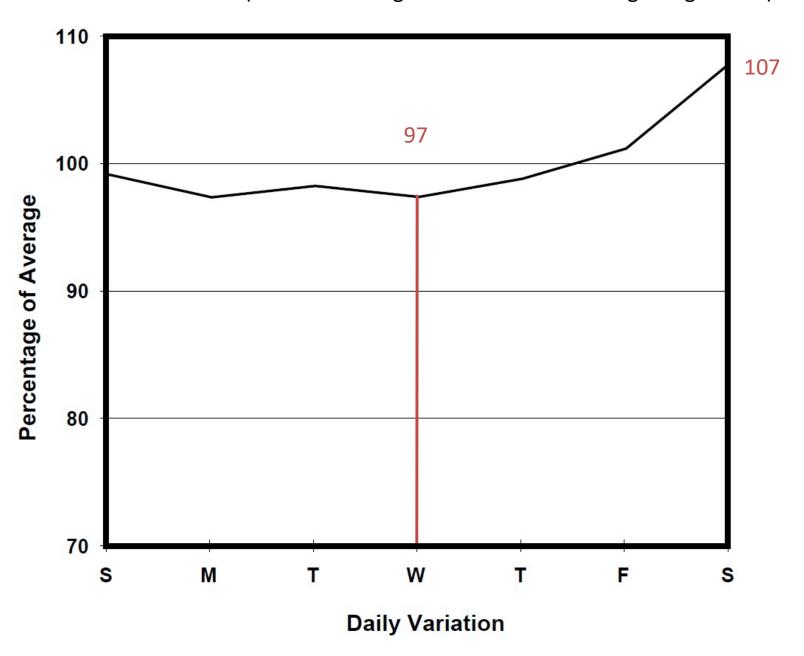




APPENDIX E

Daily Variation Pattern of ATC Station No. 5008

Core Station No. 5008
Kau Yuk Rd (from Yuen Long Tai Yuk Rd to Yuen Long Hong Lok Rd)



Previous Applications covering the Application Site

Approved Applications

	Application No.	Proposed Use(s)/Development(s)	<u>Date of Consideration</u> (RNTPC/TPB)
1	A/YL-TYST/162	Extension of School Building	1.3.2002
2	A/YL-TYST/333	Proposed Temporary Social Service	3.11.2006
		Centre for a Period of 3 Years	[revoked on 3.5.2008]

Government Bureau/Departments' General Comments

1. Policy and Social Welfare Aspects

- (a) Comments of the Secretary for Labour and Welfare (SLW):
 - no objection in principle to the planning application.
- (b) Comments of the Director of Social Welfare (DSW):
 - in view of the keen demand for residential care services for the elderly over the territory, subject to the planning permission by the Town Planning Board (the Board) and views of other government departments, he has no objection in principle on the development of the proposed residential care home for the elderly (RCHE) operation on self-financing or private mode at the application site (the Site) on the conditions that:
 - (i) there shall be no capital and recurrent financial implication to the government; and
 - (ii) the design and construction of the proposed RCHE shall be in full compliance with relevant prevailing Ordinances, Regulations and Codes of Practice enforcing in Hong Kong and any licensing requirements issued by his department, including but not limited to
 - a. the Residential Care Homes (Elderly Persons) Ordinance (Cap. 459);
 - b. the Residential Care Homes (Elderly Persons) Regulation (Cap. 459A); and
 - c. the latest version of the Code of Practice for Residential Care Homes (Elderly Persons).

2. Land Administration

Comments of the District Lands Officer/Yuen Long, Lands Department (DLO/YL, LandsD):

- major part of the Site lies within the boundary of the vacant school premises, i.e. ex-Wa Fung School (PS90). Remaining part of the Site falls within unallocated government land (GL).
- the Site is accessible from Shan Ha Road via a number of adjoining private lots and GL. Hence, there is no guarantee that any right-of-way (for pedestrians or vehicles) from Shan Ha Road to the Site would be available.
- there is no Small House application under processing/approved within the Site.

3. Traffic

(a) Comments of the Commissioner for Transport (C for T):

- no adverse comment on the application.
- (b) Comments of the Chief Highway Engineer/New Territories West, Highways Department (CHE/NTW, HyD):
 - no adverse comment on the application.

4. Environment and Sewerage

Comments of the Director of Environmental Protection (DEP):

- having considered the Further Information (**Appendices Ic and Id**), he has no further comment on the application provided that:
 - (i) the applicant will submit a proper Noise Impact Assessment Report for the general building plan and provide mitigation measures to achieve full compliance with the noise criteria in Hong Kong Planning Standards and Guidelines; and
 - (ii) the applicant will adopt on-site tertiary sewage treatment plant for the proposed development as the alternative sewage disposal option proposed by the applicant is not desirable and may have adverse water quality impact.

5. Drainage

Comments of the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD):

- no objection in principle to the proposed development from the public drainage point of view.
- should the Board consider that the application is acceptable from the planning point of view, approval conditions requiring the submission, implementation and maintenance of a revised drainage proposal for the development to the satisfaction of the Director of Drainage Services or of the Board should be stipulated.

6. Landscape

Comments of the Chief Town Planner/Urban Design and Landscape, Planning Department (CTP/UD&L, PlanD):

- no objection to the application from landscape planning perspective.
- based on the aerial photo and site photos taken in 2021 and 2022 respectively, the Site is situated in an area of miscellaneous rural fringe landscape character predominated by temporary structures, open storage yards, village houses, car parks and scattered tree groups. The proposed development is considered not incompatible with the landscape character of the surrounding area.
- with reference to the submitted landscape design proposal, the Site is covered with
 existing trees of common species and self-seeded vegetation. Some existing trees in fair
 condition are found at the centre portion and south-eastern boundaries of the Site.
 According to the proposed tree preservation scheme provided by the applicant,
 approximately 80 existing trees were identified, of which 29 are proposed to be retained

in situ, the remaining 51 to be felled. As shown on the compensatory planting proposal, 51 trees (including 32 heavy standard trees and 19 whip size trees) are proposed to be planted within the Site. Significant adverse landscape impact on the existing landscape resources arising from the proposed development is not envisaged.

7. Geotechnical

Comments of the Head of Geotechnical Engineering Office, Civil Engineering and Development Department (H(GEO), CEDD):

• while preliminary contents related to geotechnical assessment/ proposals in the Geotechnical Planning Review Report was submitted for the planning application, his office shall provide comments on the geotechnical aspect of the proposed development upon receipt of the referral of geotechnical submissions from Buildings Department (BD).

8. Fire Safety

Comments of the Director of Fire Services (D of FS):

• no objection in principle to the proposed RCHE provided that fire service installations and water supplies for firefighting will be provided to his satisfaction and that the height restriction as stipulated in S.20 of Cap. 459A is observed.

9. **Building Matters**

Comments of the Chief Building Surveyor/New Territories West, BD (CBS/NTW, BD):

• noting that the proposed temporary social welfare facility (RCHE) is located on GL, he is not in a position to comment under the Buildings Ordinance.

10. District Office's Comments

Comments of the District Officer (Yuen Long), Home Affairs Department (DO(YL), HAD):

- His office received five supportive comments from the village representatives (VRs) of Lam Hau Tsuen and Shan Ha Tsuen (Appendices III-1 to III-5, in which the second one includes 245 letters in standard format (extract examples at Appendix III-2) and the latter three in the form of petition letters with 73, 140 and 69 signatures, Appendices III-3 to III-5 respectively). Two adverse comments from some villagers of Lam Hau Tsuen (in the form of petition letters with 25 and 15 signatures, Appendices III-6 and III-7 respectively) were also received.
- The VR of Lam Hau Tsuen supports the application without stating any particular grounds (**Appendix III-1**). The VRs and some villagers of Lam Hau Tsuen and Shan Ha Tsuen (**Appendices III-2 to III-5**) support the application on the grounds that the majority of villagers support the application; the Site and its surrounding is more suitable for RCHE use than Small House development; the one-storey design will not affect the existing village environment; the proposal can preserve the existing buildings and landscape; and the applicant is a trustworthy social service provider, etc.
- Two groups of villagers from Lam Hau Tsuen (Appendices III-6 and III-7) object to

the application on similar grounds as those stated in paragraph 10.3 of the RNTPC Paper.

11. Other Departments

• Project Manager (West), CEDD (PM(W), CEDD), Director of Agriculture, Fisheries and Conservation (DAFC), Chief Engineer/Construction, Water Supplies Department (CE/C, WSD) and Commissioner of Police (C of P) have no comment on the application.

致城市規劃委員會秘書:

專人送遞或郵遞:香港北角渡平道 333 號北角政府合署 15 楼

体真:2877 0245 或 2522 8426

電郵: tpbpd@pland.gov.hk

To: Secretary, Town Planning Board

By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong

By Fax: 2877 0245 or 2522 8426 By e-mail: tpbpd@pland.gov.hk

有网的规制申請编號 The application no. to which the comment relates A/YL-TYST/1132_

意見詳情 (如有需要, 請另頁說明)

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-2-

29-NOV-2021 14:38

21-DEC-2021

96%

P.012

97%

P.004

七成市共劃委員會主席 一橋案編號/A/YL-TYST/1132

元科山厦村711号度地下

主席发生月烟:

有関在文量120約政府土地 前華村小學擬建護理院含事宜

新年快樂/身體健康

就此荒廢核含多年、山區村及村置口村(份屬及年村)特同意将此大孩冷陵度多一所多用途之怎么服務中心以協助政府推行的展表服務、以舒為裏香港人口怎么多是设的照顧長春等問題。我亦於2019年聯回其他三位之村代表去信告首村黨別成文士安求在此已荒廢的校会發展為安老服務的設施。可惜了天涯甚至因而把之門外!

章的得合方的助。更重要的是得到本港大阪总盖的電腦格文和協助興建,因此管味申請、事前我們的村香中已經經格之礼之序等人計劃如何為建,慶幸格之礼於真直所有經費、使问是其可以解決。但奇怪是認識過程並沒有包括我村、多此我问真素簽信的搜查以影的職員查詢,得到於答覆是可以、並收集所有查是220+多转,交由民政事務處
《答轉号 黃處》。

她有任何关乎此次諮詢的事宜,都远與下述人任

再对身體健康一工作的快!

最致镨 山厦村村(表(原居民)) y

副本年之尉民政事務處」

このことすと月九日



同意「更改前華封學校土地用途作為榕光社護理安老院」的城市規劃申請

本人 LWOK SEL NGA 於悉知榕光社已於 2021 年 11 月 19 日所提交的「更改前華封學校土地用途作為榕光社護理安老院」的城市規劃申請。在了解榕光社辦社宗旨及短期租用校舍現址作護理安老院的理由後,本人決定支持並同意榕光社短期租用前華封學校作為護理安老院的安排、及相關的城市規劃申請基於下列原因:

- 一) 單層的規劃建議符合本村風水;
- 二) 榕光社的規劃申請非常專業,考慮了各種環境因素及交通配套;
- 三) 規劃建議有利建築保育及善用原有校舍的旁邊園林設施

新界元朗山廈村村民:

日期:るが年 1 月19日

同意「榕光社短期租用前華封學校土地作為護理安老院」的 城市規劃申請

- (一) 護理安老院不影響附近現有居民的生活及提供鄰里互助的用 途;
- (二) 護理安老院的建議可提供社區設施,讓居民有更好的整體生活 環境;
- (三) 規劃建議充分考慮對環境因素的照顧;
- (四) 規劃建議有利建築保育及善用原有校舍的旁邊園林設施;
- (五) 單層的規劃建議符合本村風水;
- (六) 護理安老院是適合本村附近的用途

日期: シのア年 / 月 / 9日

致 城市規劃委員會秘書:

ø

新界元朗欖口村丈量約份第 120 的政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期 10 年)及挖土工程 (申請編號: A/YL-TYST/1132) 支持意見

就有關上述規劃申請,本村提出支持意見如下:

- (一) 經本村村代表諮詢,本村大部份村民支持上述規劃申請。
- (二)上述地段適合開辦護理安老院,因為村內環境較為幽靜,適合長者安養生活。而且可以為元朗區內有需要的長者提供服務,解決需求問題。
- (三) 申請者「榕光社」在本港開辦安老院知名度高,聲譽良好, 所以得到屏山鄉山廈村村代表及欖口村村代表的支持。
- (四)本村得悉規劃署收到個別人士對上述申請提出反對意見,理由是要求保留該幅土地以興建小型屋宇。但本村一眾村民均認為該幅土地更適合開辦安老院,而且相信地政總署難以審批興建小型屋宇。

現特函聯署向 貴委員會提出意見,請 貴委員會批准上述規劃申 請。有勞之處,不勝感銘。

屏山鄉欖口村村代表 張錦福 英福能 莫福能 張家慶

地址:新界元朗安寧路 139-147 號屏山鄉鄉事委員會

電話: (張錦福)

屏山鄉欖口村村民聯署支持:



地址 : 新界元朗安寧路 139-147 號屏山鄉鄉事委員會

電話: (張錦福)

2021年12月28日

屏山鄉欖口村村民聯署支持:

李槿芝	我是	英慧
李福琴	With 2	張與定
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序備室	旅游路	張梓暉
英宝叶	旅学为	張棹嗶
英宝叶	旅游路	張棹暉

地址:新界元朗安寧路 139-147 號屏山鄉鄉事委員會電話: (張錦福)

2021年12月28日

規劃申請編號:A/YL-TYST/1132

屏山鄉欖口村村民聯署支持:

张老	是多手。	張起丰
Fligg J	表拍案	黄碧琪
爱家 都	强和人	菱振影
HARAGE	组成为	5年有焦
3625	张美珍	
2/1/2		

地址:新界元朗安寧路 139-147 號屏山鄉鄉事委員會

電話: (張錦福)

致 城市規劃委員會秘書:

\$

新界元朗欖口村丈量約份第 120 的政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期 10 年)及挖土工程 (申請編號: A/YL-TYST/1132) 支持意見

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現特函聯署向 貴委員會提出意見,請 貴委員會批准上述規劃申請。有勞之處,不勝感銘。

地址: 元朗屏山鄉山廈村

電話: (張國才)

新界元朗欖口村丈量約份第 120 的政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期 10 年)及挖土工程 規劃申請編號: A/YL-TYST/1132

屏山鄉山廈村村民聯署支持:

强 学文试	张松和	一张缓冲
孤复惠	3美城东	建解思。
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展艺术	张春素	3/2 pt /2
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	1	/s

地址:元朗屏山鄉山廈村

電話: (張國才)

規劃申請編號:A/YL-TYST/1132

屏山鄉山廈村村民聯署支持:

3 E JE 3	水州菜	
1/2 10/4 33	张水浒	近為 為
礼弱步.	Stan go	八十年是
30 × 2 1	净最爱	龙成带
3袋差牌	多层级的	•
装卸光	展車18	43五益
張繁香堂	装高村	强量
提恭康	强康	张斯莱
光· 旅 34	30年生	是草草
30/2 th	1/2 S	传文社

地址:元朗屏山鄉山廈村電話: (張國才)

新界元朗欖口村丈量約份第 120 的政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期 10 年)及挖土工程 規劃申請編號: A/YL-TYST/1132

屏山鄉山廈村村民聯署支持:



地址:元朗屏山鄉山廈村

電話: 3(張國才)

規劃申請編號:A/YL-TYST/1132

屏山鄉山廈村村民聯署支持:

菱框架	朱太慰	经有限
褒高敬	瑟茅科	极王蝉
强强英	级柱末	· · · · · · · · · · · · · · · · · · ·
3K SSF	張小楠	强高
美家	惡慶就	张师艾
表個的	我从面	

地址:元朗屏山鄉山廈村

電話: (張國才)

2021年12月29日

17

新界元朗欖口村丈量約份第 120 的政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期 10 年)及挖土工程 規劃申請編號: A/YL-TYST/1132

屏山鄉山廈村村民聯署支持:

张雅黄		
科力的		
36 12/23	1	
黄机多		
36 12 pm		
江港是		
摄刷明		
强速级		
張禧		

地址: 元朗屏山鄉山廈村

電話: (張國才)

2021年12月29日

P

新界元朗欖口村丈量約份第 120 的政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期 10 年)及挖土工程 規劃申請編號: A/YL-TYST/1132

屏山鄉山廈村村民聯署	支持:	
是大	卷柱	张莲 成
最場際	凝釋深	是致销
张梯岛		
我在与		
DO AND		
地址:元朗屏山鄉山	夏村	

2021年12月29日

電話: (張國才)

新界元朗欖口村丈量約份第120的政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期10年)及挖土工程 <u>規劃申請編號:A/YL-TYST/1132</u>

屏山鄉山廈村村民聯署支持:

热发之	泰太村	强和私
		Bl XX LO
强强等	Stan /2.	强数器
到了了)	1	34236
3/2 3/3	HE TRY	张龙
切裂处	LOGIE CHEWAST	B Chen
CSP	9 E	CHEUNG TAKE An
BARDA.	3KX-1/sh	

地址:元朗屏山郷山廈村電話: (張國才)

致城市規劃委員會秘書:

專人送遞或郵遞:香港北角渣華道 333 號北角政府合署 15 樓

傳真:2877 0245 或 2522 8426

電郵: tpbpd@pland.gov.hk

To: Secretary, Town Planning Board

By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong

By Fax: 2877 0245 or 2522 8426 By e-mail: tpbpd@pland.gov.hk

有關的規劃申請編號 The application no. to which the comment relates <u>A/YL-TYST/1132 Received on 22/04/2022</u>

意見詳情 (如有需要,請另頁說明)

Details of the Comment (use separate sheet if necessary)

我們支持核光和和發配(複理工表別)系質社會各界及效所新門支持該項申請、相關政府意早批公本)。

「提意見人」姓名/名稱 Name of person/company making this comment

异己新規 中村村代表

簽署 Signature 我们

日期 Date 17-5-2022

(這部分不會公開予公眾查閱)

(This part will not be made available for public inspection)

「提意見人」詳細資料 Particulars of "Commenter"

通訊地址 Postal Add	dress #	界元融	想以村	155813	
電話號碼 Tel No					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
傳真號碼 Fax No.					
電郵地址 E-mail ad	ldress				

個人資料的聲明 Statement on Personal Data

- 1. The personal data submitted to the Board in this comment will be used by the Secretary of the Board and Government departments for the following purposes:
 - (a) the processing of this application which includes making available the name of the "commenter" for public inspection when making available this comment for public inspection; and
 - (b) facilitating communication between the "commenter" and the Secretary of the Board/Government departments

in accordance with the provisions of the Town Planning Ordinance and the relevant Town Planning Board Guidelines.

委員會就這份意見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) 威理這宗申請,包括公布適份意見供公眾查閱,同時公布「提意見人」的姓名供公眾查閱:以及
- (6) 方便「提意見人」與委員會秘書及政府部門之間進行聯絡。
- The personal data provided by the "commenter" in this comment may also be disclosed to other persons for the purposes mentioned in paragraph I above.

「提意見人」就這份意見提供的個人資料,或亦會向其他人士披露,以作上述第1段提及的用途。

3. A "commenter" 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(私際)條例)(第486章)的規定,「提意見人」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翠道 333 號北角政府合署 15楼。

元朗民政事務處 元朗民政事務專員 胡天祐先生, JP

胡專員:

新界元朗欖口村丈量約份第 120 約政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期 10 年)及挖土工程

申請編號:A/YL-TYST/1132

貴處檔號:(15) in HAD YL C&D 17-45/45/13/32

就上述的規劃申請,屏山鄉欖口村村民全力支持榕光社向規劃署申請擬議前華封學校(部份)用作臨時社會福利設施(護理安老院)。一直以來,香港的老人福利設施嚴重短缺,榕光社竭力為長者提供服務,熱心開辦護理安老院,延續其服務精神。本村希望社會各界及政府部門支持該項申請,並希望相關政府部門盡快批核申請。有勞之處,不勝感銘。

欖口村村民簽署:

地址:元朗屏山鄉欖口村

電話: (張錦福)

新界元朗欖口村丈量約份第 120 約政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期 10 年)及挖土工程

申請編號:A/YL-TYST/1132

貴處檔號:(15) in HAD YL C&D 17-45/45/13/32

欖口村村民簽署:

菜店多 爱别旗 張獅等 深波 W. Chan R. Cam 部投投 弱夏鹭 漢遊旺 節師芳 LEVIN / SY 港红色 福志色 英国等

地址:元朗屏山鄉欖口村

電話: (張錦福)

新界元朗欖口村丈量約份第120約政府土地(前華封學校(部份)) 擬議臨時社會福利設施(護理安老院)(為期10年)及挖土工程

申請編號:A/YL-TYST/1132

貴處檔號 : (15) in HAD YL C&D 17-45/45/13/32

欖口村村民簽署:

表的推 强闹发 文集美 夕 彩華 草福合 黄小釋 張機構 羅碧客 援援動 MMAR

地址:元朗屏山鄉欖口村

室話: (張錦福)

擬議臨時社會福利設施(護理安老院)(為期 10 年)及挖土工程

申請編號:A/YL-TYST/1132

貴處檔號:(15) in HAD YL C&D 17-45/45/13/32

欖口村村民簽署:

the tate	之图君	黄碧浪、
装款	最华沙	的技术
3分享年	装模书	那念是
•		

電話:

地址:元朗屏山鄉欖口村

(張錦福)

欖口村村民極力反對榕光社 於華封學校申請老人院

我們是欖口村原居民,華封學校舊址是位於本村可興建丁屋地帶,申請老人院是嚴重剝削 我們應有權利,很多村民到現在仍然沒有屋住,多年來一直寄居他人祖堂地作為簡陋居所, 隨時被清拆及驅趕,到時便無家可歸,政府興建南繞道更強收所屬村界,仍未補回給本村, 令土地更見稀少,本村村民日漸增多,對住屋需求迫切,刻不容緩,現鄉議局丁屋政策官司 勝訴,法庭容許我們在村界範圍官地內申建丁屋是合法合憲,不容踐踏,若疫情來臨時,長 者是高危一族,容易互相傳播,而老人院正是最高危處所,為免造成不必要人命威脅我們, 故老人院不能在村內存在,請貴處明鑑並儘快停止榕光社申請,讓我們申建安樂窩,希望實 處體恤,接納我們意見,保存本村福祉,這實是我們之福,無限感激,敬請答應及賜覆,謝 謝!

聯絡人: 强宛在

雷話:

副本送元朗民政事務處

二0二一年十一月廿九日

一致无朗地政處 產業測量師 鐘先生 強烈反對榜光社在屏山鄉 横口村鄉村發展式用地。申請老人院

副本抄送元朗民政事務處

地址:

權的村村民文流等

铁桥楼多瑞罗栗泽福

文流等先生 劉建英文家 胡詠青 3長代發

宋建 莫极旺 石灰彩文紹鋒 文泽前来

二0二一年十一月十五日 英端中

(13)

致城市規劃委員會秘書:

專人送遞或郵遞:香港北角渣華道 333 號北角政府合署 15 樓

傅真:2877 0245 或 2522 8426

電郵: tpbpd@pland.gov.hk

To: Secretary, Town Planning Board

By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong

By Fax: 2877 0245 or 2522 8426 By e-mail: tpbpd@pland.gov.hk



有關的規劃申請編號 The application no. to which the comment relates

A/YL-TYST/1132 Received on 22/04/2022

意見詳情 (如有需要, 請另頁說明)

Details of the Comment (use separate sheet if necessary)

就上述規劃中請編號建置一端時社會福利設施(護建安走隆)

217得悉盡可能保留/国林面额及既在建築物,以平房大設置。置在難能可贵人27護理安老院可容和100名長者;

237位置山崗之上、張坡及空氣皆宜長者入住、尤其遠離塵置提供一室靜地方。 (4)護理安老院除為山厦權口兩村長者入住、同時開放予至港長者申請人, 可舒緩安老服務的一點。壓力:魚

(5) 設計新穎可堪稱全港、獨特構思、的建築,具示範作用。

基於上述原因,本人極之支持,並希望早日完成為有需要長者提供服務。「提意見人」姓名/名稱 Name of person/company making this comment 張致波

簽署 Signature <u>我就</u>

日期 Date 24-5-2022

超狀疾症流行導致了了住在安老院的長者了辛去逝其中原因是私人安定院的课境未能與政有貧助的要求了一致,可快课境速速落後,长春是今天等等,的贡献者,我們各人者產本養飲水里源,為是者老有所養,特別是安身之所要提供良好服務,使他們能風暖到一個仁政、政府的工作。

港外上前香港嚴重缺乏護理安先活,而這所計劃的護理这老信, 其論在設計上, 港校上新影勝一等, 校处找強力支持! 海教馆

猛欲谐

致城市規劃委員會秘書:

專人送遞或郵遞:香港北角渣華道 333 號北角政府合署 15 樓

傅頁:2877 0245 或 2522 8426

電郵: tpbpd@pland.gov.hk

RECEIVED
2 4 MAY 2022
Town Planning
Board

To: Secretary, Town Planning Board

By hand or post: 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong

By Fax: 2877 0245 or 2522 8426 By e-mail: tpbpd@pland.gov.hk

学 田 学体 (4

有關的規劃申請編號 The application no. to which the comment relates A/YL-TYST/1132 Received on __22/04/2022

jeg. 2 5

就規劃申請/覆核提出意見 Making Comment on Planning Application / Review

参考編號

Reference Number:

220522-114300-29927

提交限期

Deadline for submission:

24/05/2022

提交日期及時間

Date and time of submission:

22/05/2022 11:43:00

有關的規劃申請編號

The application no. to which the comment relates:

A/YL-TYST/1132

「提意見人」姓名/名稱

Name of person making this comment:

女士 Ms. Cheung

意見詳情

Details of the Comment:

此申請並未對村民的居住環境有不良影響,對年老居民安老服務需求也有幫助之餘,選址優美及不會造成環境破壞,所以本人支持此申請。

1-1

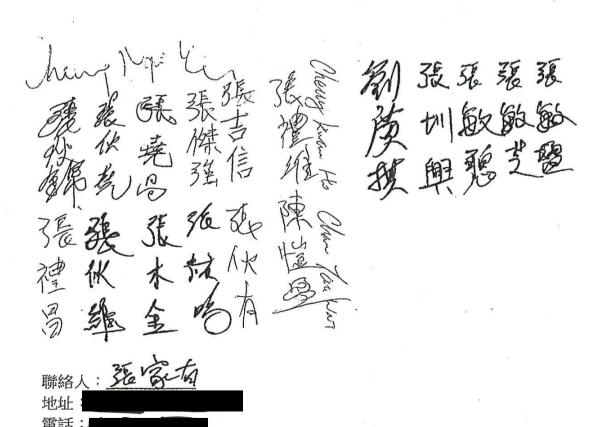
致:城市規劃委員會

強烈反對欖口村華封學校 申請老人院

編號: A/YL - TYST/1132

上述標題地段屬本村鄉村式發展用地,是所有村民世代相傳的重要福祉是全村命脈所在,本村人口不斷增加,很多村民家庭仍擠迫住在一起,空間狹小,爭吵時常發生,家庭成員們感情亦因此而僵化,水火不容,所以我們對住屋需求日趨越烈,很想有個屬於自己嘅理想之家,政府亦明白居住問題的嚴重性,實行填海、收地及各種不同政策,增加土地以增加房屋供應,緩解市民對住屋需求,而鄉議局在丁屋政策司法覆核案中獲得勝訴,我們在鄉村式發展用地以「換地」及「協約式」可申領官地建屋,是合法合憲,是我們合法傳統權益,受基本法保護,不容忽視,亦不容踐踏,是我們之福,而上述標題地段正好是我們傳宗接代,延綿子孫,申建理想安樂窩的最佳地方,不容被破壞及佔領,加上當有疫情來臨時,老人院是最高危處所,而院內長者更是最高危一族,相互傳播力強,擴散亦很快,嚴重威脅村民生命安全,故老人院不應在村內存在,敬請貴會拒絕榕光社老人院申請,讓我們申建安樂窩,傳承後代,功德無量。 謝謝

反對村民簽署: 43.2 7



二零二一年十二月六日

5-2

致:城市規劃委員會

強烈反對欖口村前華封學校

申請護理安老院

編號: A/YL - TYST/1132

我們曾於二零二零年七月十二日,在本村就上述標題舉行會議,並即時否決護理安老院申請,而標題位處鄉村式發展用地,對本村及村民日後發展至為重要,更是村民們重要福祉,而興建南繞道時,政府已徵收本村部份發展式用地,到現在仍未補回,加上元朗南發展,政府收地又重重包圍本村,根本就是寸步難移,那有土地可供使用,嚴重影響本村日後發展,長久以來各村民對住屋需求甚為渴望,因為很多村民到現在仍然沒有自己居所,子女又逐漸長大,各家庭成員更擠迫在狹小空間內,環境不佳、磨擦、口角、感情破裂等情況時有發生,為免造成嚴重事件發生,理想解決方法就是增加村民住屋需要,而標題地段正好緩解村民之困,而鄉議局在丁屋政策司法覆核案中取得勝訴,我們在鄉村發展用地以「協約式」或「換地」方式在官地上申建丁屋是合憲合法,是我們傳統權益,受基本法保護,因此護理安老院在本村沒有存在空間。又當疫情來臨時,護理安老院等院舍是高危處所,安老院內長者更是最高危羣組,隨時引發大規模傳播,迅速蔓延,容易造成大量感染及死亡,為免引發嚴重事件發生,該等院舍不適宜在村內存在。

懇請各委員諒解村民苦況,否決護理安老院申請,讓我們有個「家」,安居樂業,延綿後 代。

謝謝!

反對村民: 文流为

聯絡人 · 乂流方允	 	•	文流芳先生
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地址:電話!

二零二一年十二月十七日

5-3

☐ Urgent ☐ Return receipt ☐ Sign ☐ Encrypt ☐ Mark Subject Restricted ☐ Expand personal&public groups
A/YL-TYST/1132 DD 120 Lam Hau Tsuen - Wa Fung School RCHE 20/12/2021 02:53
From:
To: tpbpd <tpbpd@pland.gov.hk> FileRef: .</tpbpd@pland.gov.hk>
1 attachment
Lam Hau Tsuen - Google Maps.pdf
A/YL-TYST/1132
Government Land in D.D. 120, Lam Hau Tsuen, Yuen Long - Former Wa Fung School
Site area : About 2,950sq.m (78%)
Zoning : "VTD"
Applied use : 100 Bed RCHE / 5 Vehicle Parking / Evacuation of Land
Dear TPB Members,
While the proposed use of the school is laudable, however as the saying goes, 'The Devil is in the Dtails'

While the Applicant declares is has experience in the provision of the proposed services, it in fact has zero track record: "The main objectives6 of the BSA are to provide services to elderly people in need in the community. Since 2019, the Applicant has been involving in planning for RCHE services and its first licensed RCHE with a total of 38 bed spaces (including 1 isolation bed) at 1/F of Right Time Building, Playing Field Road, Mong Kok, is expected to be in operation in the 1st Quarter of 2022."

A SMALL FACILITY NOT YET OPENED

Then there is the matter of extensive excavation. "The overall extent of the excavation area covers about 1,050m2". Usually when the vacant schools are converted the proposed operations utilize only the existing facilities.

"It is the intention of the Applicant to include the adjoining vacant GL, including the former school basketball court" Surely this facility should be retained and refurbished for public use? Lam Hau Tsuen has a lot of houses but no community facilities.

There is also the issue of the trees to be felled: "a total of 80 existing trees in 25 different species have been identified within the Subject Site. Most of these surveyed trees are in poor to fair conditions with low to medium amenity value. A total of 51 out of 80 surveyed trees within the Subject Site are proposed to be felled." The usual derogatory description of what are clearly healthy mature trees.

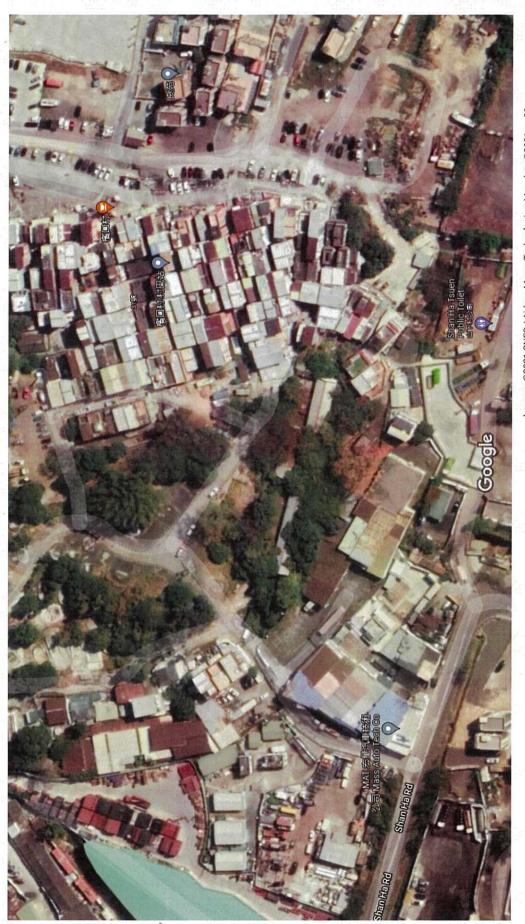
The solution to the drainage is also problematic as we are talking about a RCHE where there would be residents suffering from various chronic conditions that require frequent cleansing. But the Applicant opts for : Option (1) – by regular disposal to nearby Public Sewage Treatment Works via Tanker Away;

And this leads to the most troubling aspect: "Although the present proposed RCHE is temporary in nature"

Extensive and irreversible changes to the premises and environs but the Applicant envisages only a temporary operation. As GIC facilities incur costs to the taxpayer, the expectations would be that facilities such as RCHE once put into place would be of a permanent nature as, unlike transitional housing, the demand is long term.

Members should question if there is an ulterior motive to this application.

Mary Mulvihill



Imagery ©2021 CNES / Airbus, Maxar Technologies, Map data ©2021 20 m

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Re: A/YL-TYST/1132 DD 120 Lam Hau Tsuen - Wa Fung School RCHE 23/05/2022 02:29

From:

To:

tpbpd <tpbpd@pland.gov.hk>

File Ref:

Dear TPB Members.

Responses provided are less than reassuring:

- The applicant dodged providing any proof of its expertise with regard to provision of elderly care services despite its less than sterling record to date
- A basket ball court should be considered as an essential community amenity. Not only does it provide a location for residents to exercise in the open air with all the benefits this generates, it also allows youth to "let off steam" instead of hanging around aimlessly and being lured by gangs. The cumulative benefits of having such facilities should not be overlooked. The RCHE can be accommodated without incorporating the court into the site.
- Depts have taken up the issues of drainage and the lack of wheel chair transport options
- The short term nature of the project is an issue as there is nothing more disturbing to elderly, particularly those suffering from dementia, etc, than to be uprooted from familiar surroundings.

Members must carefully evaluate these and other factors.

Mary Muh ""-"

From:

To: tpbpd <tpbpd@pland.gov.hk>

Date: Monday, 20 December 2021 2:53 AM CST

Subject: A/YL-TYST/1132 DD 120 Lam Hau Tsuen - Wa Fung School RCHE

A/YL-TYST/1132

Government Land in D.D. 120, Lam Hau Tsuen, Yuen Long - Former Wa Fung School

Site area: About 2,950sq.m (78%)

Zoning: "VTD"

Applied use: 100 Bed RCHE / 5 Vehicle Parking / Evacuation of Land

Dear TPB Members.

While the proposed use of the school is laudable, however as the saying goes, 'The Devil is in the Dtails'

While the Applicant declares is has experience in the provision of the proposed services, it in fact has zero track record: "The main objectives6 of the BSA are to provide services to elderly people in need in the community. Since 2019, the Applicant has been involving in planning for RCHE services and its first licensed RCHE with a total of 38 bed spaces (including 1 isolation bed) at 1/F of Right Time Building, Playing Field Road, Mong Kok, is expected to be in operation in the 1st Quarter of 2022."

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There is also the issue of the trees to be felled: "a total of 80 existing trees in 25 different species have been identified within the Subject Site. Most of these surveyed trees are in poor to fair conditions with low to medium amenity value. A total of 51 out of 80 surveyed trees within the Subject Site are proposed to be felled." The usual derogatory description of what are clearly healthy mature trees.

The solution to the drainage is also problematic as we are talking about a RCHE where there would be residents suffering from various chronic conditions that require frequent cleansing. But the Applicant opts for : Option (1) – by regular disposal to nearby Public Sewage Treatment Works via Tanker Away;

And this leads to the most troubling aspect: "Although the present proposed RCHE is temporary in nature"

Extensive and irreversible changes to the premises and environs but the Applicant envisages only a temporary operation. As GIC facilities incur costs to the taxpayer, the expectations would be that facilities such as RCHE once put into place would be of a permanent nature as, unlike transitional housing, the demand is long term.

Members should question if there is an ulterior motive to this application.

Mary Mulvihill

Advisory clauses

- (a) you should liaise with the locals on the details of the proposed development;
- (b) to note the comments of the Secretary for Labour and Welfare (SLW) that:
 - (i) prior to expiry of the 10-year period, you shall provide a plan demonstrating how the elderly residents will be suitably relocated;
- (c) to note the comments of the Director of Social Welfare (DSW) that:
 - (i) while the proposed temporary residential care home for the elderly (RCHE) is intended to be run for 10 years, you should take note of the need to formulate decanting plan for the elderly residents when the service is to be suspended upon the expiry of the 10-year period;
 - (ii) you should ensure the area of floor space to be provided for each resident should be in full compliance of the statutory and licensing requirement as stated in the Residential Care Homes (Elderly Persons) Ordinance (Cap. 459) and Code of Practice for Residential Care Homes (Elderly Persons) (CoP);
 - (iii) you should take note of the latest developments concerning the proposed upward adjustment of the statutory minimum area of floor space per resident for different care level of RCHEs as recommended by the Working Group on the Review of Ordinances and Code of Practice in its report submitted in May 2019 that the proposed statutory minimum floor space per resident for the "High Care Level Homes" will be increased from 6.5 m² to 9.5 m², whereas the proposed statutory minimum floor space per resident for the "Medium and Low Care Level Homes" will be enhanced from 6.5 m² to 8 m²;
 - (iv) for a RCHE license to be issued, the intended RCHE has to comply with the licensing requirements as stipulated in Cap. 459, its subsidiary legislation and the latest version of CoP;
 - (v) the premises shall be constructed and maintained in accordance with the provisions of Buildings Ordinance (BO) & Allied Regulations and Code of Practice for Fire Safety in Building 2011 issued by the Buildings Department (BD);
 - (vi) compliance of the design requirements in respect of the provisions of the facilities for persons with a disability for the RCHE with "Design Manual: Barrier Free Access 2008" should be demonstrated;
 - (vii) adequate natural lighting and natural ventilation to the habitable area, office and kitchen should be provided in compliance with Building (Planning) Regulation (B(P)R) 30 & 31;
 - (viii) no part of the area used for habitation shall be more than 9m measured within the habitable area from a prescribed window as stipulated in B(P)R 32;

- (ix) adequate natural lighting and natural ventilation to the toilets and pantries (if any) should be provided in compliance with B(P)R 36;
- (x) the clear width of the door opening for each dormitory and the toilet should have a width not less than 800mm. The door should also be readily opened from inside without the use of a key;
- (xi) the ceiling (the ceiling structure or suspended false ceiling) of the RCHE must be situated at a height not less than 2.5m measuring vertically from the floor or not less than 2.3m measuring vertically from the floor to the underside of any beam;
- (xii) the dead-end travel distance in every part of the proposed RCHE should not be more than 12m to the protected exit or to a point, from which travel in different directions to 2 or more protected exits is available;
- (xiii) height of any light weight partitions should not obstruct the natural lighting and ventilation to the beds not along the windows;
- (xiv) a designated isolation room shall be provided for every 50 beds;
- (xv) the captioned premises should be free of unauthorised building works;
- (xvi) the provision of sanitary fitments should comply with the requirements as stipulated under Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations;
- (xvii) any building works which fall within Minor Work under Building (Minor Works) Regulation should fully comply with the requirements of the regulation. Details can be found at BD's website; and
- (xviii) their detailed comments can only be formulated at the license application submission stage;
- (d) to note the comments of the District Lands Officer/Yuen Long, Lands Department (DLO/YL, LandsD) that:
 - (i) necessary policy support from SLW and DSW for short term tenancy (STT) application of the application site (the Site) would be required to implement the proposal. Upon receipt of the STT application with policy support being given by the relevant bureau, her department will consider the application in accordance with applicable policy and practice and there is no guarantee that the application will be approved. The said application if approved would be subject to such terms and conditions, to be imposed by her department in the landlord capacity at its sole discretion;
- (e) to note the comments of the Commissioner for Transport (C for T) that:
 - (i) sufficient space should be provided within the Site for manoeuvring of vehicles; and
 - (ii) no parking, queuing and reverse movement of vehicles on public road are allowed;

- (f) to note the comments of the Chief Highway Engineer/New Territories West, Highways Department (CHE/NTW, HyD) that:
 - (i) adequate drainage measures shall be provided to prevent surface water running from the Site to the nearby public roads and drains; and
 - (ii) the access road connecting the Site with the existing village road branching off from Shan Ha Road is not and will not be maintained by his office. His office should not be responsible for the maintenance of any access connecting the Site with the existing village road branching off from Shan Ha Road;
- (g) to note the comments of the Director of Environmental Protection (DEP) that:
 - (i) as the proposed RCHE is for a period of 10 years, consideration should be given to evaluating the road traffic noise impact for the worst-case scenario during that 10-year period;
 - (ii) a typical tertiary sewage treatment facility discharge standards is as follows:

Parameter	Tertiary Effluent Standards (Upper Limit)
BOD ₅	10 mg/L
TSS	10 mg/L
TN	20 mg/L
TP	2 mg/L
Ammonia-N*	5 mg/L
E. coli	100 counts/100mL

^{*}Depending on the water body receiving the discharge, the more stringent set of the effluent standards (those listed in the table or the Water Pollution Control Ordinance Technical Memorandum) should be adopted as appropriate.

- (iii) should public sewer be available in the future, you shall connect the proposed development to public sewer at your own cost; and
- (iv) the relevant mitigation measures and requirements in the latest "Code of Practice on Handling the Environmental Aspect of Temporary Uses and Open Storage Use" should be followed to minimise any potential environmental nuisances on the surrounding area;
- (h) to note the comments of the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD) on the submitted drainage proposal that:
 - (i) the catchment area as shown in Appendix D is misleading. The catchment area for the existing drainage network should be way larger than the one shown in the drawing;
 - (ii) the location and details (i.e. cross section) of the proposed hoarding/peripheral wall, if any, should be shown on the proposed drainage plan. Overland flow from adjacent area should not be obstructed;
 - (iii) cross sections showing the existing and proposed ground levels of the Site with respect to the adjacent areas should be given; and

- (iv) Form HBP1 should be submitted to his department for application of technical audit for any proposed connection to his department's drainage facilities;
- (i) to note the comments of the Chief Town Planner/Urban Design and Landscape, Planning Department (CTP/UD&L, PlanD) that:
 - (i) planning approval by the Town Planning Board does not imply approval of the tree works such as pruning, transplanting and/or felling under lease. Relevant authority/government department(s) should be approached direct to obtain the necessary approval on tree works and compensatory planting proposal as appropriate;
- (j) to note the comments of the Head of Geotechnical Engineering Office, Civil Engineering and Development Department (H(GEO), CEDD) that:
 - (i) plans of the proposed building works, as necessary, should be submitted to BD for approval as required under the provisions of the BO; and
 - (ii) the Site is located within Scheduled Area No. 2 and may be underlain by cavernous marble. Depending on the nature of foundation of the new development proposed at the Site, extensive geotechnical investigation may be required as necessary, and may require a high-level involvement of experienced geotechnical engineer(s), both in the design and supervision of geotechnical aspects of the works to be carried out on the Site;
- (k) to note the comments of the Director of Fire Services (D of FS) that:
 - (i) detailed fire service requirements will be formulated upon receipt of formal submission of general building plans. Nevertheless, the requirement of Emergency Vehicular Access as stipulated in Section 6, Part D of the Code of Practice for Fire Safety in Building 2011, which is administered by BD, should be observed; and
 - (ii) licensing requirements will be formulated upon receipt of formal application via the Licensing Authority.