Form No. S16-I 表格第 S16-I 號

APPLICATION FOR PERMISSION **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 申

2021年 12月 2 8日 此文件在 收到・城市規劃委員會

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

- 於建議不涉及或不祇涉及:

 This document is received on DEC 2021

 The Town Planning Board will formally acknowledge

 Construction of "New Territories Exempted House (b) All of receipt of the application only upon receipt

 興建「新界豁免管制屋字」: 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 「🗸」 at the appropriate box 請在適當的方格內上加上「🗸」號

For Official Use Only	Application No. 申請編號	A I-TCE/2
請勿填寫此欄	Date Received 收到日期	2 8 DEC 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 樓及新界沙田上禾鲞路 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
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(□Mr. 先生 /□Mrs. 夫人 /□Miss 小姐 /□Ms. 女士 /□Company 公司 / Organisation 機構)

HONG KONG HOUSING AUTHORITY

2.	Name of Authorised Agent (if applicable)	獲授權代理人姓名/名稱	(如適用)
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(□Mr. 先生 /□Mrs. 夫人 /□Miss 小姐 /□Ms. 女士 /□Company 公司 /□Organisation 機構)

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 AT AREA 109, TUNG CHUNG, LANTAU ISLAND, HONG KONG
(b)	Site area and/or gross floor area involved 涉及的地盤面積及/或總樓面面 積	(SUBJECT TO DETAILED SURVEY AND LAYOUT FINALIZATION) □Site area 地盤面積 12,000 sq.m 平方米☑About 約 NOT MORE □Gross floor area 總樓面面積 THAN 69,600 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)	sq.m 平方米 ☑About 約

statutory plan(s)	TOP 10		
Land use zone(s) involved 涉及的土地用途地帶	"RESIDENTIAL (GROUP A) 5"		
Current use(s) 現時用途	CONSTRUCTION SITE (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)		
"Current Land Owner	" of Application Site 申請地點的「現行土地擁有人」		
applicant 申請人 -			
is the sole "current land own 是唯一的「現行土地擁有 <i>」</i>	er"#& (please proceed to Part 6 and attach documentary proof of ownership). 、」#& (請繼續填寫第 6 部分,並夾附業權證明文件)。		
	vners ^{»# &} (please attach documentary proof of ownership). [人」 ^{#&} (請夾附業權證明文件)。		
is not a "current land owner" [#] . 並不是「現行土地擁有人」 ^{#。}			
The application site is entirely on Government land (please proceed to Part 6). 申請地點完全位於政府土地上(請繼續填寫第 6 部分)。			
Statement on Owner's Consent/Notification 就土地擁有人的同意/通知土地擁有人的陳述			
a) According to the record(s) of the Land Registry as at			
The applicant 申請人 –			
☐ has obtained consent(s)	of "current land owner(s)".		
已取得	名「現行土地擁有人」#的同意。		
Details of consent of	current land owner(s)"# obtained 取得「現行土地擁有人」#同意的詳情		
Land Owner(s) Re	Date of consent obtained (DD/MM/YYYY) 取得同意的日期 (日/月/年)		
	有關法定圖則的名稱及編號 Land use zone(s) involved 涉及的土地用途地帶 Current use(s) 現時用途 "Current Land Owner applicant 申請人 — is the sole "current land own是唯一的「現行土地擁有人 is one of the "current land own是其中一名「現行土地擁有人」 The application site is entirel申請地點完全位於政府土地 不是「現行土地擁有人」 The application site is entirel申請地點完全位於政府土地 指人的同, According to the rece application involves a total collaberation involv		

	urrent land owner(s)" # notified 已獲通知「現行土地擁有人」#	
No. of 'Current' Land Owner(s)' 「現行土地擁 有人」數目	Lot number/address of premises as snown in the record of the	Date of notificativen (DD/MM/YYYY) 通知日期(日/月/4
(Please use separate	sheets if the space of any box above is insufficient. 如上列任何方格的空	[■間不足,請另頁說]
已採取合理步驟	ole steps to obtain consent of or give notification to owner(s): 以取得土地擁有人的同意或向該人發給通知。詳情如下: to Obtain Consent of Owner(s) 取得土地擁有人的同意所採取的	<u>內合理步驟</u>
	for consent to the "current land owner(s)" on (日/月/年)向每一名「現行土地擁有人」"郵遞要求同	
Reasonable Steps	to Give Notification to Owner(s) 向土地擁有人發出通知所採則	2的合理步驟
	tices in local newspapers on(DD/MM/YY (日/月/年)在指定報章就申請刊登一次通知&	YY) ^{&}
	e in a prominent position on or near application site/premises on (DD/MM/YYYY)&	
於	(日/月/年)在申請地點/申請處所或附近的顯明位置	貼出關於該申請的
	o relevant owners' corporation(s)/owners' committee(s)/mutual aid	committee(s)/man
office(s) or i	ural committee on(DD/MM/YYYY)& (日/月/年)把通知寄往相關的業主立案法團/業主委	員會/互助委員會
office(s) or n 於 處,或有關	ural committee on(DD/MM/YYYY)&	美員會/互助委員會
office(s) or n 於 處,或有關 Others 其他	ural committee on(DD/MM/YYYY)& (日/月/年)把通知寄往相關的業主立案法團/業主委 的鄉事委員會 ^{&}	員會/互助委員會
office(s) or n 於 處,或有關	ural committee on(DD/MM/YYYY) ^{&} (日/月/年)把通知寄往相關的業主立案法團/業主委的鄉事委員會 ^{&} e specify)	員會/互助委員會
office(s) or n 於	ural committee on(DD/MM/YYYY) ^{&} (日/月/年)把通知寄往相關的業主立案法團/業主委的鄉事委員會 ^{&} e specify)	員會/互助委員會
office(s) or n 於	ural committee on(DD/MM/YYYY) ^{&} (日/月/年)把通知寄往相關的業主立案法團/業主委的鄉事委員會 ^{&} e specify)	美員會/互助委員會
office(s) or n 於	ural committee on(DD/MM/YYYY) ^{&} (日/月/年)把通知寄往相關的業主立案法團/業主委的鄉事委員會 ^{&} e specify)	美員會/互助委員會
office(s) or n 於	ural committee on(DD/MM/YYYY) ^{&} (日/月/年)把通知寄往相關的業主立案法團/業主委的鄉事委員會 ^{&} e specify)	員會/互助委員會

6.	Type(s)	of Application 申請類別
	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 .
4	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
	Type (v) 第(v)類	Use / development other than (i) to (iii) above 上述的(i)至(iii)項以外的用途/發展
註1	: 可在多於- 2: For Develop	t more than one「✓」. 一個方格內加上「✓」號 oment involving columbarium use, please complete the table in the Appendix. 及靈灰安置所用途,請填妥於附件的表格。

(i)	<u> For Type (i) applicati</u>	on 供第(i)	獲申請	Q.S.		
(a)	Total floor area involved 涉及的總樓面面積				sq.m 平方	*
(b)	Proposed use(s)/development 擬議用途/發展	the use and g	gross floor area)	nstitution or community f 設施,請在圖則上顯示	· ·	ustrate on plan and specify 總樓面面積)
(c)	Number of storeys involved 涉及層數			Number of units invo 涉及單位數目	olved	
		Domestic p	art 住用部分		sq.m 平方米	□About 約
(d)	Proposed floor area 擬議樓面面積	Non-domes	stic part 非住用部	邻分	sq.m 平方米	□About 約.
		Total 總計			sq.m 平方米	□About 約
(e)	Proposed uses of different	Floor(s) 樓層	Current us	se(s) 現時用途	Proposed	luse(s) 擬議用途
	floors (if applicable) 不同樓層的擬議用途(如適用)					
	(Please use separate sheets if the space provided is insufficient)					
	(如所提供的空間不足,請另頁說 明)					

(ii) For Type (ii) applice	ation 供第(ii)類申請			
	☐ Diversion of stream 汽	「道改道		
· · · · · · · · · · · · · · · · · · ·	│			
	Area of filling 填塘面	責	sq.m 平方米	□About 約
	Depth of filling 填塘沟	度	m 米	□About 約
	☐ Filling of land	真土		
(a) Operation involved	Area of filling 填土面		sq.m 平方米	□About 約
涉及工程	Depth of filling 填土厚	度	m 米	□About約
	Excavation of l	and 挖土		
	Area of excavation 挖	上面積	sq.m 平方米	□About 約
	Depth of excavation 控	土深度	m 米	□About 約
			land/pond(s), and particulars of stream	m diversion, the extent
	of filling of land/pond(s) and/or exc (請用圖則顯示有關土地/池塘界		、填塘、填土及/或挖土的細節及	/或範圍))
(*				
(b) Intended				
use/development				
有意進行的用途/發展			*	
	*.	,		
(800) E TA (800) 10	/34/114/000N FERRERS			
((1949) 15007 11\9908 ((1949) (49080198				
	Public utility installation	on 公用事業設施	近裝置	
	Utility installation for p	private project 私	人發展計劃的公用設施裝置	•
			to be provided as well as the	limensions of
	each building/structure, whe 請許明有關裝置的性質及		建築物/構築物(倘有)的長度	、高度和闊度
			Dimension of each	installation
	Name/type of installation	Number of provision	/building/structure (m) (LxW	xH)
	裝置名稱/種類 	數量	每個裝置/建築物/構築物 (米)(長 x 闊 x 高)	加的尺寸
(a) Nature and scale			N	
性質及規模				
•				
•				
		-		
la de la companya de	1.1			
•				
	(Please illustrate on plan the	layout of the instal	lation 請用圖則顯示裝置的布	局)

(iv): <u>E</u>	or-Type (iv) application (<i>(第10)類目讀</i>			
(a)	Please specify the propos	ed minor relaxation of sta	ted development restriction(s) and	also fill in the	
	proposed use/development a				
Ī	請列明擬議略為放寬的發展	限制 <u>亚填妥於第(v)部分的</u>	J擬議用途/發展及發展細節 –		
₫	Plot ratio restriction 地積比率限制	From 由5.4	to至 5.8		
	Gross floor area restriction 總樓面面積限制	From 由sq. m	平方米 to 至sq. m 平方米	(
	Site coverage restriction 上蓋面積限制	From 由	% to 至%		
	Building height restriction 建築物高度限制	From 由r	n 米 to 至m 米		
·		From 由	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 restriction 非建築用地限制	From 由	.m to 至 m		
	Others (please specify) 其他(請註明)	·			
(v) <u>F</u>	or Type (s) application - 供	<u>第(v)類申請</u>			
use	(a) Proposed use(s)/development 擬議用途/發展 PROPOSED MINOR RELAXATION OF PLOT RATIO RESTRICTION FOR PERMITTED PUBLIC HOUSING DEVELOPMENT (Please illustrate the details of the proposal on a layout plan 請用平面圖說明建議詳情)				
(b) <u>Dev</u>	velopment Schedule 發展細節表				
Pro	posed gross floor area (GFA) 搧	議總樓面面積	DT MORE THAN 69,600 sq.m 平方米	☑About 約	
Pro	Proposed plot ratio 擬議地積H來 5.8 □ About 约				
Pro	posed site coverage 擬議上蓋面	積	m OR BELOW: NOT MORE THAN 50% /ER 15M: NOT MORE THAN 25 %	□About 約·	
ľ	posed no. of blocks 擬議座數		2		
Pro	posed no. of storeys of each bloc	k每座建築物的擬議層數		·,, .	
			☑ include 包括 1 storeys of basem		
			□ exclude 不包括storeys of bas NOT MORE		
Pro	posed building height of each bloom	ock 每座建築物的擬議高度	mPD 米(主水平基準上)□About約	
			m 米	□About 約	

☑ Domestic part 住用部分			
GFA 總樓面面積	66,000 sq. m 平方米	☑About 約	
number of Units 單位數目	1,344 (ABOUT)	+ + + + + + + + + + + + + + + + + + +	
average unit size 單位平均面積		☑About 約	
estimated number of residents 估計住客數目	3,763 (ABOUT)		
✓ Non-domestic part 非住用部分	GFA 總樓面面	<u>積</u>	
□ eating place 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 請註明房間數目)		
□ office 辦公室	sq. m 平方米	□About 約	
□ shop and services 商店及服務行業	sq. m 平方米	□About 約	
□ Government, institution or community facilities 政府、機構或社區設施	(please specify the use(s) and area(s)/GFA(s) 請註明用途及有關的樓面面積)		
		• • • • • • • • • • • • • • • • • • • •	
☑ 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	的地面面積/總	
	樓面面積)		
	DISTRICT MAINTAINENCE OFFICE, ESTATE MANAGEMENT OFFICE, COMMERCIAL USE (EATING PLACES, SHOPS & SERVICES).(TOTAL GFA OF.NOT		
	MORE THAN 3,600 SQM)		
「一」	(please specify land area(s) 請註明均	h而而穩)	
☑ Open space 休憩用地	3,763 sq. m 平方米 ☑ Not less than 不少於		
✓ private open space 私人休憩用地	sq. m 平方米 □ Not less than 不少於 □ Not less than 不少於		
□ public open space 公眾休憩用地			
(c) Use(s) of different floors (if applicable) 各樓層的用途 (如適戶		· ·	
[Block number] [Floor(s)]	[Proposed use(s)]		
[座數] [層數]	[擬議用途]	• *	
1-2 B/F CARPARK (DOME	STIC)	·	
0/5	YCLE STAND, RETAIL	,	
	LDREN'S PLAY AREA, DISTRICT M		
	MANAGEMENT OFFICE		
1-2 2/F - 29/F RESIDENTIAL FL			
(d) Proposed use(s) of uncovered area (if any) 露天地方(倘有)			
PODIUM GARDEN, SITTING-OUT AREA, RECREATIONAL FACILITIES, CIRCULATION AREA AND ESTATE ROAD/ EVA			

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) 疑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)				
2025/2026				
	••••••			
		•••••		
***************************************	•••••	•••••••••••••••••••••••••••••••••••••••		
8. Vehicular Access Arra 擬議發展計劃的行	Ÿ	t of the Development Proposal 安排		
	Yes 是	☐ There is an existing access. (please indicate the street name, where appropriate)		
Any vehicular access to the		有一條現有車路。(請註明車路名稱(如適用))		
site/subject building?				
是否有車路通往地盤/有關		□ m : 1 (1 'm 1 1 1 'o 1 '11')		
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)		
建 未70;		/月 床		
	NI. K			
	No 否			
	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) 168 (DOMESTIC)		
		Private Car Parking Spaces 私家車車位 10 (VISITOR)		
		Motorcycle Parking Spaces 電單車車位12		
Any provision of parking space		Light Goods Vehicle Parking Spaces 輕型貨車泊車位5		
for the proposed use(s)?		Medium Goods Vehicle Parking Spaces 中型貨車泊車位		
是否有為擬議用途提供停車		Heavy Goods Vehicle Parking Spaces 重型貨車泊車位		
位?		Others (Please Specify) 其他 (請列明)		
·		BICYCLE PARKING 90		
		RETAIL & COMMERCIAL (R&C) CAR PARKING SPACES 4		
	<u></u>	DISTRICT MAINTENANCE OFFICE CAR PARKING SPACES 3		
•	No 否			
	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		
, i		Coach Spaces 旅遊巴車位		
Any provision of		Light Goods Vehicle Spaces 輕型貨車車位 4 (DOMES <u>TIC), 1 (R&C)</u>		
loading/unloading space for the		Medium Goods Vehicle Spaces 中型貨車車位		
proposed use(s)?		Heavy Goods Vehicle Spaces 重型貨車車位		
是否有為擬議用途提供上落客 貨車位?		Others (Please Specify) 其他 (請列明)		
≠ ₩.				
•				
• •	No 否			

9. Impacts of Development Proposal 擬議發展計劃的影響			
justifications/reasons fo	r not provi	sheets to indicate the proposed measures to minimise possible adverse impacts or give iding such measures. 过减少可能出現不良影響的措施,否則請提供理據/理由。	
Does the development proposal involve alteration of existing building? 擬議發展計劃是否	Yes 是 ·	□ Please provide details 請提供詳情	
包括現有建築物的改動?	No 否		
Does the development proposal involve the operation on the right? 擬議發展是否涉及右列的工程? (Note: where Type (ii) application is the subject of application, please skip this section. 註:如申請涉及第(ii)類申請,請跳至下一條問題。)	Yes 是 No 否	【 (Please indicate on site plan the boundary of concerned land/pond(s), and particulars of stream diversion, the extent of filling of land/pond(s) and/or excavation of land) (請用地盤平面圖顯示有關土地/池塘界線,以及河道改道、填塘、填土及/或挖土的細節及/或範圍) □ Diversion of stream 河道改道 □ Filling of pond 填塘	
Would the development proposal cause any adverse impacts?	On traffic On water On drains On slope Affected Landscap Tree Fell Visual In Others (F	onment 對環境 ②對交通 Supply 對供水 Age 對排水 Age 對排水 Age 對 No 不會 ☑ Age 對解坡 But Inpact 構成景觀影響 Age Inpact 構成景觀影響 Age Inpact 構成視覺影響 Age Inpact 操成視覺影響 Age Inpact 構成視覺影響 Age Inpact 操成視覺影響 Age Inpact 構成視覺影響 Age Inpact 操成視覺影響 Age Inpact 操成視視影響 Age Inpact 操成視覺影響 Age Inpact 操成視視影響 Age Inpact 操成視視影響 Age Inpact 操成視視 Age Inpact Age	
擬議發展計劃會否 造成不良影響?	diameter 請註明畫 直徑及品 NOT AP	ate measure(s) to minimise the impact(s). For tree felling, please state the number, at breast height and species of the affected trees (if possible) 是量減少影響的措施。如涉及砍伐樹木,請說明受影響樹木的數目、及胸高度的樹幹品種(倘可) PLICABLE AS APPLICATION SITE JUST COMPLETED ITS RECLAMATION	

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 THE ATTACHED SUPPORTING PLANNING STATEMENT.
f

11. Declaration 聲明
I hereby declare that the particulars given in this application are correct and true to the best of my knowledge and belief. 本人謹此聲明,本人就這宗申請提交的資料,據本人所知及所信,均屬真實無誤。
I hereby grant a permission to the Board to copy all the materials submitted in an application to the Board and/or to upload such materials to the Board's website for browsing and downloading by the public free-of-charge at the Board's discretion. 本人現准許委員會酌情將本人就此申請所提交的所有資料複製及/或上載至委員會網站,供公眾免費瀏覽或下載。
Signature ☑ Applicant 申請人 / □ Authorised Agent 獲授權代理人 簽署
MR. CHAN KING KONG, THERON CHIEF PLANNING OFFICER/1
Name in Block LettersPosition (if applicable)姓名(請以正楷填寫)職位 (如適用)
Professional Qualification(s) 專業資格 「Member 會員 / □ Fellow of 資深會員 「MKIP 香港規劃師學會 / □ HKIA 香港建築師學會 / □ HKIS 香港測量師學會 / □ HKIE 香港工程師學會 / □ HKILA 香港園境師學會/ □ HKIUD 香港城市設計學會 / ▼ RPP 註冊專業規劃師 Others 其他
on behalf of 代表 THE HONG KONG HOUSING AUTHORITY
☐ Company 公司 / ✓ Organisation Name and Chop (if applicable) 機構名稱及著字(如適用)
Date 日期 23/12/2021 (DD/MM/YYYY 日) 17 (DD/MM/YYYY)

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况下,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 如發展涉及靈灰安置所用途,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 在龕位內最多可安放骨灰的數量 Maximum number of sets of ashes that may be interred other than in niches 在非龕位的範圍內最多可安放骨灰的數量	· · · · · · · · · · · · · · · · · · ·
Total number of niches 龕位總數	
Total number of single niches 單人龕位總數	
Number of single niches (sold and occupied) 單人龕位數目 (已售並佔用) Number of single niches (sold but unoccupied) 單人龕位數目 (已售但未佔用) Number of single niches (residual for sale) 單人龕位數目 (待售)	
Total number of double niches 雙人龕位總數	
Number of double niches (sold and fully occupied) 雙人龕位數目 (已售並全部佔用) Number of double niches (sold and partially occupied) 雙人龕位數目 (已售並部分佔用) Number of double niches (sold but unoccupied) 雙人龕位數目 (已售但未佔用) Number of double niches (residual for sale) 雙人龕位數目 (待售)	
Total no. of niches other than single or double niches (please specify type) 除單人及雙人龕位外的其他龕位總數 (請列明類別)	
Number. of niches (sold and fully occupied) 龕位數目 (已售並全部佔用) Number of niches (sold and partially occupied) 龕位數目 (已售並部分佔用) Number of niches (sold but unoccupied) 龕位數目 (已售但未佔用) Number of niches (residual for sale) 龕位數目 (待售)	
Proposed operating hours 擬議營運時間	
 ② Ash interment capacity in relation to a columbarium means – 就靈灰安置所而言,骨灰安放容量指: - the maximum number of containers of ashes that may be interred in each niche in the columbarium; 每個龕位內可安放的骨灰容器的最高數目; - the maximum number of sets of ashes that may be interred other than in niches in any area in the co 在該靈灰安置所並非龕位的範圍內,總共最多可安放多少份骨灰;以及 - the total number of sets of ashes that may be interred in the columbarium. - 在該貴灰安置所內,總共最多可安放多少份骨灰。 	

Gist of Application 申請摘要						
(Please provide deta consultees, uploaded deposited at the Plan (請 <u>盡量</u> 以英文及中 下載及存放於規劃	l to the ning End 文填寫 署規劃資	Fown Planning Boa quiry Counters of the 。此部分將會發送 科查詢處以供一般	ard's Website for the Planning Depart 予相關諮詢人士 t參閱。)	browsing and free tment for general inf	downloading formation.)	by the public and
Application No.	(For Of	ficial Use Only) (請勿	刀填寫此欄)			
申請編號						,
Location/address		*		· · · ·	<u> </u>	
位置/地址		ERNMENT LANE 頁涌第109區的政		HUNG AREA 10	09	
Site area 地盤面積				12,000 s	q. m 平方爿	₹☑ About 約
	(includ	es Government land	of包括政府土	地 12,000	sq. m 平方爿	★ Mout 約)
Plan 圖則	Approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2 東涌擴展區分區計劃大綱核准圖編號 S/I-TCE/2					
Zoning 地帶	"RESIDENTIAL (GROUP A) 5" 「住宅(甲類)5」					
Applied use/ development 申請用途/發展	PROPOSED MINOR RELAXATION OF PLOT RATIO RESTRICTION FOR PERMITTED PUBLIC HOUSING DEVELOPMENT 擬議略為放寬地積比率限制,以作准許的公營房屋發展				ICTION FOR	
(i) Gross floor are and/or plot rat			sq.m	平方米	Plot Ra	tio 地積比率
總樓面面積及 地積比率		Domestic 住用.	66,000	□ About 約 ☑ Not more than 不多於	5.5	□About 約 ☑Not more than 不多於
		Non-domestic 非住用	3,600	□ About 約 ☑ Not more than 不多於	0.3	□About 約 ☑Not more than 不多於
(ii) No. of block 幢數		Domestic 住用		·		· · · · · · · · · · · · · · · · · · ·
		Non-domestic 非住用				
		Composite 綜合用途	2			

(iii)	Building height/No.	Domestic	m 米
	of storeys 建築物高度/層數	住用	□ (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	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
			□ Rejuge Floor 例文圖 □ Podium 平台)
		Composite 綜合用途	m 米 □ (Not more than 不多於)
			95 mPD 米(主水平基準上) (Not more than 不多於)
		-	31 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		OW: NOT MORE THAN 50% MAbout 約OT MORE THAN 25%
(v)	No. of units 單位數目	1,3	44
(vi)	Open space 休憩用地	Private 私人	3,763 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

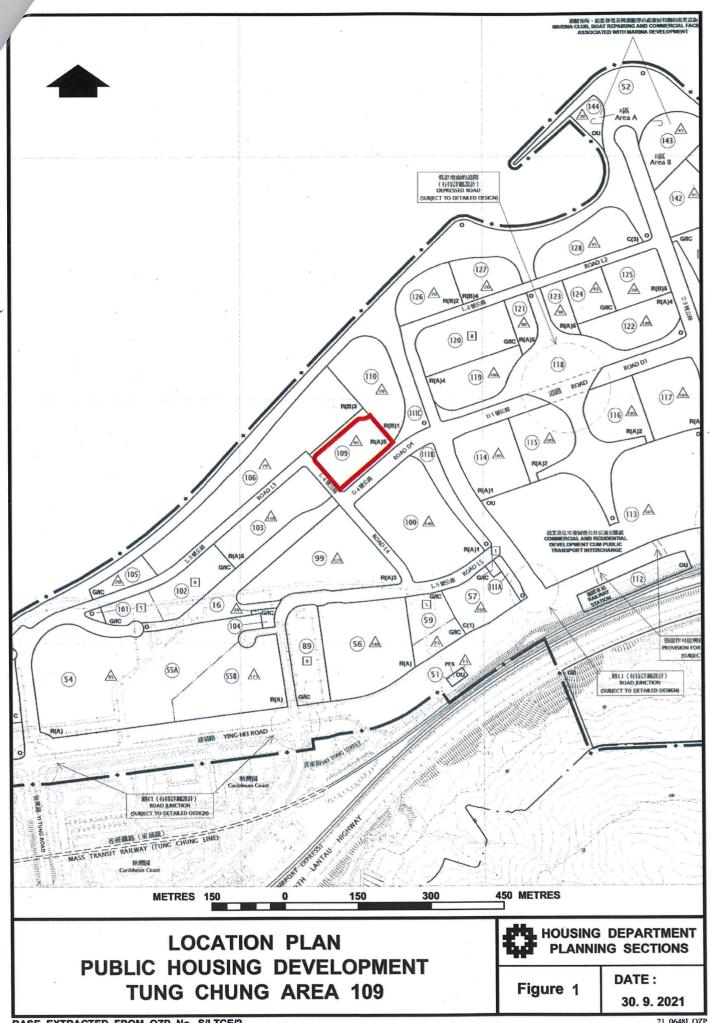
(vii)	No. of parking	Total no. of vehicle parking spaces 停車位總數	
	spaces and loading /		DOMESTIC: 168
	unloading spaces	Private Car Parking Spaces 私家車車位	VISITOR: 10
	停車位及上落客貨	Motorcycle Parking Spaces 電單車車位	12
	車位數目	Light Goods Vehicle Parking Spaces 輕型貨車泊車位	5
		Medium Goods Vehicle Parking Spaces 中型貨車泊車位	
		Heavy Goods Vehicle Parking Spaces 重型貨車泊車位	
		Others (Please Specify) 其他 (請列明)	
		BICYCLE PARKING - 90 NOS RETAIL & COMMERCIAL (R&C) CAR PARKING SPACES - 4 NOS	
		DISTRICT MAINTENANCE OFFICE CAR PARKING SPACES - 3 NOS	
		Total no. of vehicle loading/unloading bays/lay-bys	
		上落客貨車位/停車處總數	
		 Taxi Spaces 的土車位	
		Coach Spaces 旅遊巴車位	
		Light Goods Vehicle Spaces 輕型貨車車位	4 (DOMESTIC) & 1 (R&C
		Medium Goods Vehicle Spaces 中型貨車位	(Domeono) a 1 (na)
		l	
		Heavy Goods Vehicle Spaces 重型貨車車位 Others (Please Specify) 其他 (請列明)	* .
		Others (Flease Specify) 英他 (胡列列)	

Submitted Plans, Drawings and Documents 提交的圖則、繪圖及文件		
	Chinese	English
	中文	英文
Plans and Drawings 圖則及繪圖		
Master layout plan(s)/Layout plan(s) 總綱發展藍圖/布局設計圖	. 🖸	Ø
Block plan(s) 樓宇位置圖		Ū,
Floor plan(s) 樓宇平面圖		√
Sectional plan(s) 截視圖		\square
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		$ \overline{\mathbf{V}} $
Others (please specify) 其他(請註明)		
Reports 報告書		•
Planning Statement/Justifications 規劃綱領/理據		Ø
Environmental assessment (noise, air and/or water pollutions)		₹
環境評估(噪音、空氣及/或水的污染)		,
Traffic impact assessment (on vehicles) 就車輛的交通影響評估		✓
Traffic impact assessment (on pedestrians) 就行人的交通影響評估		
Visual impact assessment 視覺影響評估		
Landscape impact assessment 景觀影響評估		
Tree Survey 樹木調查		
Geotechnical impact assessment 土力影響評估		
Drainage impact assessment 排水影響評估		
Sewerage impact assessment 排污影響評估		Q
Risk Assessment 風險評估	, <u> </u>	
Others (please specify) 其他(請註明)	, U	$\overline{\mathbf{A}}$
WATER WORKS IMPACT ASSESSMENT		
	•	
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。

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S16 PLANNING APPLICATION
APPROVED TUNG CHUNG EXTENSION AREA OZP NO. S/I-TCE/2

Proposed Minor Relaxation of Maximum Overall Plot Ratio Restriction from 5.4 to 5.8 for the Public Housing Development at Tung Chung Area 109

SUPPORTING PLANNING STATEMENT

December 2021



Executive Summary

The Planning Application is submitted by the Hong Kong Housing Authority ("HKHA") to seek approval from the Town Planning Board ("TPB") under Section 16 of the Town Planning Ordinance for minor relaxation of maximum overall Plot Ratio (PR) from 5.4 to 5.8 (+ around 7.4%) of the public housing development at Tung Chung Area 109 (TC 109).

TC 109 is zoned "Residential (Group A)5" ("R(A)5") under the approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2 (the OZP), and is subject to a maximum overall PR of 5.4 and building height restriction of +95mPD.

Due to shortage of land for public housing development, the Government has been adopting a multi-pronged approach in increasing public land supply, including optimization of development potential of public housing sites where technically permits. In line with Government's initiative announced in December 2018 on "Enhanced Development Intensity of Public Housing Sites" to increase the maximum domestic PR of the public housing sites in New Towns by up to 30% as appropriate where their technical feasibility permit, the HKHA proposes to increase the maximum overall PR TC109 from 5.4 to 5.8, while keeping the building height below the statutory limit of 95mPD, with a view to optimizing the use of the public housing land. The development proposal comprises of two housing blocks providing about 1,344 public housing flats with a design population of about 3,763 persons.

The proposed minor relaxation of restriction of PR is fully justified with the following major reasons:

- The proposal is in-line with the refined policy on "Enhanced Development Intensity of Public Housing Sites" approved by Executive Council in December 2018 for optimizing land utilization;
- The proposal is to meet the acute demand for public housing. Under the Long Term Housing Strategy Annual Progress Report 2021, the split ratio of public / private housing of 70:30 is maintained continuously, and supply target for public housing is 301,000 for ten years from 2022/23 to 2031/32;

- The proposed public housing development is compatible with the surrounding development context;
- Technical assessments conclude that the proposal will not result in insurmountable impacts on urban design, air ventilation, visual, landscape, traffic, environmental, sewerage and fresh and salt water supply capacity aspects.

In view of the above, the TPB is requested to give favorable consideration to this Planning Application.

行政摘要

(聲明:此中文譯本僅供參考,如中文譯本和英文原文有差異時,應以英文原文為準。)

是項規劃申請是由香港房屋委員會(下稱「房委會」)向城市規劃委員會(下稱「城規會」)提出,旨在根據《城市規劃條例》第16條,向城規會申請規劃許可,略為放寬於東涌第109區公共房屋發展計劃的最高總地積比率由5.4倍增加至5.8倍(+約7.4%)。

東涌第109區於《東涌擴展區分區計劃大綱核准圖編號 S/I-TCE/2》(以下簡稱「大綱核准圖」)上劃為「住宅(甲類)5」地帶,受限於最高總地積比率5.4倍,及建築物高度上限的主水平基準以上95米。

因應公營房屋用地短缺,政府一直採取多管齊下的措施以增加公營房屋土地供應,包括在技術可行的情況下優化個別公營房屋地盤的發展潛力。為配合2018年12月政府公布的「提升公營房屋用地的發展密度」政策,旨在技術可行的情況下可適度提高在新市鎮的最高住宅地積比率最多三成。房委會建議申請東涌第109區地盤的總地積比率由5.4倍增加至5.8倍,並同時保持建築物高度低於主水平基準以上95米的限制,以更有效運用珍貴的土地資源。擬議發展東涌第109區包括興建2幢住宅大廈,提供約1,344個公營房屋單位,並容納約3,763預計人口。

擬議略為放寬地積比率限制的主要理據如下:

- 提案符合行政會議於2018年12月核准的「提升公營房屋用地的發展密度」政策, 以善用土地資源;
- 提案是為了滿足公營房屋的殷切需求。根據《長遠房屋策略》2021 年周年進度報告,公私營房屋供應比例繼續維持為70:30,而2022/23至2031/32年度10年間的公營房屋供應目標為301,000個單位;
- 擬議公營房屋發展與周邊的發展密度兼容;
- 技術評估亦證明提案在城市設計、通風、視覺、景觀、交通,環境,污水,供水均不會對週邊地區帶來重大影響。

基於以上各點,懇請城規會批准是項申請。

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1. INTRODUCTION

1.1 This application seeks the Town Planning Board (TPB)'s permission under Section 16 of the Town Planning Ordinance for the proposed minor relaxation of maximum overall Plot Ratio (PR) from 5.4 to 5.8 for public housing development at Tung Chung Area 109 (the Application Site).

2 SITE CONTEXT

2.1 Planning Context

- 2.1.1 Tung Chung Area 109 (TC 109) with a gross site area of around 1.20 hectares, is shown in *Figure 1*. TC 109 is currently held by the Hong Kong Housing Authority (HKHA). According to the approved Tung Chung Extension Area Outline Zoning Plan (OZP) No. S/I-TCE/2, TC 109 is zoned "Residential (Group A)5" ("R(A)5"), and is subject to a maximum overall PR of 5.4 and building height (BH) restriction of +95mPD (*Figure 1* refers).
- 2.1.2 In pursuit of the policy of "Enhancement of the Development Intensity of Public Housing Sites" approved by the Executive Council (ExCo) in December 2018 for addressing the shortage in public housing supply, the HKHA proposes to increase the flat production on the TC 109 through minor relaxation of the maximum PR from 5.4 to 5.8. According to the OZP, based on the individual merits of the development proposal, minor relaxation of restriction of PR may be considered by the TPB on application under Section 16 of the Town Planning Ordinance.

2.2 Surrounding Land Uses

2.2.1 TC 109 has been formed by reclamation. To the west is the proposed Road L4 and Tung Chung Area 103 (TC 103) planned for public housing development. To the north is the proposed Road L3 and Tung Chung Area 106 (TC 106) planned for medium-density residential development. To the east is Tung Chung Area 110 (TC 110) planned for medium-density residential development. To the south is Road D4 and Tung Chung Area 100 (TC 100) planned for public housing development.

2.3 Accessibility

2.3.1 TC 109 is easily accessible. It is located within 600m walking distance to the planned railway station. There are vehicular ingress/egress at Road L3 for TC 109. A planned public transport interchange is located in Tung Chung Area 99 (TC 99), which is in adjacent to TC 109.

3. DEVELOPMENT PROPOSAL

3.1 The Proposed Scheme

- 3.1.1 The Proposed Scheme adopts a maximum building height not exceeding 95mPD and a maximum PR of 5.8 of which PR of 5.5 and 0.3 are for domestic and non-domestic portions respectively. The Proposed Scheme would provide about 1,344 flats with a design population of about 3,763 persons, which are subject to detailed design.
- 3.1.2 The differences in key parameters of TC 109 as compared against the Baseline Scheme which is an OZP compliance scheme are summarized in *Table 1* below.

Table 1 Comparison between the Baseline Scheme and Proposed TC 109 Scheme

Development	Baseline Scheme ¹	Proposed Scheme	Difference
Parameters	[A]	[B]	[B] – [A]
Overall Maximum PR	Overall 5.4	Overall: 5.8	
	Domestic: 5.0	Domestic: 5.5	+0.4 (+7.4%)
	Non-domestic: 0.4	Non-domestic: 0.3	
Overall GFA (m ²) ²	About	About	+4,800 m ²
	64,800 m ²	69,600 m ²	+4,800 m
Building Height	Not exceeding	Not exceeding	
(Measured at Main	Not exceeding	Not exceeding	No change
	+95 mPD	+95 mPD	
Roof Level)			
Flat Production	About 1,102	About 1,344	+242
Design Population	About 3,371 ³	About 3,763 ⁴	+392

Note 1: Baseline Scheme is an OZP compliance scheme

Note 2: Calculation based on the net site area of 12,000m²

Note 3: According to the Planning and Engineering Study for Tung Chung New Town Extension completed in 2016,

average housing size assumption of 3.06 was adopted for technical assessment purpose.

Note 4: Based on the latest average household size of 2.8

3.1.3 TC 109 comprises two housing blocks which accommodate estate management office, district maintenance office and facilities ancillary to the domestic use (including the electrical and mechanical facilities, fire services, sprinkler facilities, transformer room, etc.). Not less than 3,763 m² local open space in accordance with the HKPSG requirement of 1 m² per person will be provided. A podium garden, a table tennis table and children's play area will also be provided in the public housing development. A set of schematic drawings illustrating the layout and design of the Proposed Development are provided at *Appendix 1*.

3.1.4 The key development parameters of TC 109 are summarized in *Table 3* below.

Table 3 Key Development Parameters of TC 109

Development Parameters	Proposed Scheme
Site Area ¹	About 12,000 m ²
Maximum PR	
- Overall	5.8
- Domestic	5.5
- Non-domestic	0.3
GFA ^{2, 3}	
- Total	About 69,600 m ²
- Domestic	About 66,000 m ²
- Non-domestic	About 3,600 m ²
Building Height (Measured at	Not exceeding + 95 mPD
Main Roof Level)	
No. of Housing Blocks & Storeys	Blocks 1 – 2:
	28 (Domestic) + 2 (Podium) + 1 (Basement)
	storeys
Flat Production	About 1,344
Design population ⁴	About 3,763
Site Coverage (<15m)	Not more than 50%
(≥15m)	Not more than 25%
Local Open Space	Not less than 3,763 m ²
Children's Play Area	Not less than 301 m ²

Development Parameters	Proposed Scheme
Green Coverage	20%
(% of Gross Site Area)	
Parking Provision ³	
Car Parking Spaces (Domestic) ⁴	168
Car Parking Spaces (Visitors)	10
Car Parking Space (R&C)	4
Car Parking for District	3
Maintenance Office	3
Motorcycle Parking Spaces	12
Light Goods Vehicle Parking	5
(Domestic)	
Loading/Unloading (L/UL) Bay	4
(Domestic)	·
L/UL (R&C)	1
Bicycle Parking (Domestic)	90

Note 1: The gross site area is subject to detailed survey and layout finalization.

Note 3: Full GFA exemption for parking spaces. Provision in accordance with Hong Kong Planning Standards and Guidelines (HKPSG) as advised by Transport Department (TD). The parking provisions are subject to finalized flat mix.

Note 4: Based on average household size of 2.8.

3.2. Implementation Programme

3.2.1. Piling works of TC 109 commenced by HKHA in July 2021 for planned building completion in 2025/26 tentatively.

Note 2: Calculation based on the net site area of 12,000 m².

4. PLANNING JUSTIFICATIONS

4.1. In line with Government's Policy on Intensification of Public Housing Sites

4.1.1 The Executive Council approved in December 2018 the policy on "Enhanced Development Intensity of Public Housing Sites" by increasing the maximum domestic PR of public housing sites up to 30% where their technical feasibility permits. The policy allows the maximum domestic PR of public housing sites located in selected Zones, including Density Zone 1 of New Towns where Application Site is located, to be increased by up to 30% (versus by up to 20% as announced in the 2014 Policy Address), where technical feasibility permits. To this end, the proposed increase in domestic PR from 5.0 to 5.5 for TC 109 is in line with this policy. Minor relaxation of maximum overall PR from 5.4 to 5.8 for TC 109 is therefore proposed.

4.2. Meet Acute Demand for Public Housing

4.2.1. Under the Long Term Housing Strategy Annual Progress Report 2021, the split ratio of public / private housing of 70:30 is maintained continuously, and supply target for public housing is 301,000 for the ten year from 2022/23 to 2031/32. As at end-September 2021, there were about 153 700 general applications for PRH, and about 100 800 non-elderly one-person applications under the Quota and Points System. The proposal with minor relaxation of overall PR restriction would increase the public housing production and is in line with the Government policy to better utilize land resources in order to meet the imminent housing need.

4.3. Compatible with Surrounding Development Context

4.3.1 The proposed building height of TC 109 at +95mPD does not exceed the maximum BHR as stipulated under the OZP and the proposed PR is compatible with high-rise residential developments (such as planned public housing developments at TC 99 and TC 100 with maximum domestic PR of 6.5; Ying Tung Estate, Century Link, The Visionary with maximum domestic PR of 5) in the vicinity. TC 109 is visually compatible with the surroundings.

- 4.4. No Significant Change in Urban Design, Air Ventilation, Visual and Landscape Impact
- 4.4.1 TC 109 does not involve significant change to the bulk of the podium and blocks. The proposed increase in overall PR from 5.4 to 5.8 for TC 109 will comply with the existing BHR of +95mPD. From the analysis above, it is demonstrated that with further intensification of PR, TC 109 has not compromised any original planning for high-density public housing development, urban design conceptions / intentions and landscape aspects.
- 4.4.2 In the Proposed Development, wind corridors with a minimum width of 15m and ventilation bays at ground level (*Landscape Master Plan of Appendix 2* refers) have been provided to achieve a satisfactory wind environment annually at pedestrian level. It is also considered that the Proposed Development does not involve significant change in building bulk and design features that are conducive to the pedestrian wind environment and visual, which have been incorporated. Thus, no adverse impact on air ventilation is anticipated.
- 4.4.3 A total of 6 viewpoints (VPs) (*Figure 2* refers) are selected that can best facilitate the Rural and New Town Planning Committee of the TPB to visualize the three dimensional relationship of the Proposed Development with the surrounding context. The 6 VPs cover the strategic locations around the Proposed Development. The Proposed Development is pronouncedly visible from key sensitive viewers. The extent of which is delineated based on the size of the Proposed Development in both baseline and proposed scheme, the site context, and the distance and location of the sensitive viewers. No VPs are selected in the hiking trails from Pak Mong along the foothill to the top of Por Kai Shan as it seems that the view towards the Proposed Development are blocked by existing and planned developments. As evident in the VPs, the residual cumulative visual impact of the Proposed Development is considered to be negligible and conforms with the surrounding buildings and be seen as an extension of the townscape. Justifications on the selected VPs are as follows:

(i) View from Chep Lak Kok Road (*Figure 3* refers)

This VP is located about 1.42km to the northeast of the Site, this medium-range transient VP is located at the Chep Lap Kok Road of the Hong Kong-Zhuhai-Macau Bridge Hong Kong Port. Currently, this VP has minimal traffic flow but it is anticipated to have an increase in traffic volume in the near future. Given this VP is located at a cross-border port, it may experience higher traffic flow in the future, the visual sensitive receivers (VSRs) at this VP are considered to have a low to medium sensitivity.

(ii) View from Kwo Lo Wan Road (Figure 4 refers)

This medium-range static VP is situated in between the CNAC House Loading Area and Hong Kong Airlines Headquarter and to the northwest of the Site with a viewing distance of 1.55km. This VP is not frequently visited by the public as there are no public amenities in the surrounding area, with only commercial buildings situated in the vicinity. Given the isolated nature of this VP and medium range of viewing distance, the VSRs from this VP would have a low sensitivity.

(iii) View from Scenic Hill Pavilion (Figure 5 refers)

This medium-range static VP is located at the top of the Scenic Hill and to northwest of the Sites with a viewing distance of approximately 1.91km. This VP is a local hotspot as well as frequently visited by recreational users. The pubic viewers from this VP can overlook the Hong Kong International Airport and the Tung Chung Town Center. With the medium range of viewing distance and leisure nature of this VP, the VSRs from this VP would have medium sensitivity.

(iv) View from Tung Chung New Development Pier (Figure 6 refers)

This medium-range static VP is located at the Tung Chung New Development Pier. This VP is located to the west of the Site with a viewing distance of about 1.42km. The pier offers routes to Tuen Mun and Tai O, and the usage of the pier is considered as low. It is appropriate to consider the VSRs of this VP to be transient in nature, hence in combination of the viewing distance, this VP is considered to have a low to medium sensitivity.

(v) <u>View from the Planned District Open Space (Tung Chung Area 16) In-between TC</u> 103 and TC 99 (*Figure 7* refers)

This short-range VP is located to the southwest of the Site with a viewing distance of about 360m from the Site which aims to capture the visual effect of the increased PR of the Proposed Scheme on the public viewers in the district open space. There are moderate numbers of VSRs at this VP, who are pedestrians, mainly the future residents of surrounding area, utilizing this section of open space for recreational purposes. Therefore, the VSR's duration of view at this VP is considered medium/ long. Taken into account of the close range, moderate number and medium/ long duration of view of this VSR, it is considered to have a medium/ high sensitivity.

(vi) View from the Planned District Open Space at Tung Chung Area 111C (*Figure 8* refers)

This short-range VP is located to the east of the Site with a viewing distance of about 150m from the Site which aims to evaluate the visual effect of the increased PR of the Proposed Scheme on the VSRs whom are the park users. The VSR's duration of view at this VP is considered medium/ long. As the district open space serves the recreational needs of local residents and the general public, thus, it is considered to have a medium to high sensitivity. The proposed increase in development intensity would not cause any adverse visual impact.

- 4.4.4 The overall urban design for the Proposed Development is to strengthen the connectivity to the adjacent district open spaces such as in Area 16 and Area 111C, and maximize greening opportunity within the Proposed Development.
- 4.4.5 TC 109 is Reclamation/Ongoing Major Development Landscape in the Urban Fringe, with no landscape resource found within the site. There is no existing tree within the site. TC 109 is unlikely to cause any further significant adverse landscape impact, especially the surrounding areas are also reclamation sites with similar design characters. In view of that the public housing at TC 99 and TC 100 under construction are located to the south of the Application Site, TC 109 with similar scale and use are considered compatible with the local environment.

4.4.6 The landscape design aims to maximize greening and recreational opportunity to cater for the enjoyment of the residents. The landscape areas are mainly located on G/F and podium levels of TC 109, which provide both active and passive recreational facilities for different ages of user, including seating area, children's play area, communal play area, fitness area, and planters. The green coverage will be provided at a minimum of 20% of the gross site area, half of which will be at grade or at levels easily accessible by residents, with the integration of local open space. Please refer to Landscape Master Plans and Open Space Demarcation Plans of separate levels at *Appendix 2* for details.

4.5 Optimization of Site Development Potential

4.5.1 The disposition and layout of the building blocks have been specifically designed in response to TC 109 context as aforementioned in order to optimize the development potential of TC 109 as far as practical, while addressing various environmental and technical aspects in minimizing their impacts.

4.6 Flexibility for Innovative Design adapted to Site Characteristics

4.6.1 TC109 has a set back from the site boundary in which a continuous retail shop frontage abutting the District Open Space; this is to encourage the street life, enhancing interface between commercial frontage and the open space and to create a generous spatial experience for recreation and leisure. The retail shops will also include cantilevered canopies for the general public's comfort (*Appendix 2* refers).

4.7 No Adverse Technical Implications

No Adverse Impact on the Sewerage System

- 4.7.1 Civil Engineering and Development Department (CEDD) will undertake implementation of planned infrastructure according to the planned population threshold.
- 4.7.2 Sewerage Impact Assessment (SIA) (*Appendix 3* refers) has been conducted and the study findings conclude that the planned / existing sewerage system has sufficient capacity to cater for the additional sewage discharge from the Proposed Development.

No Adverse Impact on the Fresh and Salt Water Supply System

4.7.3 Water Works Impact Assessment (WWIA) (*Appendix 4* refers) has been conducted and the findings concluded that the planned/ existing/ temporary fresh and salt water supply system in the vicinity is adequate to serve the Proposed Development. The proposal is not expected to envisage insurmountable adverse impact.

No Adverse Traffic Impact

4.7.4 A Traffic Impact Assessment (TIA) for TC 109 has been carried out in support of this Section 16 Application. The result of TIA indicates that the proposal will have no insurmountable traffic impact on the surrounding road network with provision of improvement measures at local junctions if included in infrastructure under Tung Chung New Town Extension (TCNTE) project by CEDD. Car parking and loading/unloading facilities are provided to meet the Hong Kong Planning Standards and Guidelines requirements, parking demand in the district, and to the satisfaction of Transport Department (TD). Please refer to the TIA as accepted by TD at *Appendix 5* for details.

No Adverse Environmental Impact

4.7.5 An Environmental Assessment Study (EAS) for TC 109 to address the potential road traffic noise, fixed plant noise sources and air quality impact has been conducted (*Appendix 6* refers). The result of the EAS has demonstrated that the proposal will have no insurmountable impact with appropriate noise mitigation measures to be incorporated in the proposed public housing developments at TC 109, such as provision of acoustic windows and fixed side windows, etc.

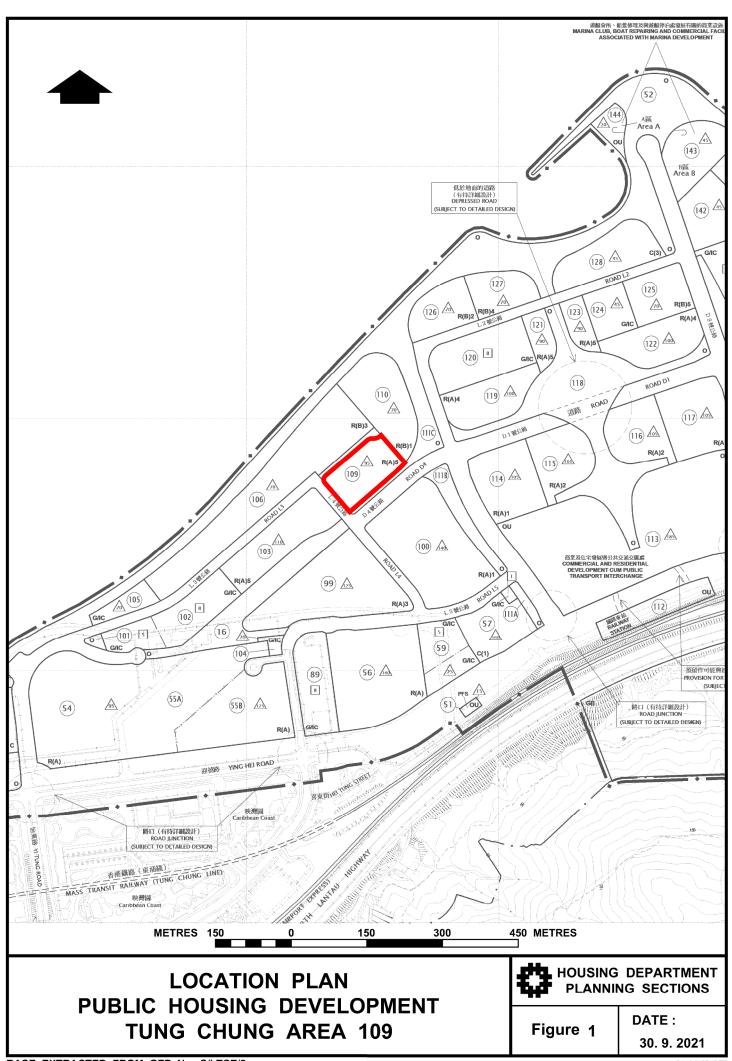
5 CONCLUSION

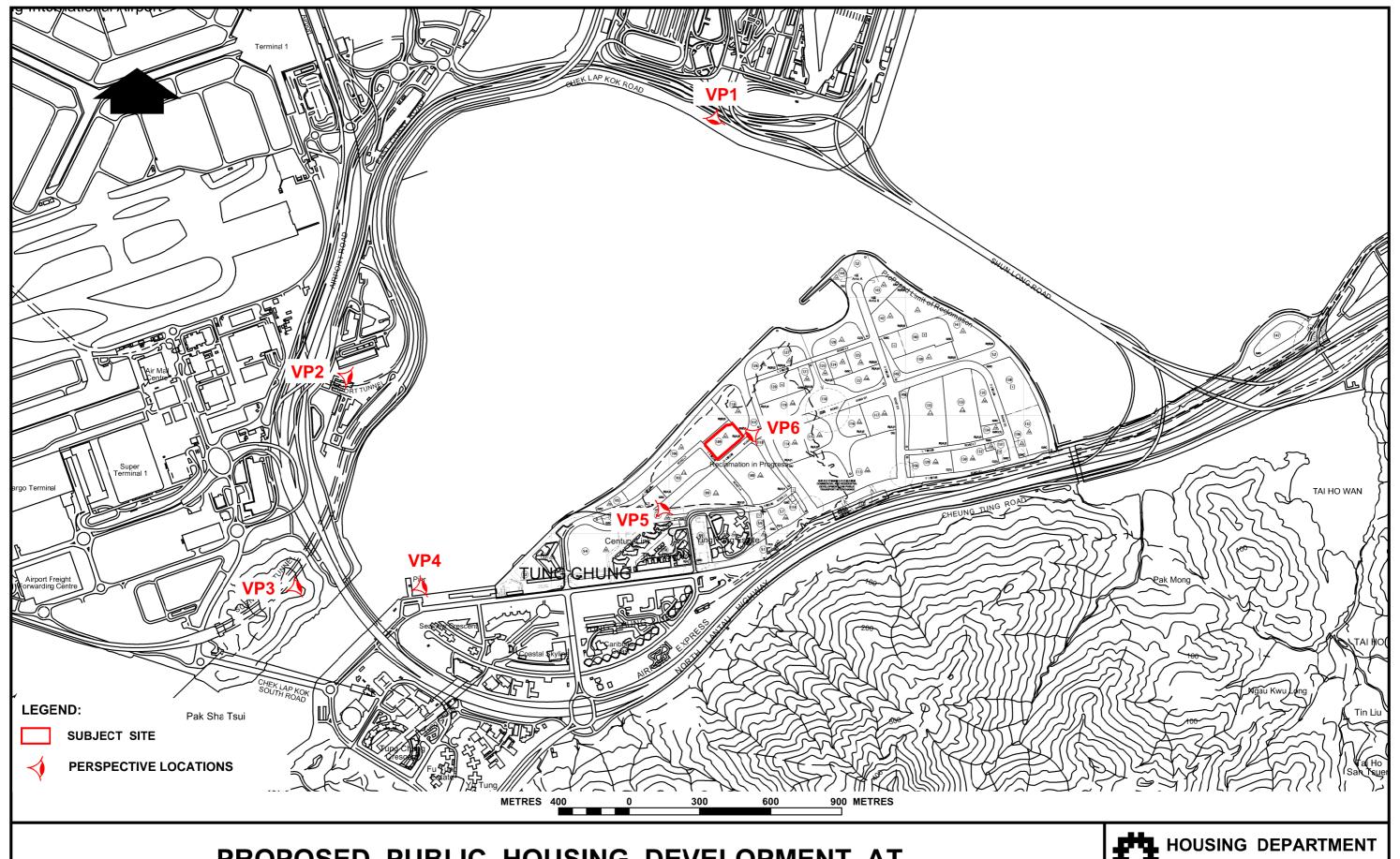
- 5.1 It has been demonstrated in this Planning Statement that the proposed minor relaxation of maximum overall PR from 5.4 to 5.8 for TC 109 will facilitate the provision of additional public housing flats, and is in line with the Government's policy directives to maximize the development potential of valuable land resources.
- 5.2 The Proposed Development is also in line with the planning intention of the "R(A)5" zone and compatible with the surrounding developments. As demonstrated in the technical assessments, the proposal will have no insurmountable impacts on urban

design, air ventilation, visual, landscape, traffic, environmental, sewerage and fresh and salt water supply capacity aspects.

5.3 In view of the above, the TPB is requested to give favorable consideration on the proposed minor relaxation of maximum overall PR from 5.4 to 5.8 of the Application Site.





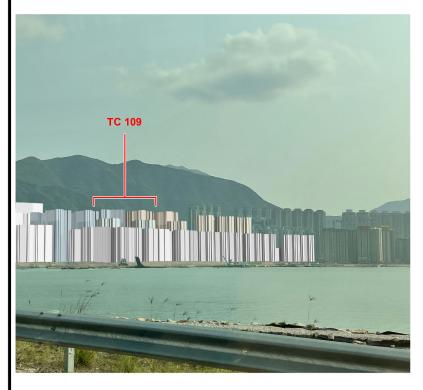


PROPOSED PUBLIC HOUSING DEVELOPMENT AT **TUNG CHUNG AREA 109 VIEWPOINT LOCATIONS**

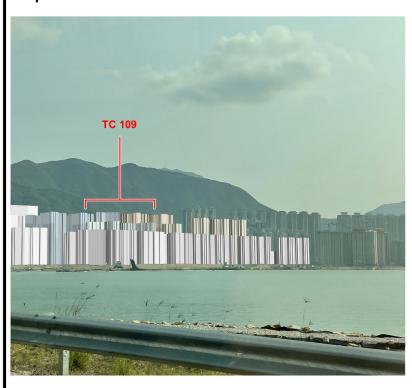


Figure 2

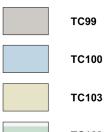
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Proposed Scheme

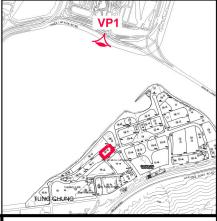


LEGEND:



TC109

TC113



PHOTOMONTAGE AT VIEWPOINT 1

HOUSING DEPARTMENT PLANNING SECTIONS

Figure 3

DATE: 7. 12. 2021



Proposed Scheme



LEGEND:

ТС99

TC100

TC103

TC109

TC113



PHOTOMONTAGE AT VIEWPOINT 2

HOUSING DEPARTMENT PLANNING SECTIONS

Figure 4

DATE: 7. 12. 2021



Proposed Scheme



LEGEND:

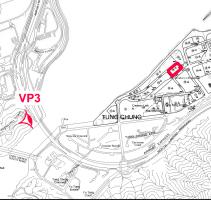
ТС99

TC100

TC103

TC109

TC113



PHOTOMONTAGE AT VIEWPOINT 3

HOUSING DEPARTMENT PLANNING SECTIONS

Figure 5

DATE : 7. 12. 2021



Proposed Scheme



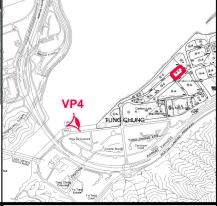
LEGEND:

TC99

TC103

TC109

TC113

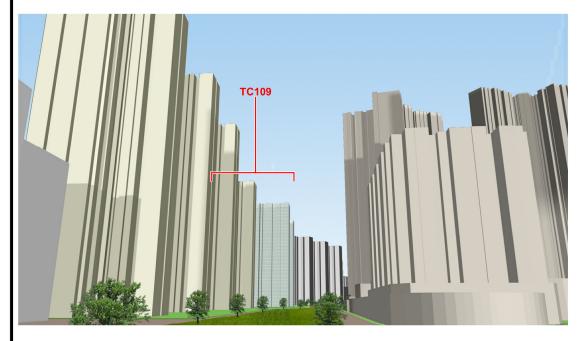


PHOTOMONTAGE AT VIEWPOINT 4

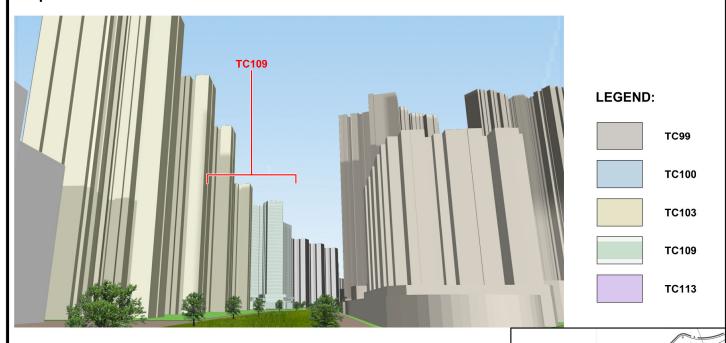
HOUSING DEPARTMENT PLANNING SECTIONS

Figure

DATE: 7. 12. 2021



Proposed Scheme



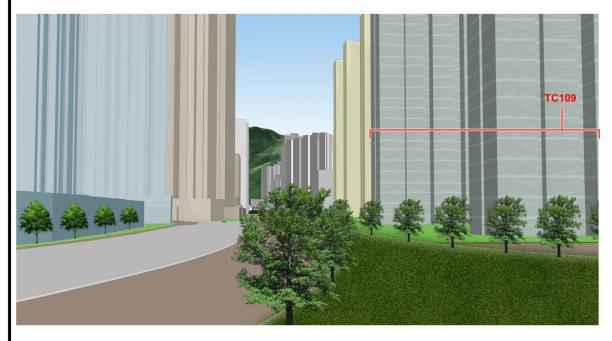
HOUSING DEPARTMENT

PHOTOMONTAGE AT VIEWPOINT 5

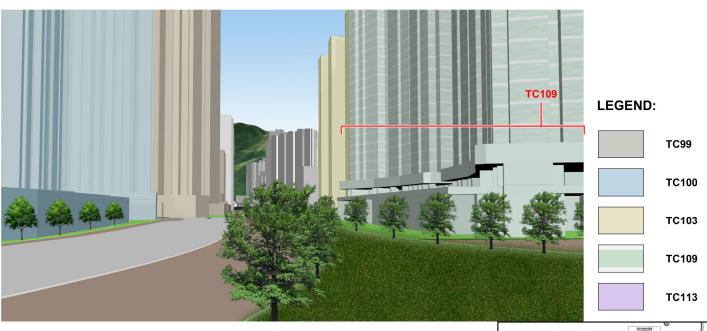
HOUSING DEPARTMENT PLANNING SECTIONS

Figure 7

DATE:
7. 12. 2021



Proposed Scheme



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PHOTOMONTAGE AT VIEWPOINT 6

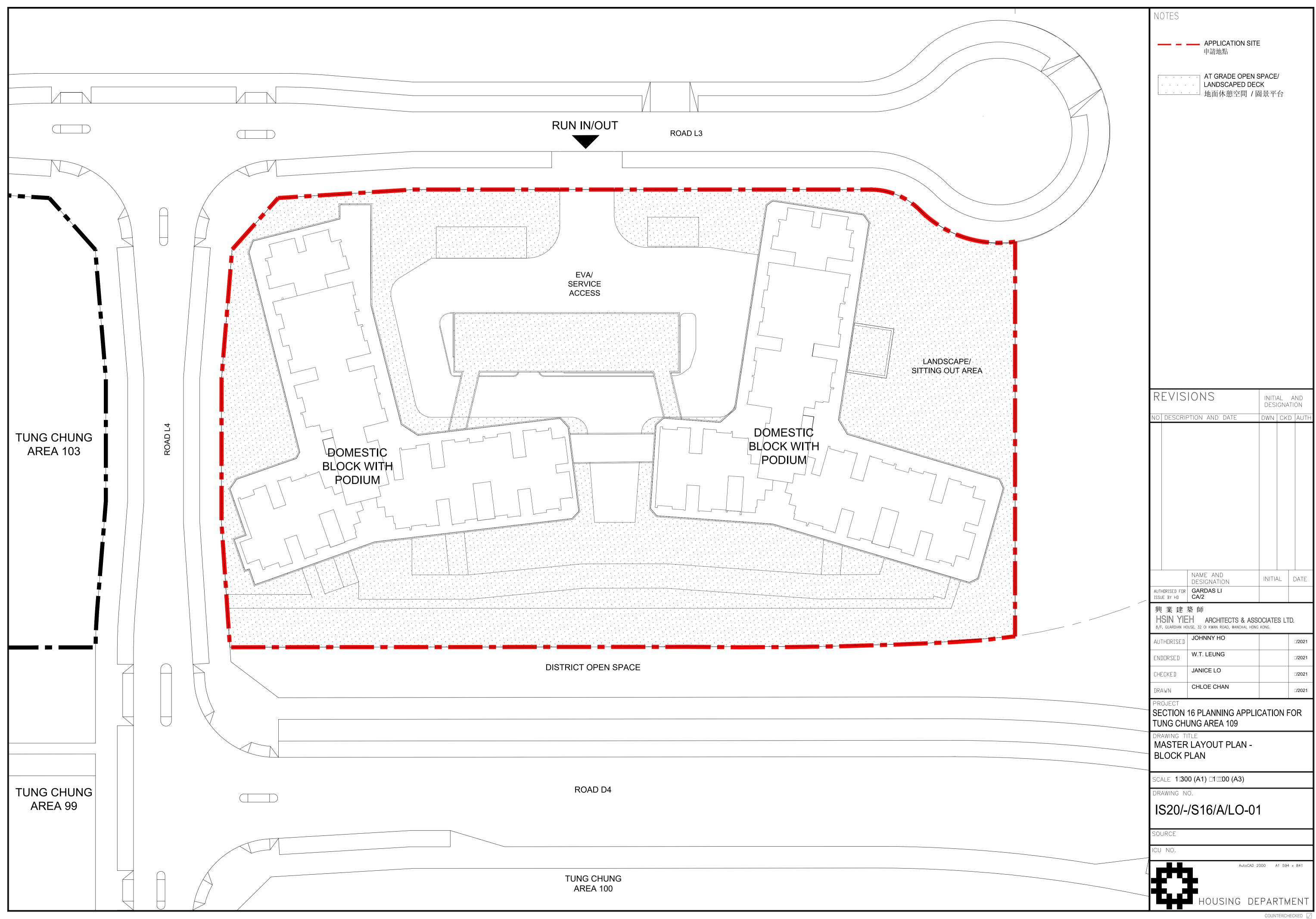
HOUSING DEPARTMENT PLANNING SECTIONS

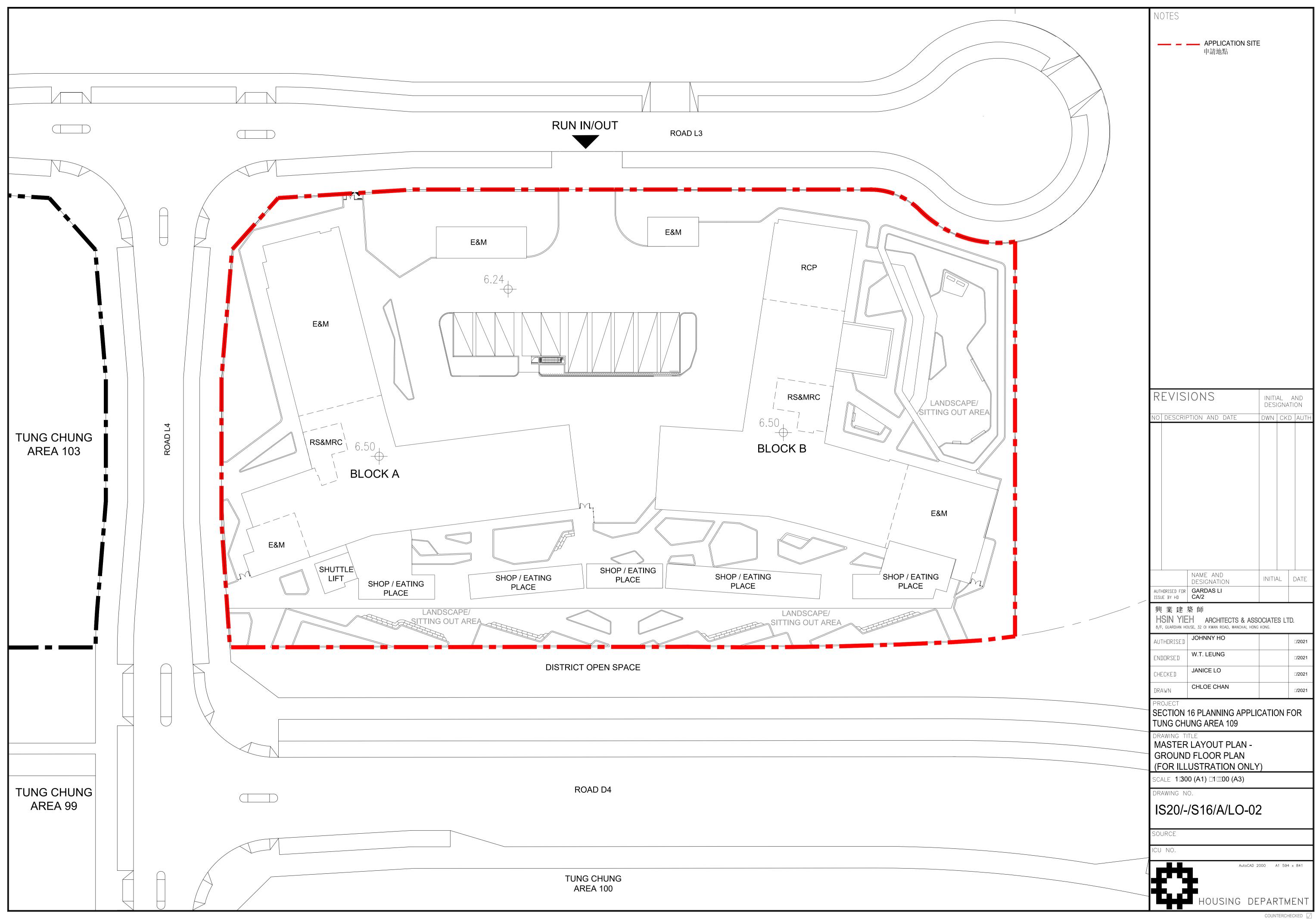
Figure 8

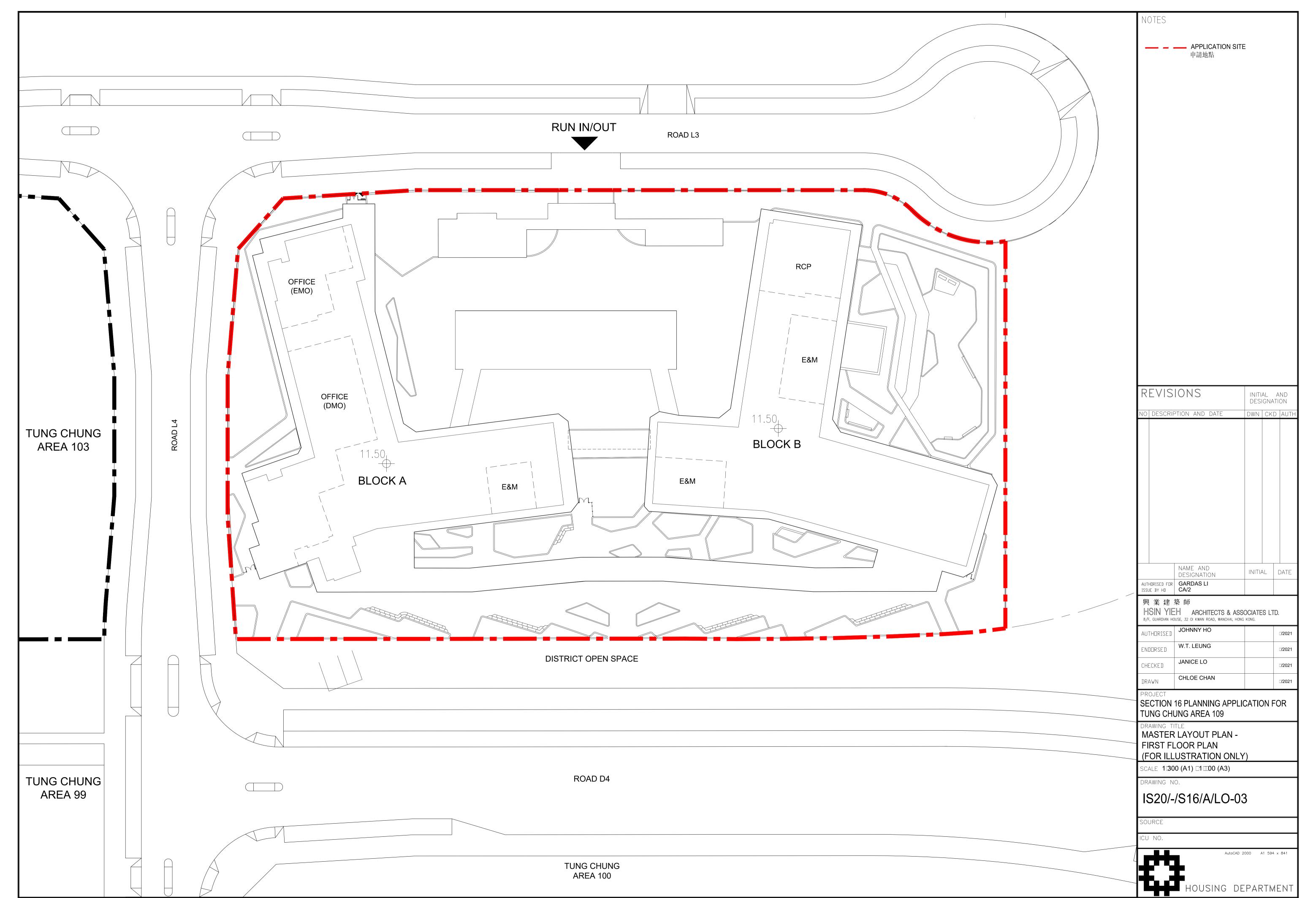
DATE: 7. 12. 2021

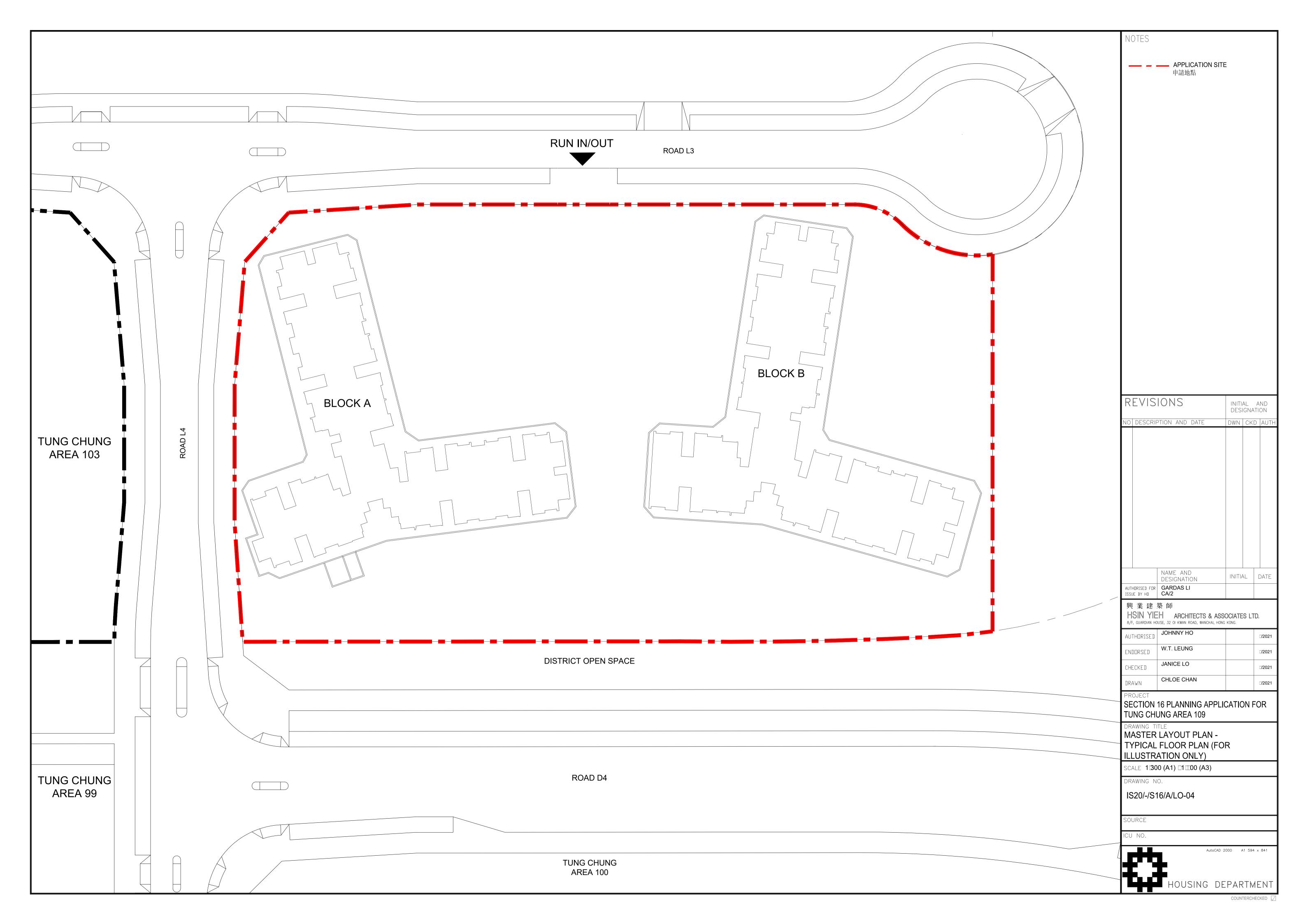
Appendix 1

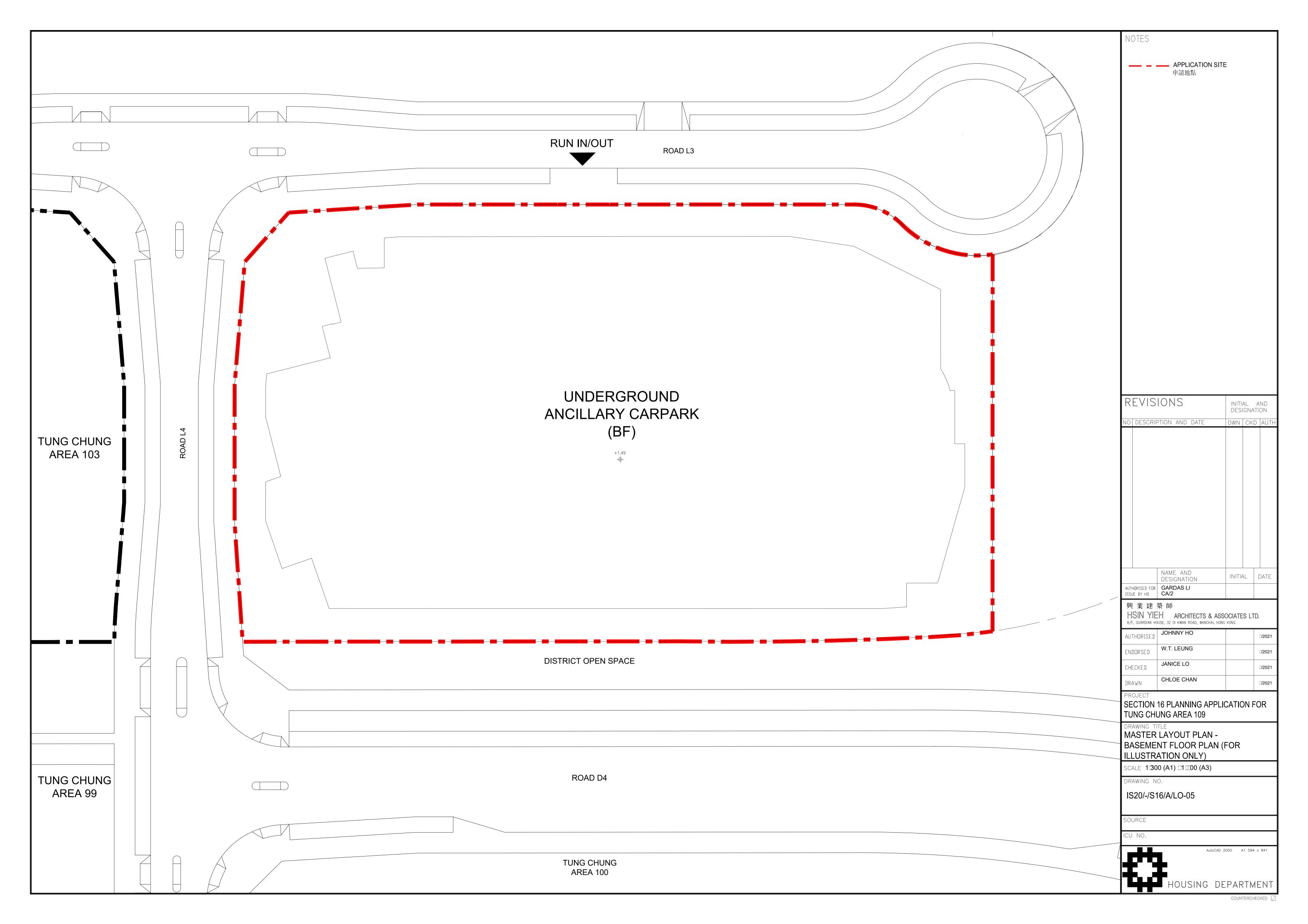
Schematic Drawings

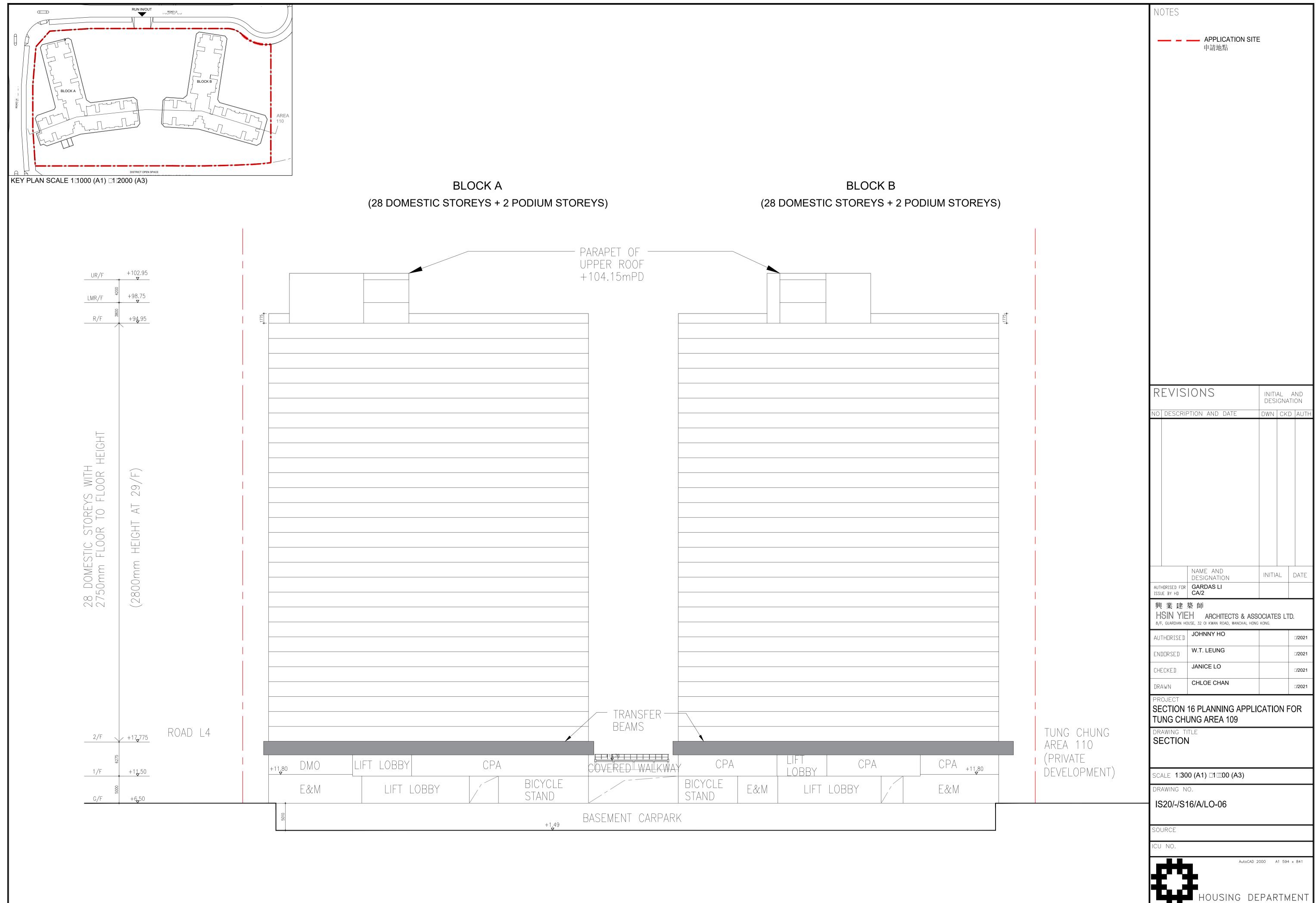












Appendix 2

Landscape Master Plan &
Open Space Demarcation Plan



- 1. MAIN ENTRANCE FROM DOS
- 2. CENTRAL COMMUNAL PASSAGE
- 3. RETAIL FRONTAGE
- 4. RESIDENTIAL LOBBY ENTRANCE
- 5. CHILDREN'S PLAY AREA

- 8. EVA & VEHICULAR ENTRANCE
- 9. ROOF GREEN (1/F)
- 10. ELEVATED LOOK OUT AREA (1/F)
- 11. BUFFER PLANTING

Boundary Fence

INITIAL AND DESIGNATION NO DESCRIPTION AND DATE DWN CKD AUTH

NAME AND DESIGNATION INITIAL DATE AUTHORISED FOR GARDAS LI ISSUE BY HD CA/2

HSIN YIEH ARCHITECTS & ASSOCIATES LTD.

SCENIC LANDSCAPE STUDIO LTD.

JOHN CHARTERS LAPSP □DIRECTOR CHRISTIE LI LAPSP □PROJECT MANAGER

BENNY KWOK LAPSPILANDSCAPE ASSISTANT

PUBLIC HOUSING DEVELOPMENT AT TUNG CHUNG AREA 109

LANDSCAPE MASTER PLAN -

IS20/-/D2/L/LO-01

AutoCAD 2000 A1 594 x 841





INITIAL AND DESIGNATION DWN CKD AUTH

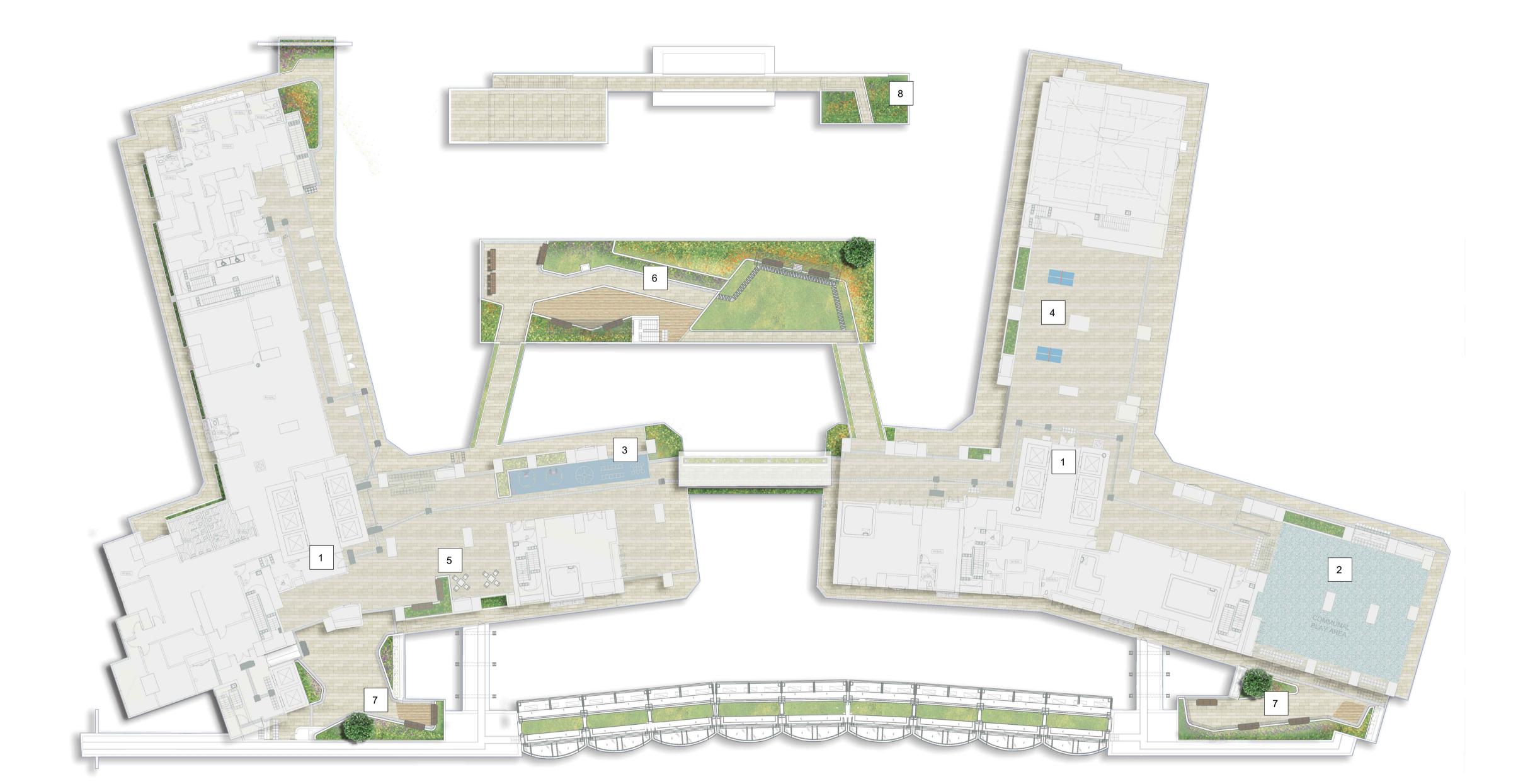
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HSIN YIEH ARCHITECTS & ASSOCIATES LTD.

AutoCAD 2000 A1 594 x 841

HOUSING DEPARTMENT





LEGEND

- 1. RESIDENTIAL LOBBY ENTRANCE
- 2. CHILDREN'S PLAY AREA
- 3. FITNESS DECK
- 4. TABLE TENNIS
- 5. TABLE & CHAIRS
- 6. ROOF GARDEN
- 7. ROOF GREEN
- 8. ELEVATED LOOK OUT AREA (1/F)

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SCENIC LANDSCAPE STUDIO LTD.

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CHECKED	CHRISTIE LI LAPSP □PROJECT MANAGER	
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PUBLIC HOUSING DEVELOPMENT AT TUNG CHUNG AREA 109

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SCALE 1:250

PROJECT

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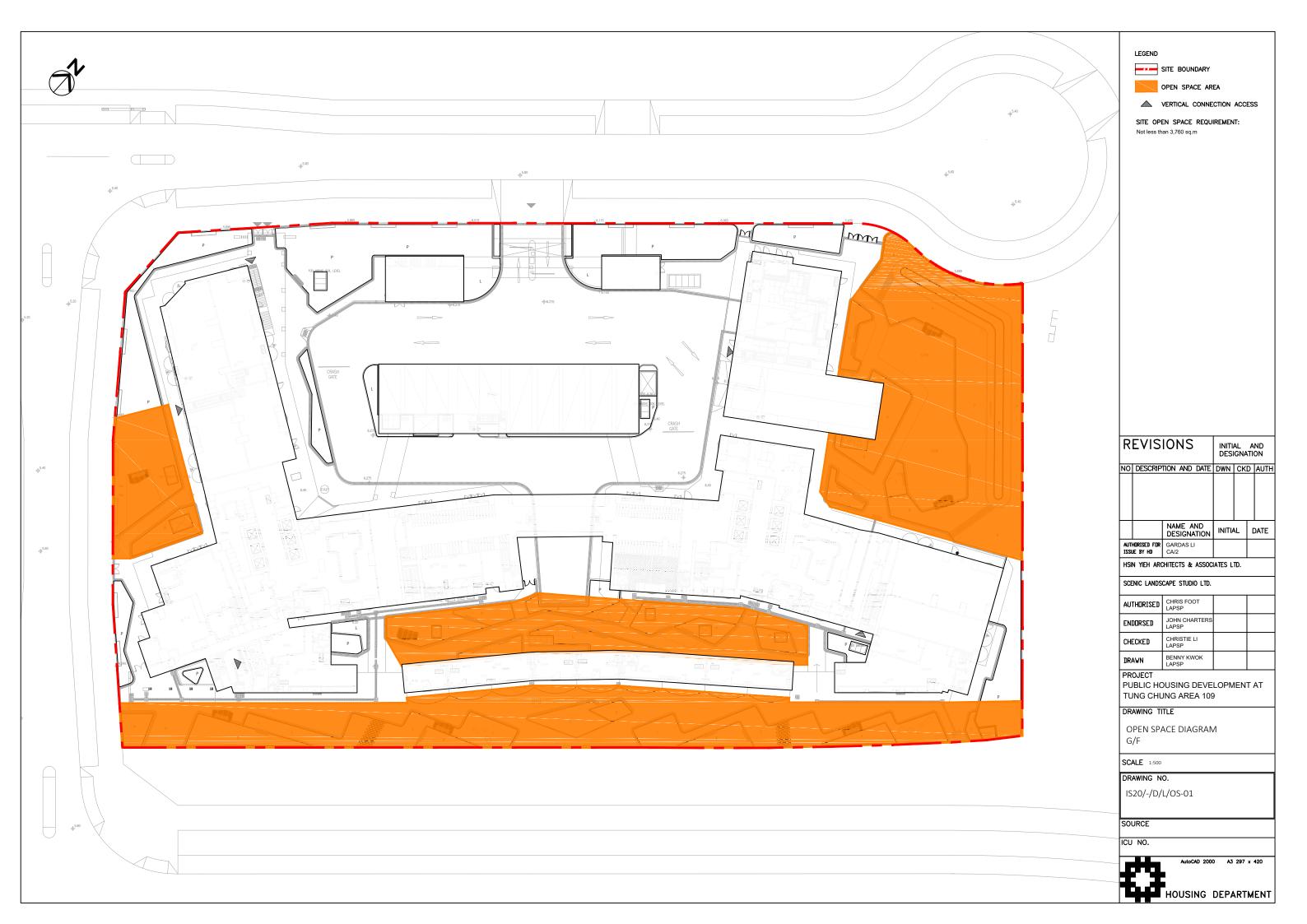
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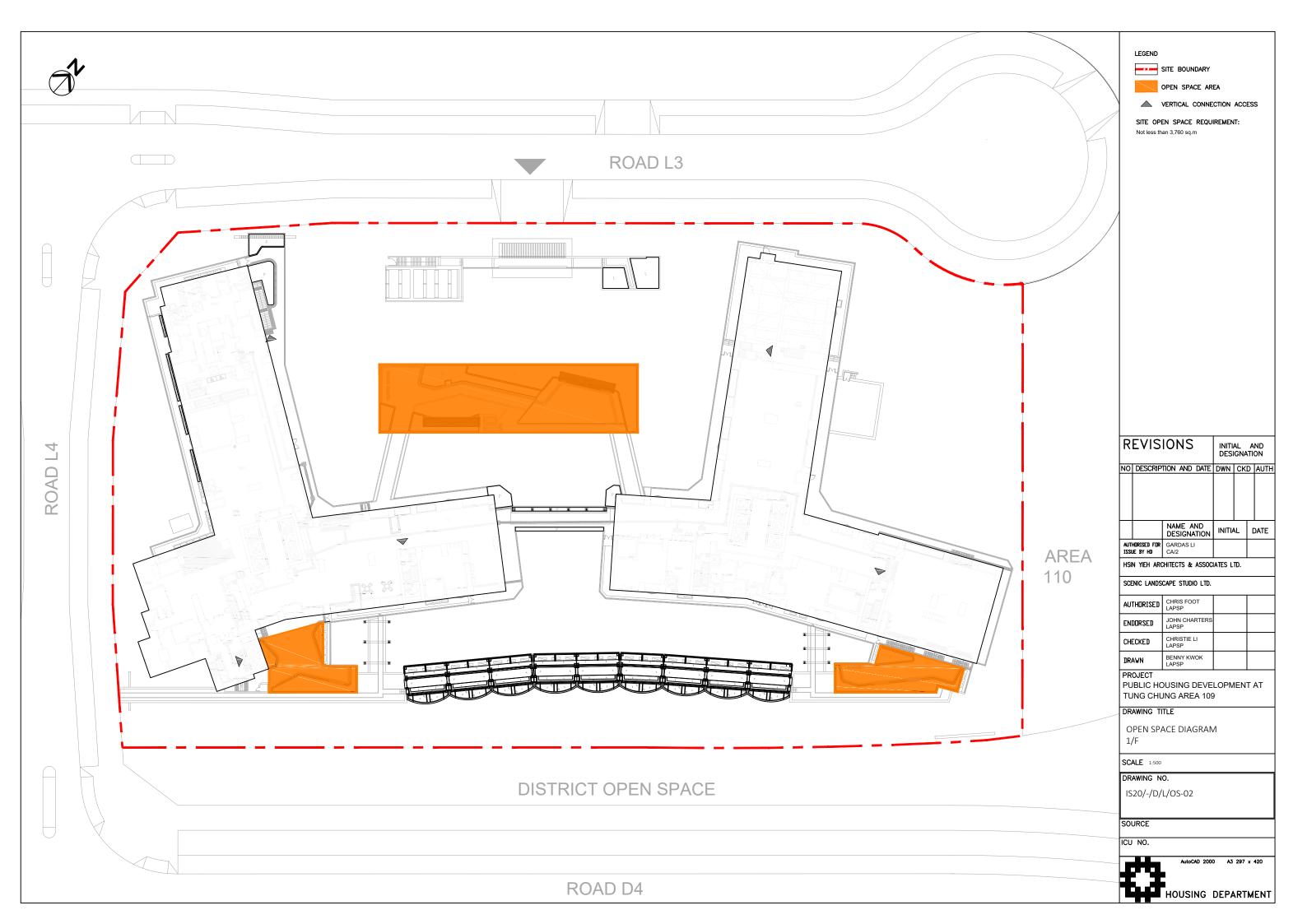
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AUTHORISED JOHNNY HO □/2021 W.T. LEUNG ENDORSED □/2021 JANICE LO CHECKED □/2021 CHLOE CHAN

DRAWN

SECTION 16 PLANNING APPLICATION FOR TUNG CHUNG AREA 109

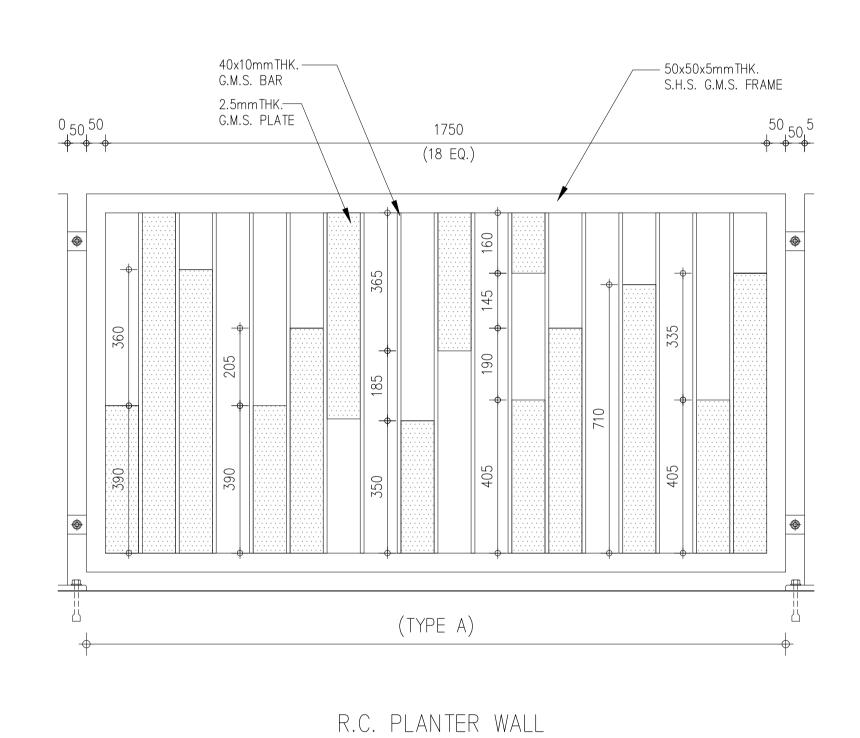
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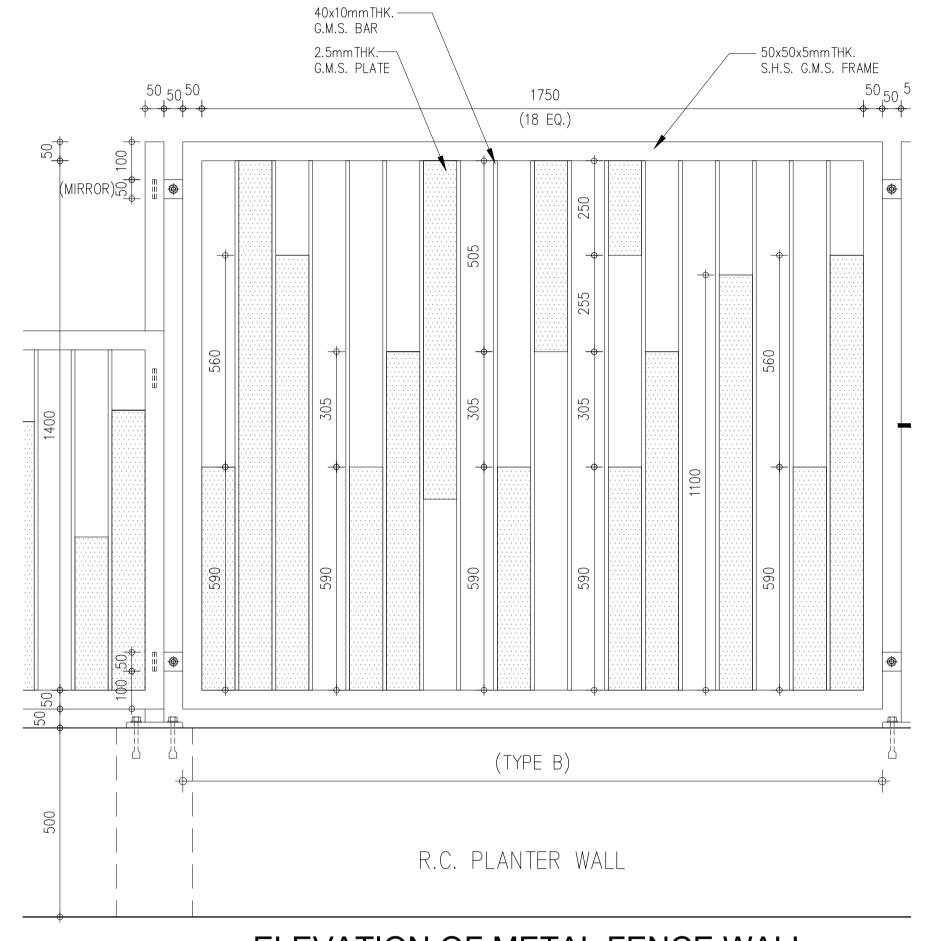
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ELEVATION OF METAL FENCE WALL (TYPE A)



ELEVATION OF METAL FENCE WALL (TYPE B)

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DRAWN CHLOE CHAN

PUBLIC HOUSING DEVELOPMENT AT TUNG CHUNG AREA 109

DESIGN CONCEPT FOR
THE BOUNDARY FENCE

SCALE 1:10 (A1); 1:20 (A3)

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HOUSING DEPARTMENT

Appendix 3

Technical Assessments – Part 1
(Sewerage Impact Assessment)

Hong Kong Housing Authority

Agreement No. CB20180310 HKHA Term Engineering Consultancy Services 2018-2020 For Kowloon Central & West and Islands Region

Proposed Public Housing Development at Tung Chung Area 109

Sewerage Impact Assessment (Draft Final)



Document No. Q1021/C005/1 Issue 5

December 2021



Q1021/C005 Issue 5 December 2021

Agreement No. CB20180310 HKHA Term Engineering Consultancy Services 2018-2020 For Kowloon Central & West and Islands Region

Proposed Public Housing Development at Tung Chung Area 109

Sewerage Impact Assessment (Draft Final)

Approved for Issue by:					
	William SO				
Position:	Project Manager				
Date:	December 2021				

Hong Kong Housing Authority 6/F, Block 3 Hong Kong Housing Authority Headquarter 33 Fat Kwong Street Ho Man Tin Kowloon Mannings (Asia) Consultants Ltd 5/F, Winning Commercial Building 46-48 Hillwood Road Tsim Sha Tsui Kowloon

Agreement No. CB20180310 HKHA Term Engineering Consultancy Services 2018-2020 For Kowloon Central & West and Islands Region

Proposed Public Housing Development at Tung Chung Area 109

Sewerage Impact Assessment (Draft Final)

Issue	Prepared by	Reviewed by	Date
I	MWS	ST	March 2021
2	MWS	ST	September 2021
3	MWS	ST	November 2021
4	MWS	ST	December 2021
5	MWS	ST	December 2021



Agreement No. CB20180310 HKHA Term Engineering Consultancy Services 2018-2020

Content

2.0 Tun 3.0 Sev	uction Chung Area 109age Impact Assessmentusion	
Appendix A	Site Layout Plan	
,		
Appendix B	Design Drawings from "Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensi CASE2 Scenario 2B (Final)" (ref. PI20-02) and HKHA	ity –
Appendix C	Extracts of Reference Guidelines and Materials	
Appendix D	Sewerage Assessment	



HKHA Term Engineering Consultancy Services 2018-2020

Introduction

1.1 **Background**

- 1.1.1 Civil Engineering and Development Department (CEDD) is carrying out reclamation and infrastructure works for the development of Tung Chung New Town Extension (TCNTE) - East. In response to the policy on site optimisation and intensification, CEDD has carried out studies to assess the potential increase of housing provision in Tung Chung East. Tung Chung Area 109 (hereinafter refer as "the Subject Site") at Tung Chung East are the two being explored (See Appendix A). Tentatively, the proposed public housing developments at the Subject Site are targeted to complete in year 2025/26 respectively.
- 1.1.2 Mannings (Asia) Consultants Ltd has been commissioned by the Hong Kong Housing Authority (HKHA) under the Agreement No. CB20180310 HKHA Term Engineering Consultancy Services 2018-2020 to undertake the Sewerage Impact Assessment (SIA) (hereinafter refer as "the Subject Study") to support the s.16 planning application for the proposed public housing development at the Subject Site.

1.2 **Study Objective**

- 1.2.1 The objective of the study is:
 - To assess the sewerage impact to the proposed gravity sewers and the pumping station.
- 1.2.2 The major tasks to achieve these objectives include:
 - To evaluate the Average Dry Weather Flow (ADWF) generated from the increased population of Area 109; and
 - Assess the impacts of increased population in Area 109 to the proposed sewerage system.



Tung Chung Area 103 and 109

2.1 Sewerage Disposal Arrangement

2.1.1 According to the latest design of Tung Chung New Town Extension (East) by CEDD, the sewerage catchment of the reclamation area is divided two catchments, namely western catchment and eastern catchment. The western catchment covers the Tung Chung New Town Extension (East) Phase I and Phase 2 development area and the Ying Tung Estate (Area 56). The collected sewerage from the development area and the sewerage generate from Area 56 will be discharged into the proposed Western Sewerage Pumping Station (West SPS) located in adjacent to Ying Tung road and subsequently conveyed the flow into existing Tung Chung Sewage Pumping Station (TCSPS) for eventually pumping to Siu Ho Wan Sewage Treatment Works (SHWSTW). The latest sewage layout plans of the gravity sewer and the West SPS catchment and general layout of West SPS are presented in Appendix B.

2.2 **Population**

2.2.1 The Subject Site, with a site layout plan shown in Appendix A, will include domestic blocks, nondomestic facilities including retail and commercial. A summary of the development parameters of the Subject Site in the assessment were presented in the table below.

	Tung Chung Area 109
Target Completion Year	2025/26
Public Rental Housing (PR	RH)
No. of Flats	<mark>1,344</mark>
Population	4,113
	Restaurant
Non-domestic Facilities	Commercial (retail)
	Other uses

- 2.2.2 By referring to EPD's Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning, different unit flow factors have been stipulated for the following 2 different types of development:
 - Domestic Flows (EPD's Guidelines Section 7, Table T-I); and
 - Commercial and Institutional Flows (EPD's Guidelines Section 7, Table T-2);

Relevant tables are extracted in Appendix C for easy reference.

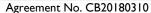


2.2.3 The total ADWF generated from Area 109 is estimated 859.4m³/day and in proposed to be discharged into the proposed sewage manhole SE-B6 and SE-B7 as shown in Appendix B. The estimation of ADWF in the catchment of West SPS are summarized in the table below.

Development	Name	Population	Unit Flow Factor (m³/d/person)	ADWF (m³/day)	Types	Remarks and Assumption
	Residential Population (RS)	6,322	0.19	1,201	Domestic Private R I	
	Commercial (Retail)	287	0.28	80	Commercial: Community, Social & Personal Services (JTT)	Information from HD and AECOM report "Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity — CASE 2 Scenario 2B (Final)" (ref. P120-
	Kindergarten (Student)	180	0.04	7	School Student	
Area 103	Kindergarten (Employee)	20	0.08	2	Commercial Employee	
	Community & Social Centers	33	0.28	9	Commercial: Community, Social & Personal Services (JTT)	
	Assumed F&B Trade(1)	28.7	1.58	45.3	Restaurants & Hotels (J10	
Area 109	Residential Population (R3)	4,113	0.19	781	Domestic Private RI	02)
	Commercial (Retail)	180	0.28	50	Commercial: Community, Social & Personal Services (JTT)	
	Assumed F&B Trade(1)	18	1.58	<mark>28.4</mark>	Restaurants & Hotels (J10	
	Total	<mark>11182</mark>	-	2203.7	-	-

(1) Population of possible F&B trade in TCE is assumed to be 10% of retail employee.

Area 103, being in close proximity of Area 109 and close targeted completion year, 2.2.4 2026/27, with Area 109, the proposed increased intensity for Area 103 will be considered together with the Subject Site.



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2.2.5 As referred to AECOM report "Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – CASE 2 Scenario 2B¹ (Final)" (ref. P120-02), the revised ADWF generated from Area 56 and other area in catchment for West SPS, except Area 103 and Area 109, will be 12503.00m³/ day. There will be totally 14706.7 m³/day discharged into the West SPS. The build-up of sewerage flow of catchment is extracted in Appendix C. The estimation of ADWF in the catchment of West SPS are summarized in the table below.

MAUUIUGS IIII

Area No.	Population/ Employee	ADWF (m³/day)
103	<mark>6871</mark>	<mark>1344.30</mark>
109	<mark>4311</mark>	<mark>859.40</mark>
Other Areas in West SPS Catchment (Including Area 56)		12503.00
Total		14,706.70

Remarks: The estimation of ADWF from Area 103 refers to the report named "Proposed Public Housing Development at Tung Chung Area 103 Sewerage Impact Assessment (Draft Final)" (Document no. Q1021/C005/2) under separate submission.

¹ Case 2 Scenario 2B covers the increase development intensity for Area 99, 103, 109, 133A, 133B and 133C by HD's Site Optimisation and Executive Council (ExCo)'s Intensification Policy and all other public housing sites at Tung Chung East Extension increased by HD's Site Optimisation.





Sewerage Impact Assessment

3. I Proposed Gravity Sewer Network in Western SPS Catchment

Comparing with AECOM report "Sewerage Design Report (Final)" (ref. C20-02), the designed 3.1.1 flow of sewage generated from West SPS catchment will remain 14,706.7 m3/day, with population increase in Western SPS catchment (including Area 103 and Area 109). The proposed gravity sewer network in western sewage catchment have been assessed based on the information, including the build-up of sewage in other areas other Area 103 and Area 109 and the distribution of sewage to discharge points, from AECOM report "Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity - CASE2 Scenario 2B (Final)" (ref. PI20-02) in West SPS and the design of the gravity sewer by CEDD's Consultant. By referencing to EPD's Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (the Guidelines), peaking factor excluding stormwater allowance should be adopted as the proposed sewerage facilities are planned to receive flow from new upstream sewerage system which essentially have no misconnections and defects for infiltration. The assessment of the gravity sewer in West SPS is detailed in the Appendix D.

3.2 **Proposed Pumping Station and its Rising Mains**

- 3.2.1 The design of the proposed West SPS is made reference to AECOM report "Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity -CASE2 Scenario 2B (Final)" (ref. Pl20-02). The storage capacity of West SPS is assessed and the capacity is adequate to cater for 6 hours of ADWF of the revised population in West SPS catchment for emergency storage. The calculation of the sewage retention volume is presented in Appendix D.
- 3.2.2 According to AECOM report "Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity - CASE2 Scenario 2B (Final)" (ref. PI20-02), the diameter of rising mains is adjusted to NS450. The hydraulic design of the proposed ND450 twin rising mains has been assessed based on the revised population in West SPS catchment. The flow velocities of the NS450 twin rising mains are estimated to be 1.41 m/s and 2.82 m/s under normal operation and emergency condition respectively. The calculation of the NS450 twin rising mains volume is presented in Appendix D.

3.3 Gravity Sewer Network at Tung Chung Town Centre

From the information in AECOM report "Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity - CASE2 Scenario 2B (Final)" (ref. PI2--02), the sewerage will be conveyed from the discharge chamber (DCI) of the rising mains mentioned in section 3.2 to existing TCSPS via the proposed sewerage system between the proposed manhole SE-GI to F21. The capacity of the proposed gravity sewer between the proposed manhole SE-GI to F21 is assessed and considered adequate. The assessment of the between the proposed manhole SE-GI to F2I is detailed in the Appendix D.

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3.4 Existing Tung Chung Sewage Pumping Station (TCSPS)

3.4.1 As referred to the Sewerage Impact Assessment under Agreement No. CE32/2011(CE): Planning & Engineering Study on the Remaining Development in Tung Chung – Feasibility Study, it is estimated that the projected, it is note that EPD has arranged with DSD to upgrade the to its design maximum handling capacity to 3,680 lit/s (317,952m3/day) which is sufficient to cater for ultimate sewage flow 280,831 m3/day, as referred to AECOM report "Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – CASE2 Scenario 2B (Final)" (ref. Pl20-03), in Year 2041. Sewerage impact to TCSPS arising from the population increase in Area 103 and Area 109 is not anticipated.

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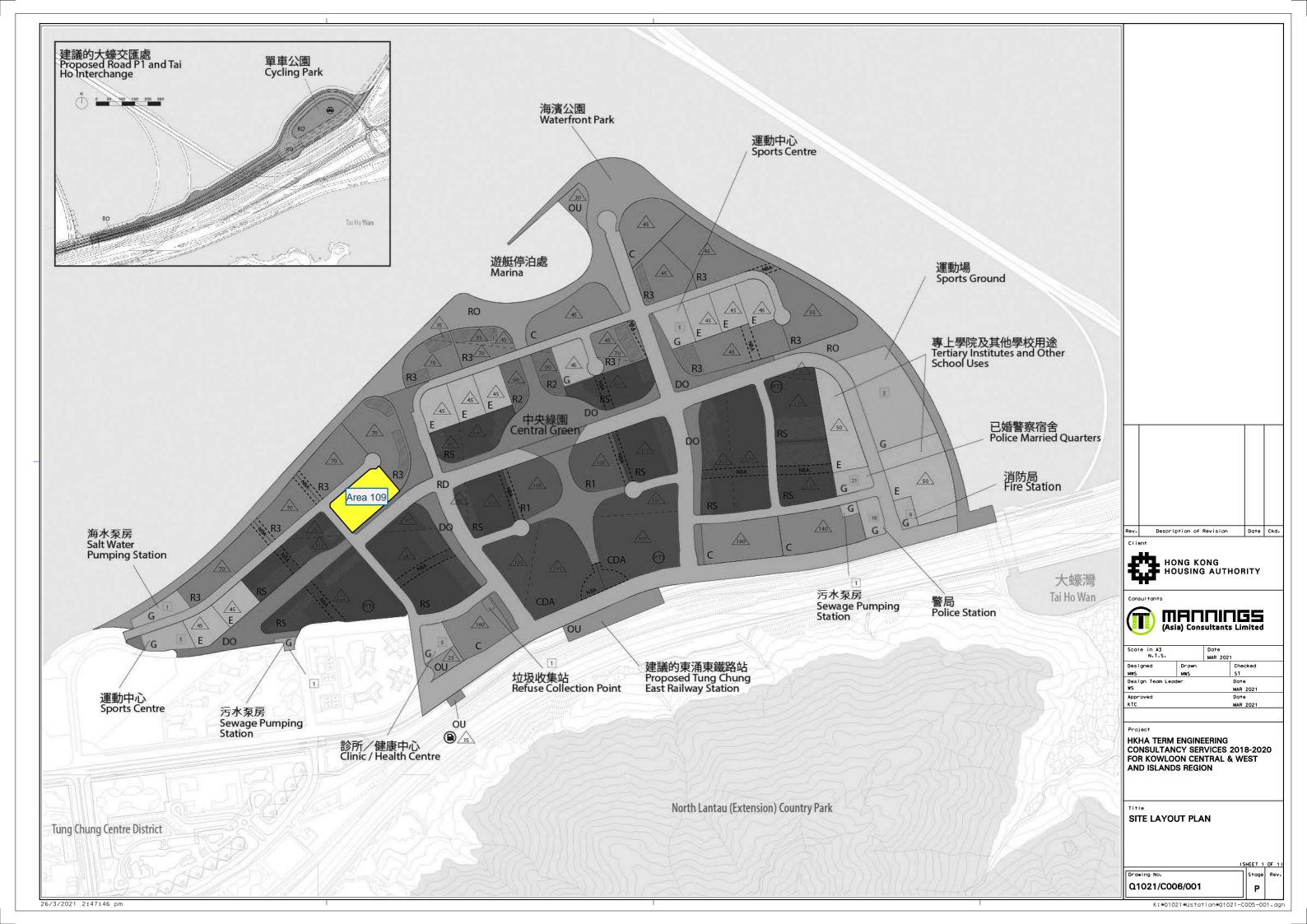
4.0 Conclusion

- 4.1 The sewerage impact assessment was based on the scenarios that the development intensity for Areas 99, 103, 109, and other sites were increased by both HD's Site Optimisation and Executive Council (ExCo)'s Intensification Policy and all other public housing sites at Tung Chung East Extension were increased by HD's Site Optimisation. The population of 4,113 in Area 109 is adopted in this assessment.
- 4.2 Based the latest design of the proposed sewerage system in AECOM report "Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity CASE2 Scenario 2B (Final)" (ref. Pl20-02), the sewerage generated from Area 109 is proposed to be discharged to Western Sewerage Pumping Station via the proposed gravity sewer. The capacity of the proposed gravity sewers and Western Sewerage Pumping Station and its rising mains were assessed to be adequate to cater the population increase in Area 109.
- 4.3 It is concluded that the sewerage generated from the increase in population in Area 109 could be accommodated in West Sewerage Pumping Station catchment by the proposed design of gravity sewers and pumping station and its rising mains in AECOM report "Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity CASE 2 Scenario 2B (Final)" (ref. Pl20-02).
- 4.4 Given that EPD has arranged with DSD to upgrade the maximum handling capacity Tung Chung Sewage Pumping Station, as reported in Sewerage Impact Assessment under Agreement No. CE32/2011(CE), it is concluded that adverse sewerage impact to TCSPS arising from the population increase in Area 109 is not anticipated.



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APPENDIX A SITE LAYOUT PLAN



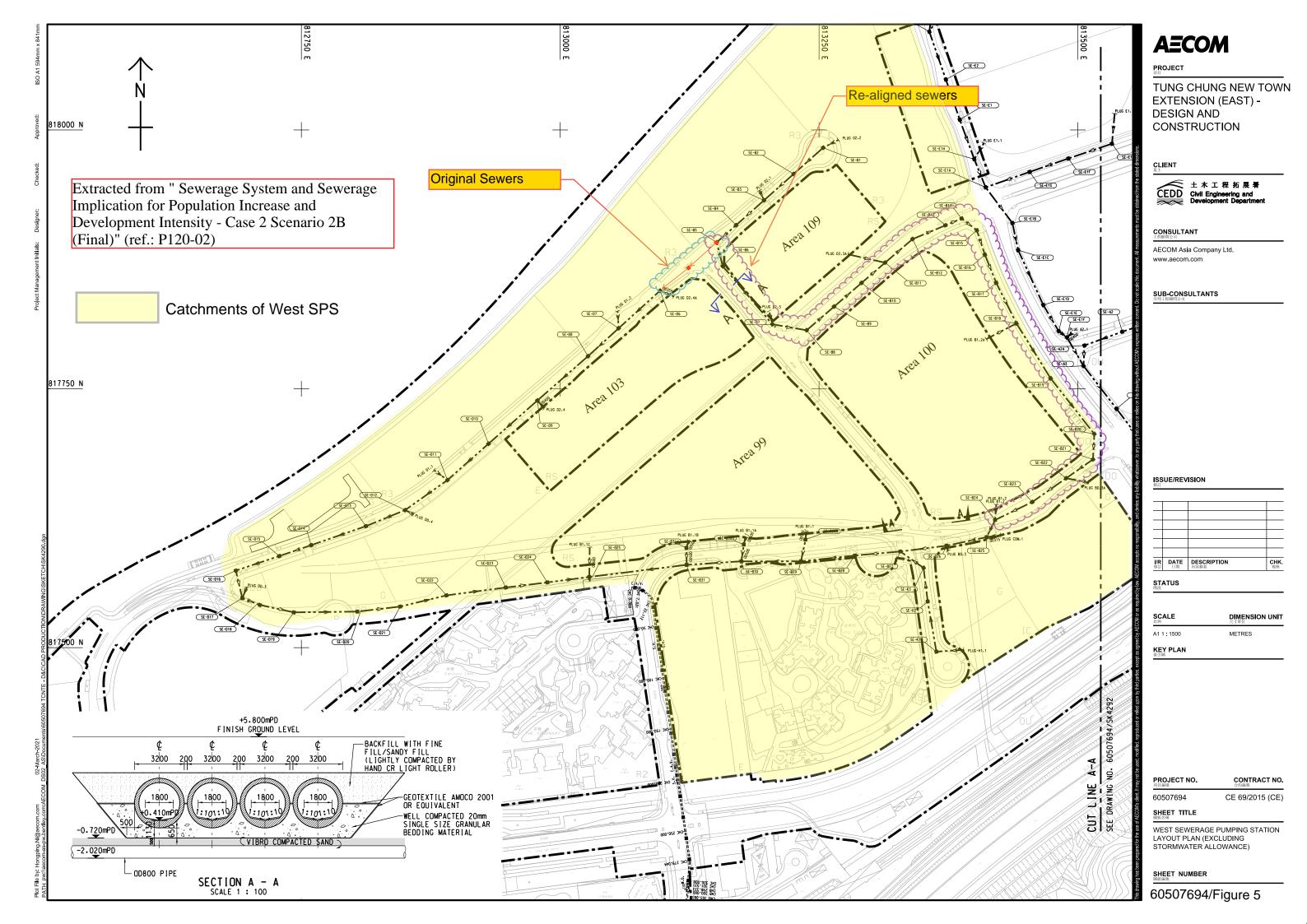


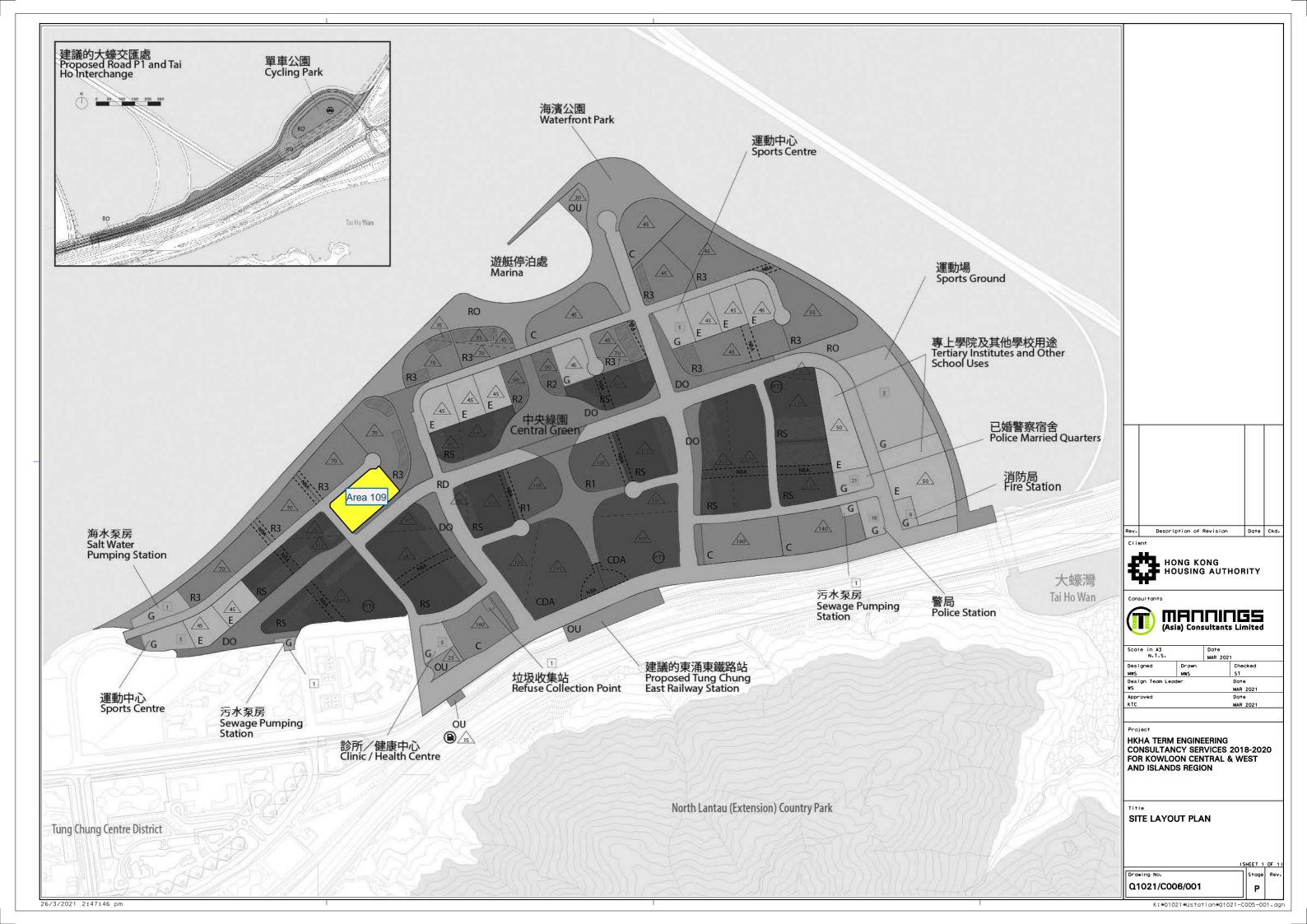


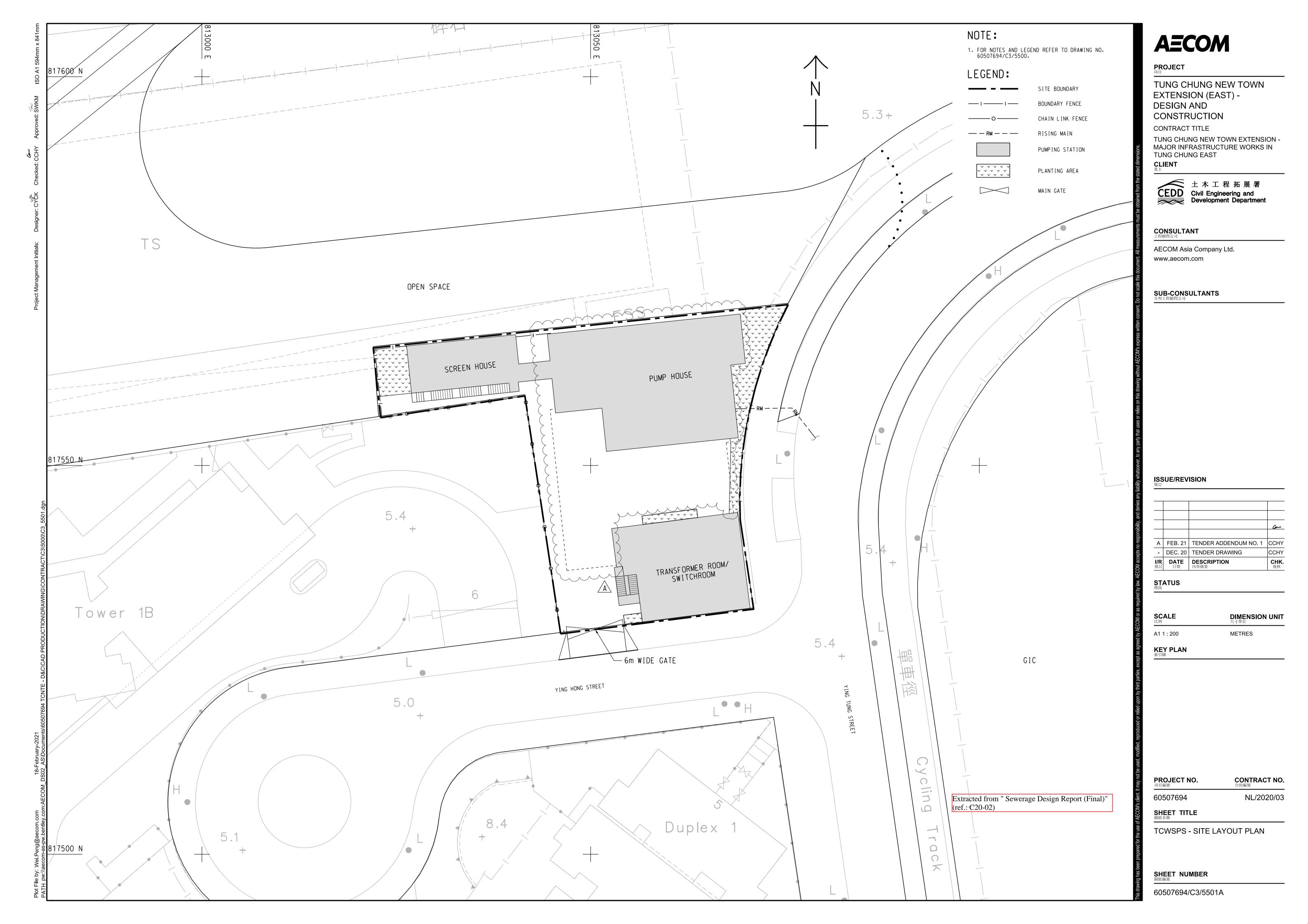
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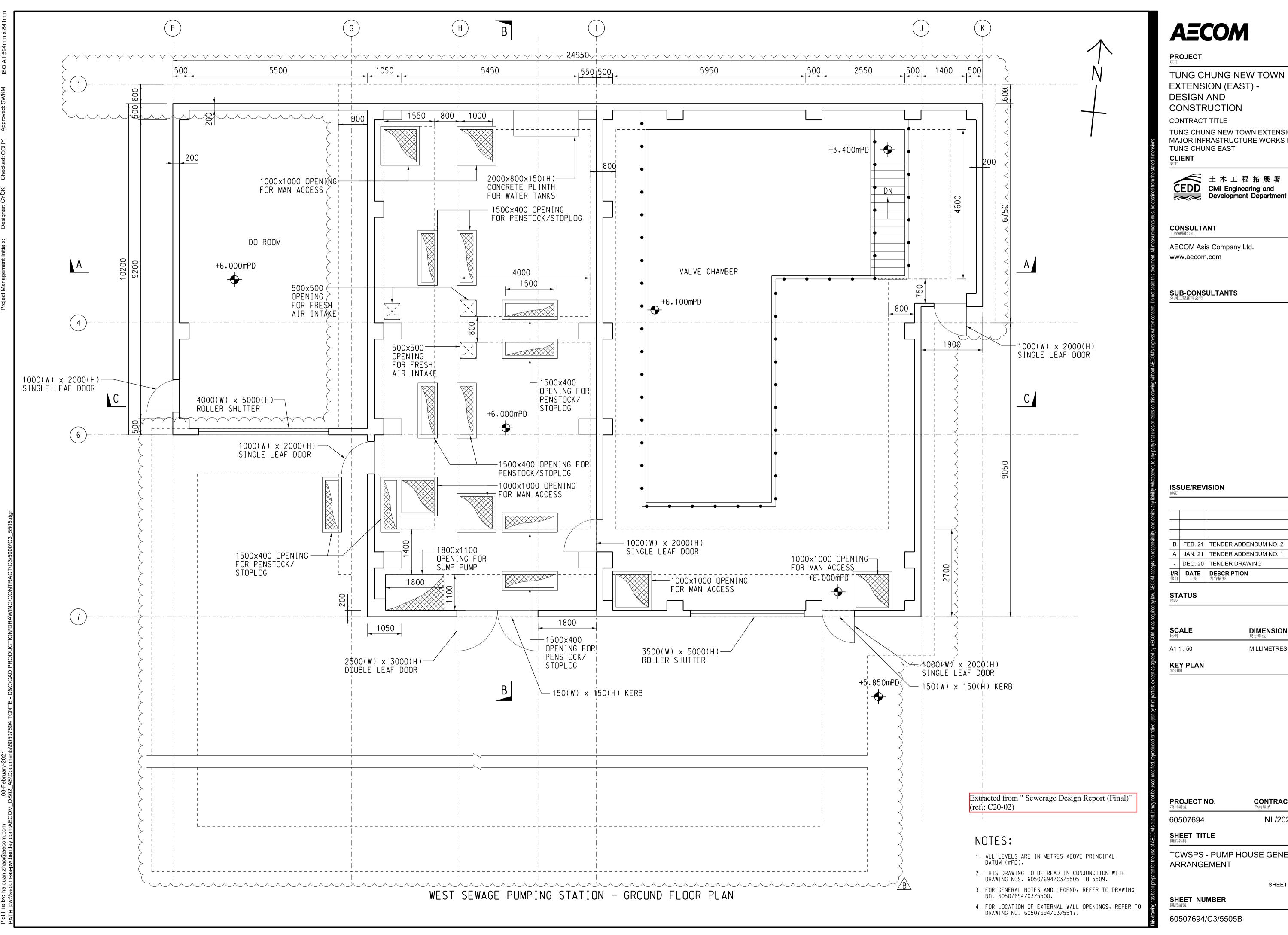
APPENDIX B

Design Drawings from "Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity - CASE2 Scenario 2B (Final)" (ref. Pl20-02) and **HKHA**









TUNG CHUNG NEW TOWN EXTENSION (EAST) -

TUNG CHUNG NEW TOWN EXTENSION -MAJOR INFRASTRUCTURE WORKS IN

← 土木工程拓展署

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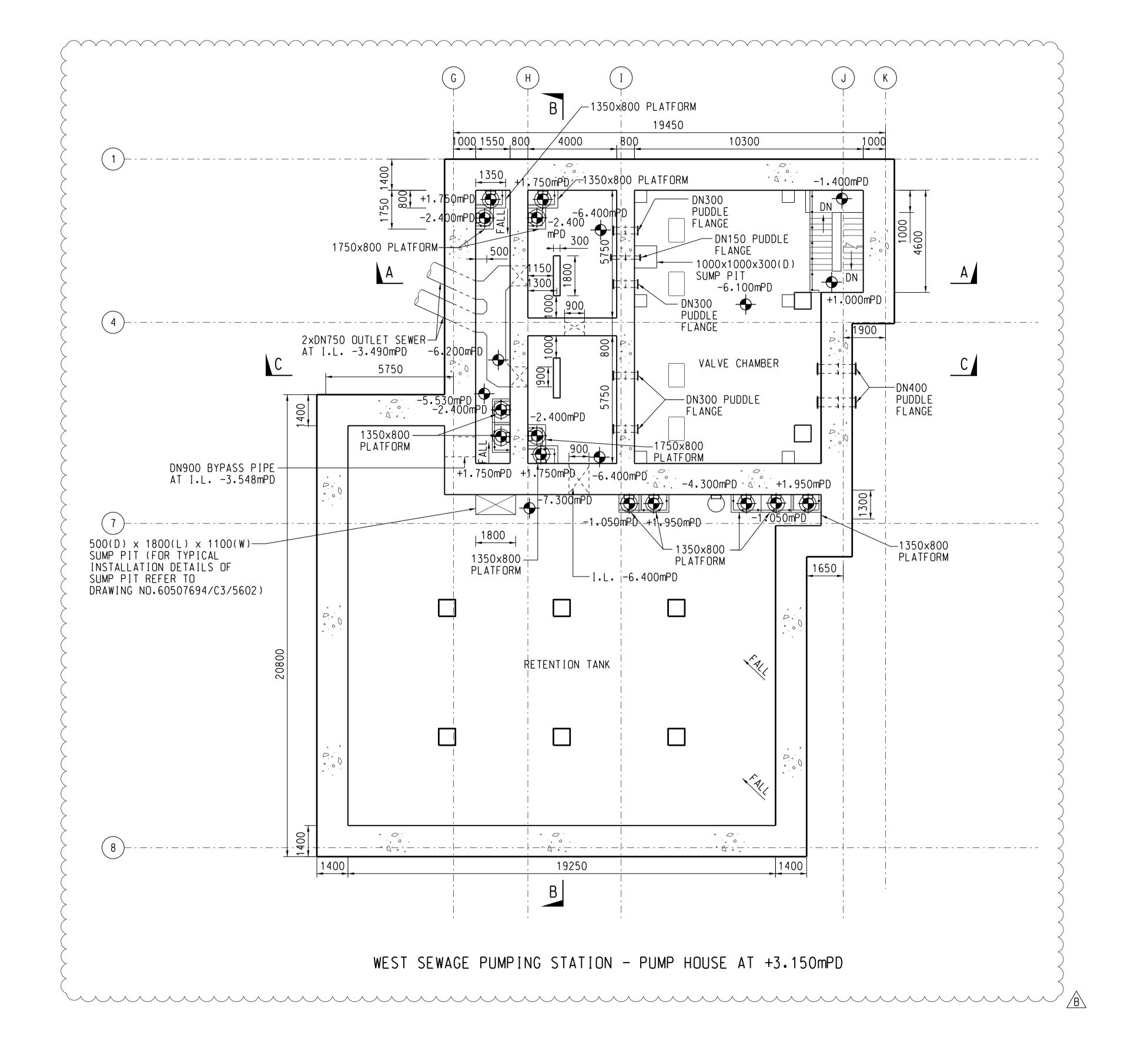
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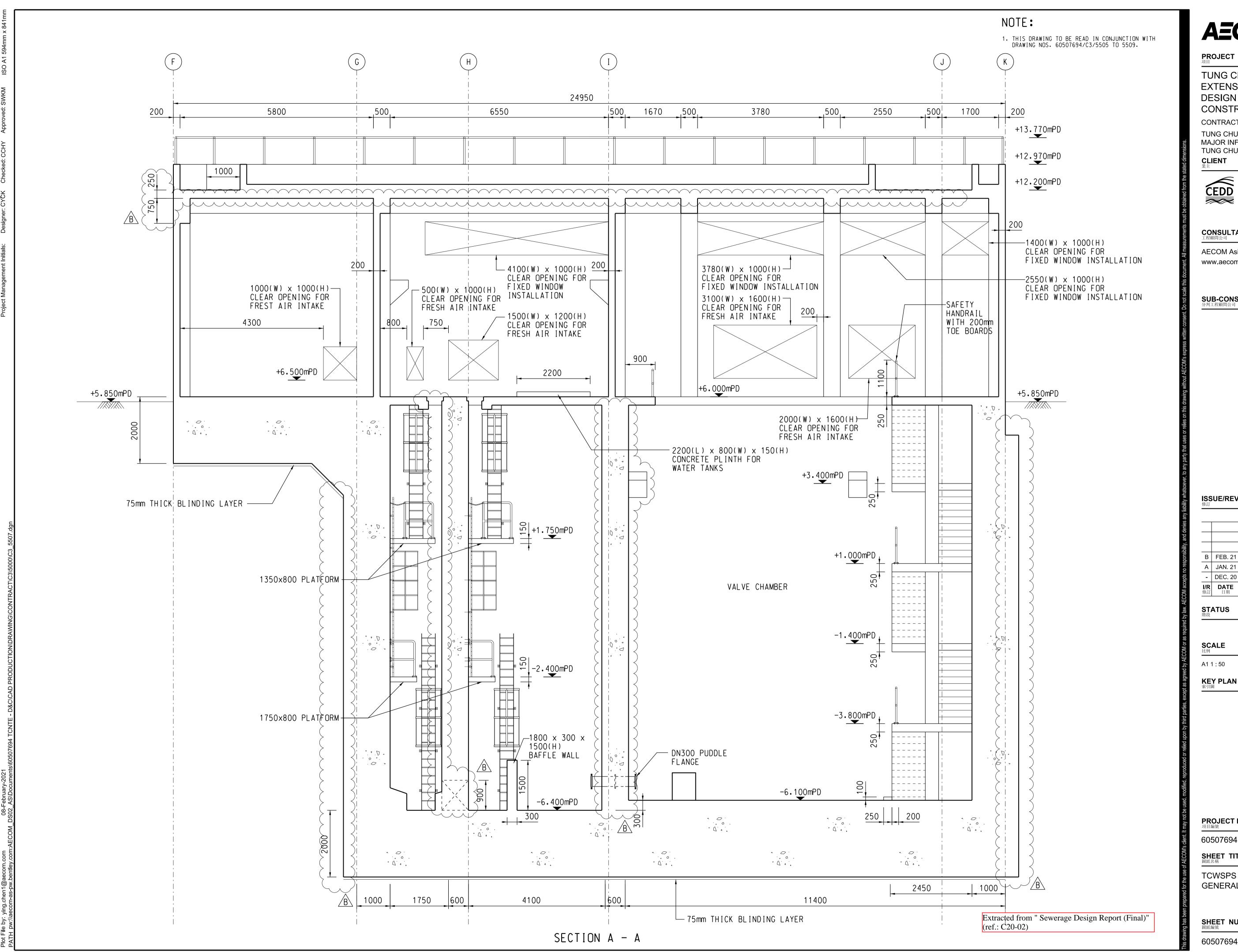
TCWSPS - PUMP HOUSE

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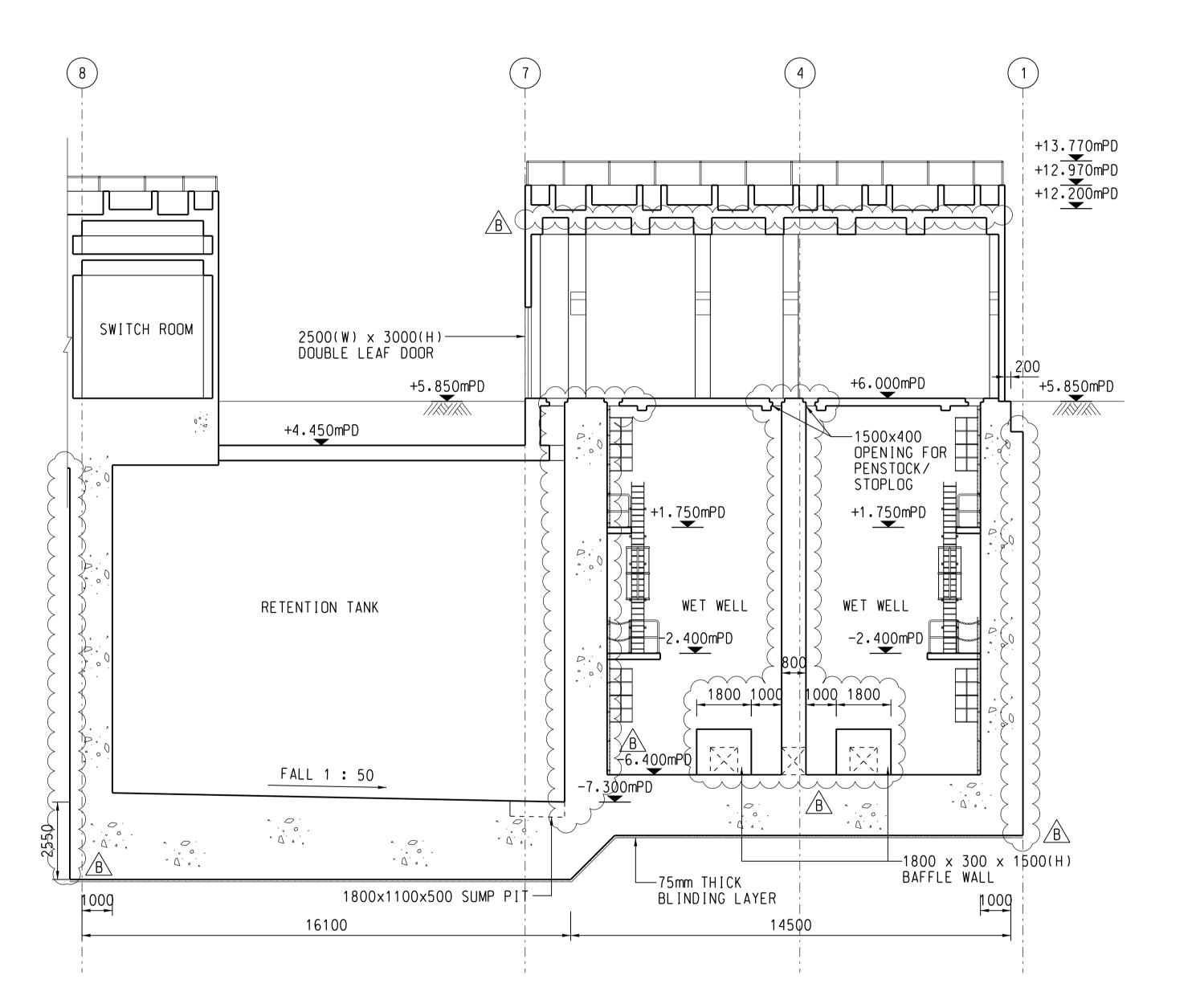
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SECTION B - B

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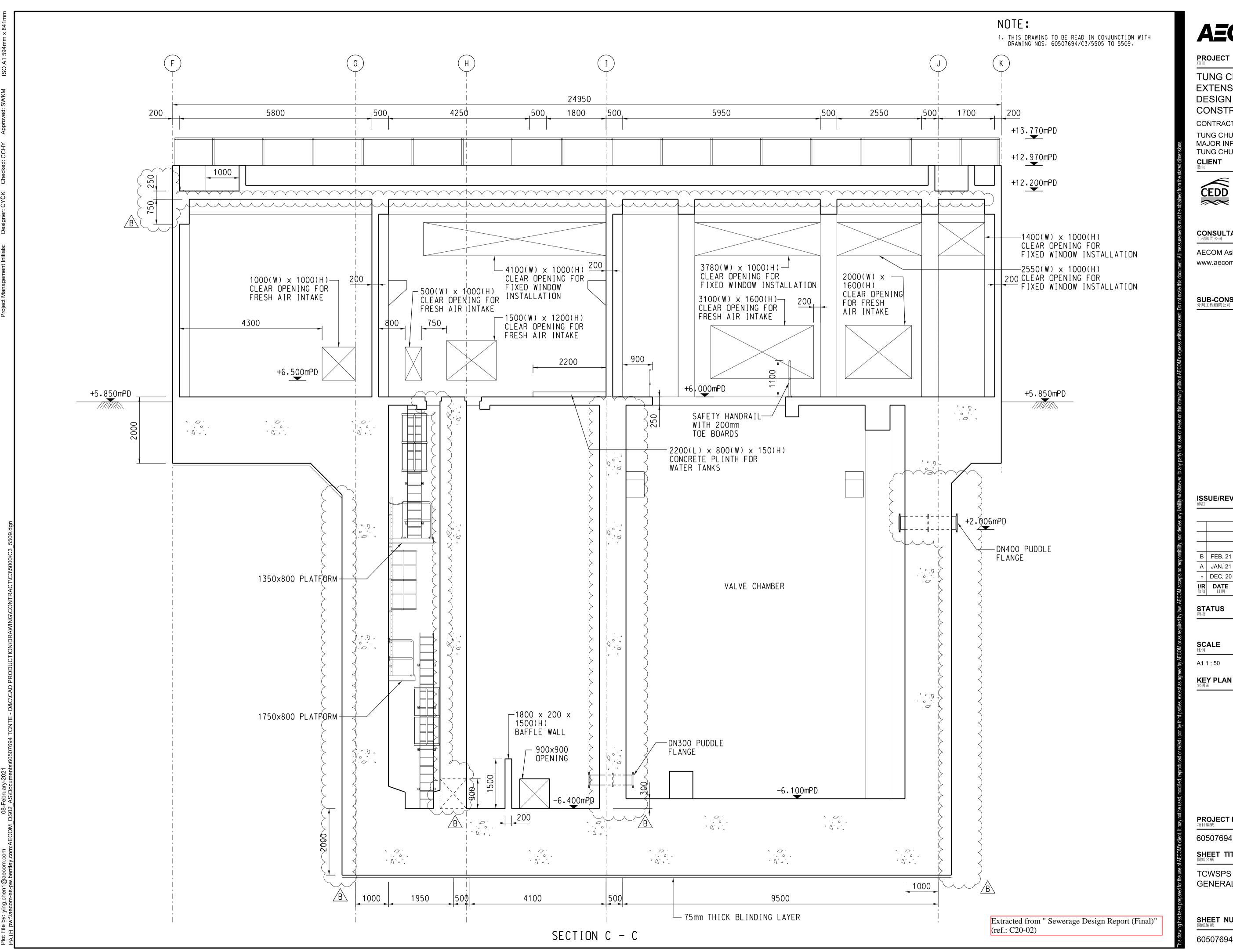
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TCWSPS - PUMP HOUSE GENERAL ARRANGEMENT

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TCWSPS - SCREEN HOUSE GENERAL ARRANGEMENT

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9-000mPD

-300×300 CLEAR

OPENING FOR DO DUCT

 $-4000(W) \times 4000(H)$ ROLLER SHUTTER

+5.850mPD

- 400×800 OPENING

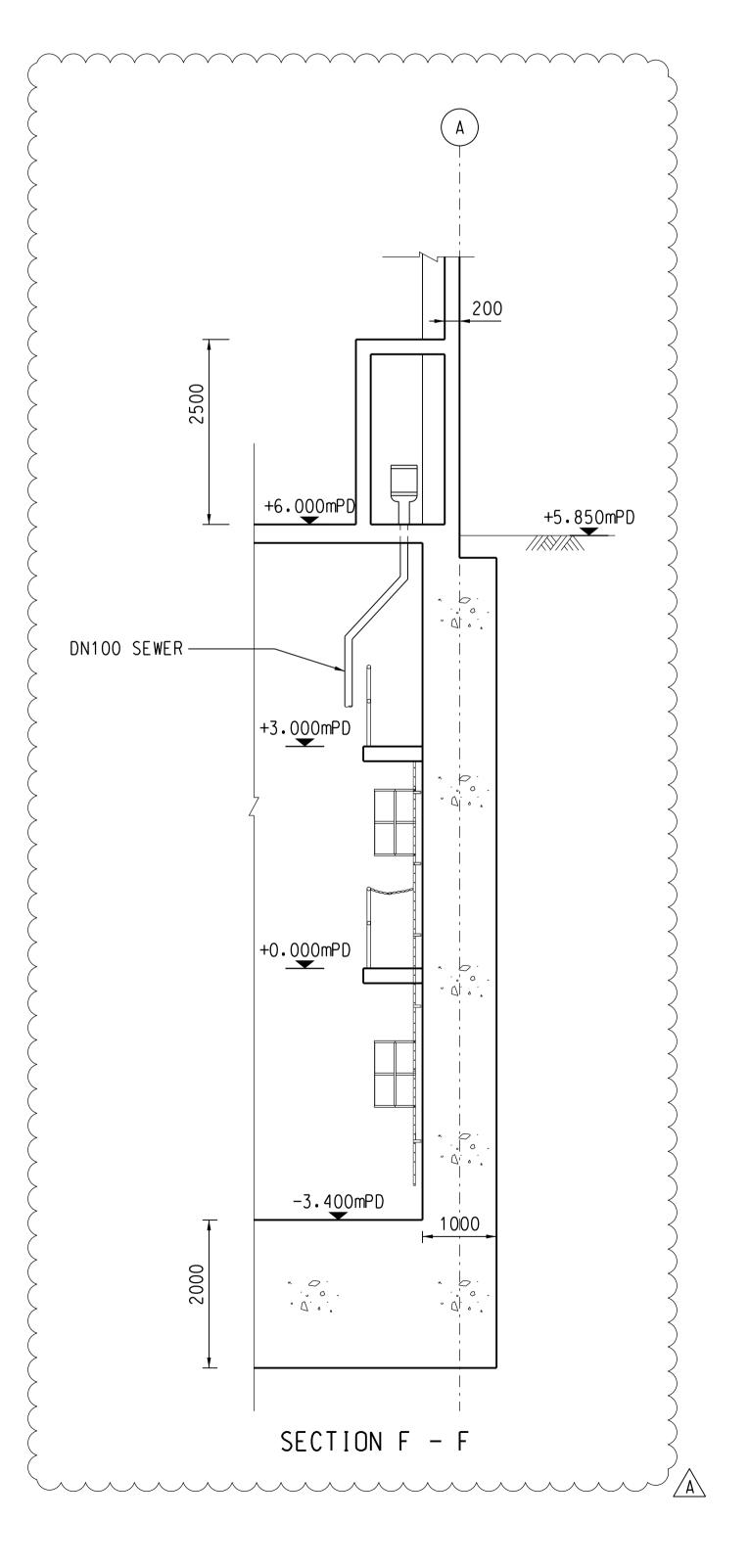
600 200

950

NOTES:

2. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM (mPD) ACCEPTANCE.

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60507694/C3/5510 TO 5512. 3. SEWER CONNECTION IN SECTION F-F ARE INDICATIVE
ONLY. CONTRACTOR ARE RESPONSIBLE FOR DESIGN THE
SANITARY FACILITIES SUBJECTED TO SUPERVISOR'S





PROJECT

TUNG CHUNG NEW TOWN EXTENSION (EAST) -**DESIGN AND** CONSTRUCTION

CONTRACT TITLE

TUNG CHUNG NEW TOWN EXTENSION -MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT



土木工程拓展署 CEDD Civil Engineering and Development Department

CONSULTANT

AECOM Asia Company Ltd. www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION

			Comi
Α	JAN. 21	TENDER ADDENDUM NO. 1	CCHY
-	DEC. 20	TENDER DRAWING	CCHY
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核

STATUS 階段

DIMENSION UNIT 尺寸單位 SCALE 比例 MILLIMETRES

KEY PLAN 索引圖

PROJECT NO. 項目編號

60507694 NL/2020/03

SHEET TITLE 圖紙名稱

TCWSPS -SCREEN HOUSE GENERAL ARRANGEMENT

SHEET 2 OF 3

CONTRACT NO. ^{合約編號}

SHEET NUMBER 圖紙編號

60507694/C3/5511A

Extracted from "Sewerage Design Report (Final)" (ref.: C20-02)

NOTES:

- ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM (mPD).
- 2. THIS DRAWING TO BE READ IN WITH DRAWING NOS. 60507694/C3/5510 TO 5512.

AECOM

CONTRACT TITLE

PROJECT

TUNG CHUNG NEW TOWN EXTENSION (EAST) -DESIGN AND CONSTRUCTION

TUNG CHUNG NEW TOWN EXTENSION -MAJOR INFRASTRUCTURE WORKS IN TUNG CHUNG EAST

CLIENT



上木工程拓展署
Civil Engineering and
Development Department

CONSULTANT

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SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION

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Δ	JAN. 21	TENDER ADDENDUM NO. 1	CCHY
_	DEC. 20	TENDER DRAWING	CCHY
 / 修		DESCRIPTION 內容摘要	CHK 複核

STATUS 階段

SCALE 比例 **DIMENSION UNIT** 尺寸單位 MILLIMETRES

KEY PLAN 索引圖

PROJECT NO. 項目編號

CONTRACT NO. ^{合約編號}

NL/2020/03

60507694

SHEET TITLE 圖紙名稱

TCWSPS -

SCREEN HOUSE GENERAL ARRANGEMENT

SHEET 3 OF 3

SHEET NUMBER 圖紙編號

60507694/C3/5512A

Extracted from "Sewerage Design Report (Final)" (ref.: C20-02)

	AECON																NS20150					PROJE:	CT NO. 60	0507694
	1	2	3	17	18	19.00	20	21	22.000	23	26.000	27.000	28.000	29.000	30.000	31	32.000	33.000	34.000	35.000	28	DATE	20/10	72021
Parameters											29.602		R	oughness:		Ks=	1.500	mm for PE		1.500 r	mm for PE	BY	hxy	CHKD

4/8/2011																								
Pipe		Manhole			Accun	nulation	EP	PD		(mm) (m) (mPD) (mPD) (mPD) (11N) to Invert(m) (m/s) (m/s)														
	UP_MH	DN_MH	Back-	CON_POP	ACC_POP	ACC_DWF	Contribute People	PEAK	PEAK FLOW	DIA	LEN	UP_GL	DN_GL	UP_INV	DN_INV	GRAD.		to	VEL.	САР	PF/CAP	PIPE	PIPE	BEDDING
NO.	NO.	NO.	drop	(person)	(person)	(m³/d)	(person)	FACTOR	(m³/s)	(mm)	(m)	(mPD)	(mPD)	(mPD)	(mPD)	(1 IN)	Invert(m)	Invert(m	(m/s)	(m ³ /s)		MAT.	CLASS	TYPE
SE- B1.1	SE- B1	SE-B2	normal	2070	2070	776.13	2875	5.000	0.045	400	39.000	5.550	5.800	3.825	3.565	150	1.725	2.235	1.364	0.120	37%	PE	PE100	В
SE-B2.1	SE-B2	SE-B3	normal	0	2070	776.13	2875	5.000	0.045	400	39.000	5.800	6.000	3.565	3.305	150	2.235	2.695	1.364	0.120	37%	PE	PE100	В
SE-B3.1	SE-B3	SE-B4	normal	1372	3442	1283.77	4755	5.000	0.074	560	36.000	6.000	5.700	3.145	2.905	150	2.855	2.795	1.694	0.300	25%	PE	PE100	В
SE-B4.1	SE-B4	SE-B5	normal	0	3442	1283.77	4755	5.000	0.074	560	25.000	5.700	5.500	2.630	2.463	150	3.070	3.037	1.694	0.300	25%	PE	PE100	В
SE-B5.1	SE-B5	SE-B6	normal	0	3442	1283.77	4755	5.000	0.074	560	19.200	5.500	5.700	2.163	2.035	150	3.337	3.665	1.694	0.300	25%	PE	PE100	В
SE-B6.1	SE-B6	SE-B7	normal	0	3442	1283.77	4755	5.000	0.074	560	82.000	5.700	5.700	1.735	1.189	150	3.965	4.511	1.694	0.300	25%	PE	PE100	В
SE-B7.1	SE-B7	SE-B8	normal	2151	5593	1706.82	6322	4.000	0.079	630	31.300	5.700	5.400	1.119	0.962	200	4.581	4.438	1.581	0.355	22%	PE	PE100	В
SE-B8.1	SE-B8	SE-B9	normal	0	5593	1706.82	6322	4.000	0.079	630	35.000	5.400	5.600	0.962	0.787	200	4.438	4.813	1.581	0.355	22%	PE	PE100	В
SE-B9.1	SE-B9	SE-B10	normal	0	5593	1706.82	6322	4.000	0.079	630	35.000	5.600	5.600	0.787	0.612	200	4.813	4.988	1.581	0.355	22%	PE	PE100	В
SE-B10.1	SE-B10	SE-B11	normal	0	5593	1706.82	6322	4.000	0.079	630	30.000	5.600	5.700	0.612	0.462	200	4.988	5.238	1.581	0.355	22%	PE	PE100	В
SE-B11.1	SE-B11	SE-B12	normal	2151	7744	2129.86	7888	4.000	0.099	630	35.000	5.700	5.900	0.462	0.287	200	5.238	5.613	1.581	0.355	28%	PE	PE100	В
SE-B12.1	SE-B12	SE-B13	normal	0	7744	2129.86	7888	4.000	0.099	630	34.000	5.900	5.800	0.287	0.117	200	5.613	5.683	1.581	0.355	28%	PE	PE100	В
SE-B13.1	SE-B13	SE-B14	normal	0	7744	2129.86	7888	4.000	0.099	630	17.000	5.800	5.850	0.117	0.032	200	5.683	5.818	1.581	0.355	28%	PE	PE100	В
SE-B14.1	SE-B14	SE-B15	normal	0	7744	2129.86	7888	4.000	0.099	630	18.800	5.850	5.650	-0.468	-0.562	200	6.318	6.212	1.581	0.355	28%	PE	PE100	В
SE-B15.1	SE-B15	SE-B16	normal	0	7744	2129.86	7888	4.000	0.099	630	24.500	5.650	5.550	-0.562	-0.685	200	6.212	6.235	1.581	0.355	28%	PE	PE100	В
SE-B16.1	SE-B16	SE-B17	normal	0	7744	2129.86	7888	4.000	0.099	630	30.000	5.550	5.600	-0.685	-0.835	200	6.235	6.435	1.581	0.355	28%	PE	PE100	В
SE-B17.1	SE-B17	SE-B18	normal	0	7744	2129.86	7888	4.000	0.099	630	73.500	5.600	5.900	-0.835	-1.202	200	6.435	7.102	1.581	0.355	28%	PE	PE100	В
SE-B18.1	SE-B18	SE-B19	normal	8596	16340	3831.62	14191	3.000	0.133	800	33.000	5.900	5.900	-1.372	-1.482	300	7.272	7.382	1.501	0.545	24%	PE	PE100	В
SE-B19.1	SE-B19	SE-B20	normal	0	16340	3831.62	14191	3.000	0.133	800	69.000	5.900	5.600	-1.482	-1.712	300	7.382	7.312	1.501	0.545	24%	PE	PE100	В
SE-B20.1	SE-B20	SE-B21	normal	0	16340	3831.62	14191	3.000	0.133	800	23.700	5.600	5.700	-1.712	-1.791	300	7.312	7.491	1.501	0.545	24%	PE	PE100	В
SE-B21.1	SE-B21	SE-B22	normal	0	16340	3831.62	14191	3.000	0.133	800	32.000	5.700	5.800	-1.791	-1.898	300	7.491	7.698	1.501	0.545	24%	PE	PE100	В
SE-B22.1	SE-B22	SE-B23	normal	3033	19373	4383.48	16235	3.000	0.152	800	40.000	5.800	5.550	-1.898	-2.031	300	7.698	7.581	1.501	0.545	28%	PE	PE100	В
SE-B23.1	SE-B23	SE-B24	normal	0	19373	4383.48	16235	3.000	0.152	800	40.000	5.550	5.750	-2.031	-2.164	300	7.581	7.914	1.501	0.545	28%	PE	PE100	В
SE-B24.1	SE-B24	SE-B25	normal	8596	27968	6085.24	22538	3.000	0.211	800	18.000	5.750	5.650	-2.164	-2.224	300	7.914	7.874	1.501	0.545	39%	PE	PE100	В
SE-B25.1	SE-B25	SE-B26	normal	3033	31001	6637.09	24582	3.000	0.230	800	40.000	5.650	5.900	-2.224	-2.358	300	7.874	8.258	1.501	0.545	42%	PE	PE100	В
SE-B26.1	SE-B26	SE-B27	normal	144	31145	6677.66	24732	3.000	0.232	800	45.000	5.900	5.650	-2.358	-2.508	300	8.258	8.158	1.501	0.545	43%	PE	PE100	В
SE-B27.1	SE-B27	SE-B28	normal	0	31289	6718.23	24882	3.000	0.233	800	37.000	5.650	5.500	-2.508	-2.627	310	8.158	8.127	1.477	0.536	43%	PE	PE100	В
SE-B28.1	SE-B28	SE-B29	normal	0	31289	6718.23	24882	3.000	0.233	900	57.500	5.500	5.450	-2.627	-2.791	350	8.127	8.241	1.497	0.688	34%	PE	PE100	В
SE-B29.1	SE-B29	SE-B30	normal	0	35139	7458.77	27625	3.000	0.259	900	58.500	5.450	5.700	-2.791	-2.938	400	8.241	8.638	1.400	0.644	40%	PE	PE100	В
SE-B30.1	SE-B30	SE-B31	normal	0	38988	8199.31	30368	3.000	0.285	900	57.500	5.450	5.700	-2.938	-3.081	400	8.388	8.781	1.400	0.644	44%	PE	PE100	В
SE-B31.1	SE-B31	SE-D25	normal	0	42837	8939.84	33111	3.000	0.310	900	90.000	5.700	5.500	-3.081	-3.160	400	8.781	8.660	1.400	0.644	48%	PE	PE100	В

Extracted from "Sewerage Design Report (Final)" (ref.: C20-02)

	A=CO/	M															NS20150						CT NO. 60	
																						DATE	26/10	0/2021
	1	2	3	17	18	19.00	20	21	22.000	23	26.000	27.000	28.000	29.000	30.000	31	32.000	33.000	34.000	35.000	28			
Parameters											29.602		F	Roughness:		Ks=	1.500	mm for Pl	Ξ	1.500 m	nm for PE	BY	hxy	CHKD
4/8/2011																								

4/8/2011																_								
Pipe		Manhole			Accum	nulation	EF	PD		<u> </u>						P	ipe Param							
	UP_MH	DN_MH	Back-	CON_POP	ACC_POP	ACC_DWF	Contribute People	PEAK FACTOR	PEAK FLOW	DIA	LEN	UP_GL	DN_GL	UP_INV	DN_INV	GRAD.	UP_COV to	to	VEL.	CAP	PF/CAP	PIPE MAT.	PIPE CLASS	BEDDING TYPE
NO.	NO.	NO.	drop	(person)	(person)	(m³/d)	(person)	FACTOR	(m³/s)	(mm)	(m)	(mPD)	(mPD)	(mPD)	(mPD)	(1 IN)	Invert(m)	Invert(m)	(m/s)	(m³/s)		WAI.	CLASS	ITPE
SE-D6.1	SE-D6	SE-D7	normal	3435	3435	672.46	2491	5.000	0.039	355	64.304	5.760	5.595	1.700	1.353	185	4.060	4.242	1.135	0.080	49%	PE	PE100	В
SE-D7.1	SE-D7	SE-D8	normal	988	4423	1038.02	3845	5.000	0.060	400	33.344	5.595	5.621	1.308	1.097	158	4.287	4.524	1.328	0.117	51%	PE	PE100	В
SE-D8.1	SE-D8	SE-D9	normal	0	4423	1038.02	3845	5.000	0.060	400	68.064	5.621	5.831	1.097	0.736	189	4.524	5.095	1.216	0.107	56%	PE	PE100	В
SE-D9.1	SE-D9	SE-D10	normal	3435	7859	1710.49	6335	4.000	0.079	500	62.134	5.831	5.400	0.636	0.286	178	5.195	5.114	1.447	0.201	39%	PE	PE100	В
SE-D10.1	SE-D10	SE-D11	normal	0	7859	1710.49	6335	4.000	0.079	500	50.804	5.400	5.930	0.286	-0.008	173	5.114	5.938	1.467	0.203	39%	PE	PE100	В
SE-D11.1	SE-D11	SE-D12	normal	1303	9162	2192.60	8121	4.000	0.102	560	49.904	5.930	6.051	-0.068	-0.296	219	5.998	6.347	1.401	0.248	41%	PE	PE100	В
SE-D12.1	SE-D12	SE-D13	normal	1639	10801	2262.52	8380	4.000	0.105	560	43.542	6.051	5.660	-0.296	-0.482	234	6.347	6.142	1.355	0.240	44%	PE	PE100	В
SE-D13.1	SE-D13	SE-D14	normal	10	10811	2265.82	8392	4.000	0.105	630	53.569	5.660	5.836	-0.482	-0.714	231	6.142	6.550	1.471	0.331	32%	PE	PE100	В
SE-D14.1	SE-D14	SE-D15	normal	0	10811	2265.82	8392	4.000	0.105	630	32.566	5.836	5.718	-0.714	-0.862	220	6.550	6.580	1.507	0.339	31%	PE	PE100	В
SE-D15.1	SE-D15	SE-D16	normal	0	10811	2265.82	8392	4.000	0.105	710	53.000	5.750	5.600	-0.942	-1.154	250	6.692	6.754	1.525	0.431	24%	PE	PE100	В
SE-D16.1	SE-D16	SE-D17	normal	300	11111	2349.82	8703	4.000	0.109	710	15.000	5.600	5.500	-1.154	-1.214	250	6.754	6.714	1.525	0.431	25%	PE	PE100	В
SE-D17.1	SE-D17	SE-D18	normal	0	11111	2349.82	8703	4.000	0.109	710	19.000	5.500	5.500	-1.214	-1.280	288	6.714	6.780	1.421	0.402	27%	PE	PE100	В
SE-D18.1	SE-D18	SE-D19	normal	0	11111	2349.82	8703	4.000	0.109	710	32.306	5.500	5.500	-1.280	-1.480	162	6.780	6.980	1.899	0.537	20%	PE	PE100	В
SE-D19.1	SE-D19	SE-D20	normal	0	11111	2349.82	8703	4.000	0.109	710	61.395	5.500	5.500	-1.480	-1.768	213	6.980	7.268	1.652	0.467	23%	PE	PE100	В
SE-D20.1	SE-D20	SE-D21	normal	0	11111	2349.82	8703	4.000	0.109	710	41.095	5.500	5.500	-1.768	-1.920	270	7.268	7.420	1.466	0.415	26%	PE	PE100	В
SE-D21.1	SE-D21	SE-D22	normal	0	11111	2349.82	8703	4.000	0.109	710	46.049	5.500	5.500	-1.920	-2.104	250	7.420	7.604	1.524	0.431	25%	PE	PE100	В
SE-D22.1	SE-D22	SE-D23	normal	0	11111	2349.82	8703	4.000	0.109	710	57.730	5.500	5.500	-2.104	-2.348	237	7.604	7.848	1.568	0.443	25%	PE	PE100	В
SE-D23.1	SE-D23	SE-D24	normal	0	11111	2349.82	8703	4.000	0.109	710	40.338	5.500	5.500	-2.348	-2.492	280	7.848	7.992	1.440	0.407	27%	PE	PE100	В
SE-D24.1	SE-D24	SE-D25	normal	0	11111	2349.82	8703	4.000	0.109	710	40.599	5.500	5.500	-2.492	-2.792	135	7.992	8.292	2.075	0.587	19%	PE	PE100	В
SE-D25.1	SE-D25	SPS002	normal	3849	57797	12030.19	44556	3.000	0.418	900	29.600	5.500	5.500	-3.160	-3.245	350	8.660	8.745	1.497	0.688	61%	PE	PE100	В
SE-K1.1	SE-K1	SE-K2	normal	144	144	40.57	150	6.000	0.003	315	53.185	5.772	5.806	2.500	2.145	150	3.272	3.661	1.167	0.064	4%	PE	PE100	В
SE-K2.1	SE-K2	SE-K3	normal	0	144	40.57	150	6.000	0.003	315	32.993	5.806	5.900	2.145	1.925	150	3.661	3.975	1.167	0.064	4%	PE	PE100	В
SE-K3.1	SE-K3	SE-B27	BD3	0	144	40.57	150	6.000	0.003	315	29.910	5.900	7.495	1.925	1.726	150	3.975	5.769	1.167	0.064	4%	PE	PE100	В
OE NO.1	OL NO	OL BZ1	550	 	177	40.07	100	0.000	0.000	010	20.010	0.000	7.400	1.525	1.720	100	0.070	0.700	1.107	0.004	470		1 2 100	
DC1.1	DC1	SE-G1	normal	0	57796.8	11471.22	42486	3	0.333	710	14	7.683	7.74	5.7	5.636	219	1.983	2.104	1.626	0.499	67%	PE	PE100	В
SE-G1.1	SE-G1	SE-G2	normal	0	57796.8	11471.22	42486	3	0.333	710	26	7.74	7.55	5.636	5.518	220	2.104	2.032	1.626	0.499	67%	PE	PE100	В
SE-G2.1	SE-G2	SE-G3	normal	0	57796.8	11471.22	42486	3	0.333	710	41	7.55	7.3	5.518	5.332	220	2.032	1.968	1.626	0.499	67%	PE	PE100	В
SE-G3.1	SE-G3	SE-G4	normal	0	57796.8	11471.22	42486	3	0.333	710	41	7.3	7	5.332	5.145	219	1.968	1.855	1.626	0.499	67%	PE	PE100	В
SE-G4.1	SE-G4	SE-G5	normal	0	57796.8	11471.22	42486	3	0.333	710	45	7	6.75	5.145	4.941	221	1.855	1.809	1.626	0.499	67%	PE	PE100	В
SE-G5.1	SE-G5	SE-G6	normal	0	57796.8	11471.22	42486	3	0.333	710	37.5	6.75	6.75	4.941	4.77	219	1.809	1.98	1.626	0.499	67%	PE	PE100	В
SE-G6.1	SE-G6	SE-G7	BD3	0	57796.8	11471.22	42486	3	0.333	710	18.7	6.75	6.75	4.77	4.689	231	1.98	2.061	1.590	0.488	68%	PE	PE100	В
SE-G7.1	SE-G7	F12	BD3	0	57796.8	11471.22	42486	3	0.333	710	7.88	6.75	6.5	1.689	1.653	219	5.061	4.847	1.626	0.499	67%	PE	PE100	В
SE-B29a.1	SE-B29a	SE-B29	BD3	3849	3849	740.54	2743	5.000	0.043	500	20.860	5.718	7.495	2.793	2.725	307	2.925	4.770	1.100	0.152	28%	PE	PE100	В
																								<u> </u>
SE-B30a.1	SE-B30a	SE-B30	BD3	3849	3849	740.54	2743	5.000	0.043	500	16.419	5.718	7.495	2.340	2.272	241	3.378	5.223	1.240	0.172	25%	PE	PE100	В
										」 ∣														<u> </u>

Extracted from "Sewerage Design Report (Final)" (ref.: C20-02)

Hong Kong Housing Authority

Agreement No. CB20180310
HKHA Term Engineering Consultancy Services 2018-2020

APPENDIX C

Extracts of Reference Guidelines and Materials

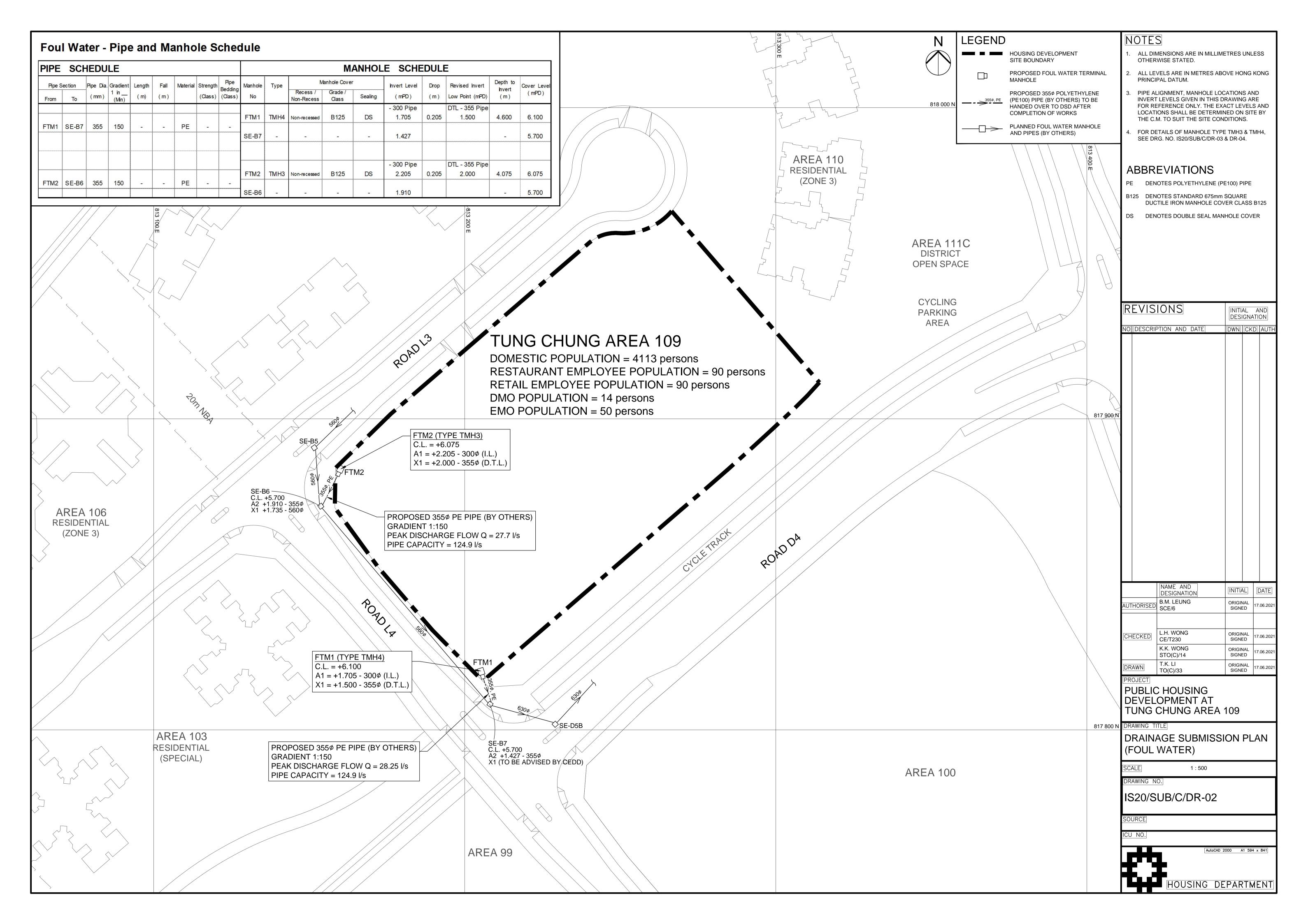


Table T-1 Unit Flow Factor for Domestic Flows

Location	Unit	Datum (2002) (m ³ /d)	Increase per Annum (m3/d)	Planning for Future (m³/day)
Domestic (housing type specific)				
Public rental	Person	0.19	-	0.19
Private R1	Person	0.19	-	0.19
R2	Person	0.27	-	0.27
R3	Person	0.34	0.003	0.37
R4	Person	0.34	0.003	0.37
Traditional Village	Person	0.15	-	0.15
Modern Village	Person	0.27	-	0.27
Institutional and special class	Person	0.19	-	0.19
Temporary and non-domestic	Person	0.15	-	0.15
Mobile residents	Person	0.19	-	0.19
Domestic (catchment specific)				
General- Permanent housing				
(for catchment wide planning)				
- Sandy Bay	Person	0.32	0.003	0.35
- Stanley, Discovery Bay	Person	0.29	-	0.29
- Shek O	Person	0.28	0.007	0.35
- Outlying Islands, Sai Kung	Person	0.26	0.001	0.27
- Yuen Long, Mui Wo	Person	0.23	0.002	0.25
- Aberdeen, Wan Chai, North Lantau	Person	0.23	-	0.23
- Sha Tin, Tai Po	Person	0.21	-	0.22
- San Wai	Person	0.20	0.003	0.23
-Wah Fu, Shek Wu Hui	Person	0.20	0.001	0.21
- Northwest Kowloon, Tuen Mun,	Person	0.20	-	0.20
Central, North Point	Person			
- Ap Lei Chau, Chai Wan, Shau Kei	Person	0.19	-	0.19
Wan, Central Kowloon, East				
Kowloon, Kwai Chung, Tsing Yi,				
Tseung Kwan O				
General – Other housing (catchment wide planning		0.175		0.175
- All catchments	person	0.175	-	0.175

Extracted from EPD's "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning"

Notes of Table 1:

- (1) For planning a new sewerage system, the planning unit flow factors should be used. Adequate allowance should be provided in the proposed sewerage system to ensure that the sewerage system will be adequate for the worst possible future development scenarios.
- (2) Permanent housing comprises public rental housing, subsidized sales flats and private permanent housing (R1, R2, R3 and R4). Other housing consists of non-domestic, institutional & special classes, and temporary housing.

Table T-2: Unit Flow Factors of Commercial Flows and Student Flows

Location	Unit	Planning For Future (m3/d)
Commercial employee	Employee	0.08
Commercial employee		
(a) Specific trades:	Employee	
J2 Electricity Gas & Water	Employee	0.250
J3 Transport, Storage & Communication	Employee	0.100
J4 Wholesale & Retail	Employee	0.200
J5 Import & Export	Employee	-
J6 Finance, Insurance, Real Estate &	Employee	-
Business Services		
J7 Agriculture & Fishing	Employee	-
J8 Mining & Quarrying	Employee	-
J9 Construction	Employee	0.150
J10 Restaurants & Hotels	Employee	1.500
J11 Community, Social & Personal	Employee	0.200
Services		
J12 Public Administration	Employee	-
(b) General –territorial average	Employee	0.200
School student	Person	0.040

Notes of Table T-2:

- (1) For planning of a new sewerage system, the planning unit flow factors should be used and the worst possible combination of commercial flows for the future development scenarios should be considered to ensure that the sewerage system under planning will be sustainable.
- (2) For job types J10 and J11, the "per-employee" unit flow factor takes into account the flows of customers and/or tenants.
- (3) The total unit flow generated from an employee in a particular trade is the sum of the unit flow factor of employee and the unit flow factor of commercial activities of a particular trade under consideration.

Extracted from EPD's "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning"

Table T-5: Peaking Factors, P

Population Range	Peaking Factor (including stormwater allowance) for facility with existing upstream sewerage	Peaking Factor (excluding stormwater allowance) for facility with new upstream sewerage				
(a) For sewers						
<1,000	8	6				
1,000 - 5,000	6	5				
5,000 - 10,000	5	4				
10,000 - 50,000	4	3				
>50,000	$Max \left(\frac{7.3}{N^{0.15}}, 2.4 \right)$	$\operatorname{Max}\left(\frac{6}{\operatorname{\mathbf{N}}^{0.175}}, 1.6\right)$				
(b) Sewage Treatment Wor	ks, Preliminary Treatment Work	s and Pumping Stations				
<10,000	4	3				
10,000 - 25,000	3.5	2.5				
25,000 - 50,000	3	2				
>50,000	$ Max \left(\frac{3.9}{N^{0.065}}, 2.4 \right) $	$ Max \left(\frac{2.6}{N^{0.065}}, 1.6 \right) $				

Notes of Table T-5:

(1) N is the contributing population in thousands.

Summarised Development parameter and estimated ADWF in West SPS (excluding Area 103 109)

Area No. Category Residential Population (R3) Commercial (Retail) F&B Trade Residential Population (R3) Commercial (Retail)	(Head) 1303 988 1372 1707 330 33 14880 288 28.8 180 20	ADWF 482.0 366.0 508.0 632.0 92.0 52.1 2827.0 81.0 45.5 7.0
106B Residential Population (R3) 106C Residential Population (R3) Residential Population (R3) Commercial (Retail) F&B Trade Residential Population (R3)	988 1372 1707 330 33 14880 288 288 28.8 180	366.0 508.0 632.0 92.0 52.1 2827.0 81.0 45.5
106C Residential Population (R3) Residential Population (R3) 110 Commercial (Retail) F&B Trade Residential Population (R3)	1372 1707 330 33 14880 288 28.8 180	508.0 632.0 92.0 52.1 2827.0 81.0 45.5
Residential Population (R3) Commercial (Retail) F&B Trade Residential Population (R3)	1707 330 33 14880 288 28.8 180	632.0 92.0 52.1 2827.0 81.0 45.5
Commercial (Retail) F&B Trade Residential Population (R3)	330 33 14880 288 28.8 180	92.0 52.1 2827.0 81.0 45.5
F&B Trade Residential Population (R3)	33 14880 288 28.8 180	52.1 2827.0 81.0 45.5
Residential Population (R3)	14880 288 28.8 180	2827.0 81.0 45.5
· · · · · · · · · · · · · · · · · · ·	288 28.8 180	81.0 45.5
Commercial (Retail)	28.8 180	45.5
	180	
99 F&B Trade		7.0
Kindergarten (student)	20	, .0
Kindergarten (employee)	20	2.0
Residential Population (R3)	16120	3063.0
Commercial (Retail)	676	189.0
F&B Trade	67.6	106.8
Kindergarten (student)	180	7.0
Kindergarten (employee)	20	2.0
Community & Social Centres	128	36.0
Commercial (Office)	4122	330.0
57 Commercial (Retail)	1767	495.0
Commercial (Retail)	176.7	279.2
105 Salt-water Pumping Station	10	3.0
59 Electricity Substation	10	3.0
Clinic	278	78.0
Sports Centre	300	84.0
Primary School (student)	1530	61.0
Primary School (employee)	109	9.0
56		2662.0
		12503.0

Total	Population	ADWF (m3/d)
To TCE West PS (including Area 56)*	46625 + Area103 & 109	14706.70
To ree west P3 (including Area 56)	+ Area 56	14700.70

Note: * Assume 2662 m3/d sewerage from the Housing Site in Area 56



Hong Kong Housing Authority

Agreement No. CB20180310 HKHA Term Engineering Consultancy Services 2018-2020

APPENDIX D

Sewerage Assessment

Table I Sewerage Impact Assessment

Proposed Gravity Sewer

Roughness Coefficient for Proposed Sewer, K₅ = 1,50
Kinematic Viscosity, n = 0.000001 mm m²/sec @ 20°C

l l								Gre	dient	Popule	tion	ADWF	(m³/day)			Peak							
US Manhole	DS Manhole	Pipe Size (mm)	Internal Size DN (mm)	No. of Pipe	Approx. Length (m)	US I.L. (mPD)	DS I.L. (mPD)	×	l in	Increment	Accu.	Increment	Accu.	Sources of Additional Sewage Flow	Contributing Population	Flow Factor (excl. stormwater allowance)	PDWF (m²/s)	Area of Flow (m²)	Slope	Velocity (m/s)	Capacity (m ³ /s)	Peak Flow/ Capacity	Capacity> ADWF?
			(a)	(b)									(c)		(f) = (c) /0.27	(h)	(i) = (c) x (h)/3600/24	(j) =((a)^2 /4) x(b) x π /100000		(k)	(i) = (j) × (k)	(i) / (k)	
SE-B I	SE-B2 SE-B3	400 400	351.3 351.3		39.0 39.0	3.825 3.565	3.565 3.305	0.667	150.000	2,070	2,070	776.13	776 776	I I 0 & Assumed F&B Trade	2875 2875	5	0.045	0.097	0.007	1.254	0.122	0.368	Ok Ok
SE-B2 SE-B3	SE-B3 SE-R4	560	491.8	i	36.0	3.145	2.905	0.667	150.000	1,372	3,442	0.00 507.64	1,284	106	4755	5	0.074	0.097	0.007	1.559	0.122	0.368	Ok
SE-B4	SE-B5	560	491.8	- 1	25.1	2.630	2.463	0.667	150.000	0	3,442	0.00	1,284		4755	5	0.074	0.190	0.007	1.559	0.296	0.251	Ok
SE-B5	SE-B6	560	491.8	-	19.2	2.163	2.035	0.667	150.000	0	3,442	0.00	1,284		4755	5	0.074	0.190	0.007	1.559	0.296	0.251	Ok
SE-86 SE-87	SE-B7 SE-B8	560 630	491.8 553.4	-	81.9 31.4	1.735	0.962	0.667	150.000	2,155 2,156	5,597 7,753	429.70 429.70	1,713	109	6346 7938	4	0.079	0.190	0.007	1.559	0.296 0.350	0.268	Ok Ok
SE-88	SE-B9	630	553.4	- 1	35.0	0.962	0.787	0.500	200.000	0	7,753	0.00	2,143	107	7938	4	0.099	0.241	0.005	1.456	0.350	0.283	Ok
SE-B9	SE-BIO	630	553.4	- 1	35.0	0.787	0.612	0.500	200.000	0	7,753	0.00	2,143		7938	4	0.099	0.241	0.005	1.456	0.350	0.283	Ok
SE-BIO	SE-BII	630	553.4	- 1	30.0 35.0	0.612	0.462	0.500	200.000	0	7,753	0.00	2,143		7938 7938	4	0.099	0.241	0.005	1.456	0.350 0.350	0.283	Ok
SE-BII SE-BI2	SE-B12 SE-B13	630 630	553.4 553.4		35.0	0.462	0.287	0.500	200.000	0	7,753 7,753	0.00	2,143		7938 7938	4	0.099	0.241	0.005	1.456	0.350	0.283	Ok Ok
SE-B13	SE-B14	630	553.4	i	17.0	0.117	0.032	0.500	200.000	0	7,753	0.00	2,143		7938	4	0.099	0.241	0.005	1.456	0.350	0.283	Ok
SE-B14	SE-B15	630	553.4	- 1	18.8	-0.468	-0.562	0.500	200.000	0	7,753	0.00	2,143		7938	4	0.099	0.241	0.005	1.456	0.350	0.283	Ok
SE-B15	SE-B16	630	553.4	1	31.8	-0.526	-0.685	0.500	200.000	0	7,753	0.00	2,143		7938	4	0.099	0.241	0.005	1.456	0.350	0.283	Ok
SE-B16 SE-B17	SE-B17 SE-B18	630 630	553.4 553.4	-	30.0 73.4	-0.685 -0.835	-0.835 -1.202	0.500	200.000	0	7,753 7,753	0.00	2,143		7938 7938	4	0.099	0.241	0.005	1.456	0.350 0.350	0.283	Ok Ok
SE-B18	SE-B19	800	703.9	1	33.0	-1.372	-1.482	0.333	300.000	8,596	16,349	1701.76	3,845	100	14240	3	0.134	0.389	0.003	1.385	0.539	0.248	Ok
SE-B19	SE-B20	800	703.9	- 1	69.0	-1.482	-1.712	0.333	300.000	0	16,349	0.00	3,845		14240	3	0.134	0.389	0.003	1.385	0.539	0.248	Ok
SE-B20	SE-B21	800	703.9 703.9	1	23.7 35.1	-1.712 -1.781	-1.791 -1.898	0.333	300.000	0	16,349	0.00	3,845 3,845		14240	3	0.134	0.389	0.003	1.385	0.539	0.248	Ok Ok
SE-B21 SE-B22	SE-B22 SE-B23	800	703.9	-	36.9	-1.781	-2.021	0.333	300.000	3.033	19,382	0.00 551.86	4,397	57	16284	3	0.153	0.389	0.003	1.385	0.539	0.248	Ok
SE-B23	SE-B24	800	703.9	1	39.9	-2.031	-2.164	0.333	300.000	0	19,382	0.00	4,397		16284	3	0.153	0.389	0.003	1.385	0.539	0.283	Ok
SE-B24	SE-B25	800	703.9	- 1	18.0	-2.164	-2.224	0.333	300.000	8,596	27,978	1701.76	6,099	100 & Assumed F&B Trade	22587	3	0.212	0.389	0.003	1.385	0.539	0.393	Ok
SE-B25 SE-B26	SE-B26 SE-B27	800	703.9 703.9	- 1	40.2 45.0	-2.224 -2.358	-2.358 -2.508	0.333	300.000	3,033 288	31,011	551.85 81.00	6,650	57 59	2463 I 2493 I	3	0.231	0.389	0.003	1.385	0.539	0.428	Ok Ok
SE-B26 SE-B27	SE-B27 SE-B28	800	703.9	-	36.9	-2.508	-2.627	0.333	310.000	0	31,299	0.00	6,731	39	24931	3	0.234	0.389	0.003	1.362	0.539	0.441	Ok
SE-B28	SE-B29	900	791.6	i	57.4	-2.627	-2.791	0.286	350.000	0	31,299	0.00	6,731		24931	3	0.234	0.492	0.003	1.381	0.680	0.344	Ok
SE-B29	SE-B30	900	791.6	- 1	58.8	-2.791	-2.938	0.250	400.000	3,850	35,149	740.54	7,472	99	27674	3	0.259	0.492	0.003	1.292	0.636	0.408	Ok
SE-B30 SE-B31	SE-B31 SE-D25	900	791.6 791.6		57.2 31.6	-2.938 -3.081	-3.081 -3.160	0.250	400.000	3,850 3,849	38,999 42,848	740.54 740.53	8,212 8,953	99	30417 33159	3	0.285	0.492	0.003	1.292	0.636	0.448	Ok Ok
SE-B31	SE-D25	700	771.0		31.0	-3.061	-3.160	0.230	400.000	3,047	12,010	/40.53	0,733	"	33137	,	0.311	0.492	0.003	1.272	0.030	0.467	- Ox
SE-D6	SE-D7	355	311.6	- 1	64.2	1.700	1.353	0.541	185.000	549	549	143.30	143	103	531	6	0.010	0.076	0.005	1.044	0.080	0.124	Ok
SE-D7	SE-D8	400	351.3	-	33.3	1.308	1.097	0.633	158.000	988	1,537	365.56	509	106	1885	5	0.029	0.097	0.006	1.222	0.118	0.250	Ok
SE-D8 SE-D9	SE-D9 SE-D10	400 500	351.3 439.2	1	68.2 62.3	0.636	0.736	0.529	189.000	6,322	1,537 7,859	0.00	509 1,710	103	1885 6333	5	0.029	0.097	0.005	1.117	0.108	0.273	Ok Ok
SE-D10	SE-DII	500	439.2	- 1	50.9	0.836	-0.008	0.578	173.000	0,322	7,859	0.00	1,710	103	6333	4	0.079	0.152	0.006	1.349	0.202	0.392	Ok
SE-DII	SE-D12	560	491.8	- 1	49.9	-0.068	-0.296	0.457	219.000	1,303	9,162	482.11	2,192	106	8118	4	0.101	0.190	0.005	1.289	0.245	0.414	Ok
SE-D12	SE-D13	560	491.8	- 1	43.5	-0.296	-0.482	0.427	234.000	1,639	10,801	69.92	2,262	102	8377	4	0.105	0.190	0.004	1.247	0.237	0.442	Ok
SE-D13 SE-D14	SE-D14 SE-D15	630 630	553.4 553.4	1	53.6 32.6	-0.482	-0.714 -0.862	0.433	231.000	10	10,811	3.30	2,265 2,265	105	8390 8390	4	0.105	0.241	0.004	1.354	0.326	0.322	Ok Ok
SE-D15	SE-D15	710	624.6	i	53.0	-0.942	-1.154	0.400	250.000	0	10,811	0.00	2,265		8390	4	0.105	0.306	0.004	1.406	0.431	0.243	Ok
SE-D16	SE-D17	710	624.6	- 1	15.0	-1.154	-1.214	0.400	250.000	0	10,811	0.00	2,265		8390	4	0.105	0.306	0.004	1.406	0.431	0.243	Ok
SE-D17	SE-D18	710	624.6	1	19.0	-1.214	-1.280	0.347	288.000	300	11,111	84.00	2,349	102	8701	4	0.109	0.306	0.003	1.310	0.401	0.271	Ok
SE-D18 SE-D19	SE-D19 SE-D20	710 710	624.6 624.6	-	32.4 61.3	-1.280 -1.480	-1.480 -1.768	0.617	162.000	0	11,111	0.00	2,349 2,349		8701 8701	4	0.109	0.306	0.006	1.748	0.536	0.203	Ok Ok
SE-D19	SE-D21	710	624.6	i	41.0	-1.768	-1.920	0.370	270.000	0	11,111	0.00	2,349		8701	4	0.109	0.306	0.004	1.353	0.415	0.262	Ok
SE-D21	SE-D22	710	624.6	- 1	46.0	-1.920	-2.104	0.400	250.000	0	11,111	0.00	2,349		8701	4	0.109	0.306	0.004	1.406	0.431	0.252	Ok
SE-D22 SE-D23	SE-D23 SE-D24	710 710	624.6 624.6	-	57.8 40.3	-2.104 -2.348	-2.348 -2.492	0.422	237.000	0	11,111	0.00	2,349		8701 8701	4	0.109	0.306	0.004	1.444	0.443	0.246	Ok Ok
SE-D23 SE-D24	SE-D24 SE-D25	710	624.6	-	40.3	-2.348 -2.492	-2.492 -2.792	0.357	280.000 135.000	0	11,111	0.00	2,349		8701 8701	4	0.109	0.306	0.004	1.328	0.407	0.267	Ok Ok
SE-D25	SPS002	900	791.6	i	29.8	-3.160	-3.245	0.286	350.000	46,697	57,808	9693.55	12,042.74		44603	3	0.418	0.492	0.003	1.381	0.680	0.615	Ok
PLUG D2.3	SE-B6	355	311.6	1	13.5	2.000	1.910	0.667	150.000	2,155	2,155	429.70	429.70		1591	5	0.025	0.076	0.005	1.044	0.079	0.315	Ok
PLUG D2.3A PLUG D2.4A	SE-B7 SE-D6	355 355	311.6	-	11.0 8.6	1.500	1.427	0.667	150.000 95.000	2,156 549	2,156	429.70 143.30	429.70 143.30		1591 531	5	0.025	0.076	0.005	1.044	0.079	0.315	Ok Ok
PLUG D2.4A PLUG D2.4	SE-D6 SE-D9	355	311.6	1	13.5	1.840	1.749	0.676	148.000	6,204	6,204	1201.00	1,201.00		4448	5	0.070	0.076	0.005	1.044	0.079	0.126	Ok

Note:
1. Contributing Population = Accu. ADWPF24f36000.27, the peak flow factor refer to contributing population
2. The Coldebrook-White Equation is used to determine the velocity \square 2. The Coldebrook-White Equation is used to determine the velocity \square 3. Data adopted from CEDV's Severage Deepy Report [final] (vtf: C30-02)

V = mean velocity (m's)

V = mean velocity (m's)

R = bydraulic radius (m)

V = kinermatic viscosity of fluid (m's)

V = kinermatic viscosity of fluid (m's)

22/12/2021

 Proposed Gravity Sewer
 Image: Certain for Propositions C. I. | 0.00 mm (POPP piper)

 Residence Certain for Propositions C. I. | 0.00
 mm (POPP piper)

 Residence Visually 4 | 0.000001
 mm (POPP piper)

										Populatio	o from	ADWF (m	/duv) from	Populatio	from	ADWF (e	1/der) from		I	Peak	Peak									
								Gre	dient	Greatty	Sower	Grantt		Pumping !	tetion		g Station			Flow Fector	Row Fector		PDWF of				Capacity of	Capacity of		
US Manhole	DS Manhole	Pipo Sizo (mm)	internal Size DN (mm)	No. of Pipe	Apprex. Leagth (m)	US I.L. (mPD)	DS I.L. (mPD)	x	l in	Increment	Accu.	Increment	Accu.	Increment	Accu.	Increment	Accu.	Contributing Population from Gravity Source	Population from Pumping Station	From Gravity Sower (Including stormweter allowance)	from pumping station (seed. stormweter allowance)	PDWF of Proposed Sowers (m ³ /s)	Existing Sources (m ² /e) ^o	Area of Row (m²)	Slope	Valocity (m/s)	Proposed Sowers (m ³ /e)	Existing Sowers (m ² /s)		Capacity* ADWF1
			(1)	(b)									(cl)				(c2)	(FI) = (cI) /0.27	(f1) = (c2) /0.27	(h1)	(62)	(i) = (c1 x h1+ c2 x h2)/3600/24	(m)	(j) =((a)^2 /4) x(b) x fi /100000		(k)	(i) = (j) x (k)	(n)	(i+m) / (l+n)	
DCI	SE-G1	710	600	_	14	5.700	5.636	0.457	218.750	0	0	0	0	57807.7	57,808	14706.70	14,706.70	0	54469	8	2.0	0.341		0.283	0.005	1.642	0.464		0.735	Ok
SE-G1	SE-G2	710	600	_	26	5.636	5.518	0.454	220.339	0	0	0	0	0	57,808	0.00	14,706.70	0	54469	8	2.0	0.341		0.283	0.005	1.636	0.463		0.738	Ok
SE-G2	SE-G3	710	600	_	41	5.518	5.332	0.454	220.430	0	0	0	0	0	57,808	0.00	14,706.70	0	54469	8	2.0	0.341		0.283	0.005	1.636	0.463		0.738	Ok
SE-G3	SE-G4	710	600	_	41	5.332	5.145	0.456	219.251	0	0	0	0	0	57,808	0.00	14,706.70	0	54469	8	2.0	0.341		0.283	0.005	1.641	0.464		0.736	Ok
SE-G4	SE-G5	710	600	_	45	5.145	4.941	0.453	220.588	0	0	0	0	0	57,808	0.00	14,706.70	0	54469	8	2.0	0.341		0.283	0.005	1.636	0.462		0.738	Ok
SE-GS	SE-G6	710	600	_	37.5	4.941	4.770	0.456	219.298	0	0	0	0	0	57,808	0.00	14,706.70	0	54469	8	2.0	0.341	-	0.283	0.005	1.640	0.464	-	0.736	Ok
SE-G6	SE-G7	710	600	_	18.7	4.770	4.689	0.433	230.864	0	0	0	0	0	57,808	0.00	14,706.70	0	54469	8	2.0	0.341	-	0.283	0.004	1.598	0.452	-	0.755	Ok
SE-G7	SE-G8	710	600	_	7.88	1.689	1.653	0.457	218.889	0	0	0	0	0	57,808	0.00	14,706.70	0	54469	8	2.0	0.341	-	0.283	0.005	1.642	0.464	-	0.735	Ok
FI2	FI3	800	756.6	-	43.0	0.563	0.310	0.588	169.960	11,420	11,420	3927.00	3,927.00	0	57,808	0.00	14,706.70	14544	54469	4	2.0	0.523	0.111	0.450	0.006	2.155	0.969	0.120	0.582	Ok
FI3	FI4	800	756.6	-	23.0	-0.124	-0.259	0.587	170.370	0	11,420	0.00	3,927.00	0	57,808	0.00	14,706.70	14544	54469	4	2.0	0.523	0.111	0.450	0.006	2.153	0.968	0.120	0.583	Ok
F14	F15	800	756.6	-	36.0	-0.259	-0.471	0.589	169.811	0	11,420	0.00	3,927.00	0	57,808	0.00	14,706.70	14544	54469	4	2.0	0.523	0.111	0.450	0.006	2.156	0.970	0.120	0.582	Ok
FIS	FI6	800	756.6	-	45.0	-0.471	-0.736	0.589	169.811	0	11,420	0.00	3,927.00	0	57,808	0.00	14,706.70	14544	54469	4	2.0	0.523	0.111	0.450	0.006	2.156	0.970	0.120	0.582	Ok
FI6	FI7	800	756.6	-	22.0	-0.736	-0.865	0.586	170.543	0	11,420	0.00	3,927.00	0	57,808	0.00	14,706.70	14544	54469	4	2.0	0.523	0.111	0.450	0.006	2.152	0.967	0.120	0.583	Ok
F17	F18	800	756.6	-	68.0	-0.965	-1.365	0.588	170.000	0	11,420	0.00	3,927.00	0	57,808	0.00	14,706.70	14544	54469	4	2.0	0.523	0.111	0.450	0.006	2.155	0.969	0.120	0.582	Ok
FMH7042062	F18	800	756.6 756.6	-	95.0	-1.420 -1.670	-1.485 -2.050	0.591	169.231 250.000	0	11,420	0.00	3,927.00	0	57,808 57,808	0.00	14,706.70	14544	54469 54469	4	2.0	0.523	0.603	0.450	0.006	2.160	0.971	0.427	0.805	Ok
F18	F19	800	756.6 756.6	-	95.0 42.0	-2.050	-2.050	0.400	250.000	0	11,420	0.00	3,927.00	0	57,808	0.00	14,706.70	14544	54469	4	2.0	0.523	0.603	0.450	0.004	1.775	0.798	0.427	0.919	Ok Ok
F19	F20	800	756.6	-	42.0 36.0	-2.218	-2.218	0.400	250.000	0	11,420	0.00	3,927.00	0	57,808	0.00	14,706.70	14544	54469	4	2.0	0.523	0.603	0.450	0.004	1.775	0.798	0.427	0.919	Ok Ok
F20 F21	F21 FCH7000680	800	756.6	-	3.0	-2.362	-2.362	0.400	250.000	0	11,420	0.00	3,927.00	0	57,808	0.00	14,706.70	14544	54469	- 1	2.0	0.523	0.603	0.450	0.004	1.775	0.798	0.427	0.919	Ok
F21	PC-PV-000680	550	7,000	-	2.0	-2.362	-2.3/4	0.400	250,000		,420	0.00	3,727.00		27,000	0.00	14,700.70	14344	3+407	-	4.0	0.323	0.203	0.430	0.304	1.773	0.778	0.427	v.317	- JK

Note:

1. Convoluting Population = Rest. ACMPP3/9809027, the pask flow feature refer to contributing population

2. The Collection Plant Equation is a discussive the viscous and Exemption is a discussive the viscous and Exemption is a discussive of the part of the part

Table 3 Sewerage Impact Assessment

Existing Gravity Sewer

Roughness Coefficient for Proposed Sewer, $K_1=3.00\,$ mm Kinematic Viscosity, n = 0.000001 m2/Nec @ 20° C

		1			T		Gre	dient	Populat	lon	ADWF	(m³/day)									1	
													1		Peak Flow Factor							
US Manhole	DS Manhole	Pipe Size (mm)	No. of Pipe	Approx. Length (m)	US I.L. (mPD)	DS I.L. (mPD)	%	l in	Increment	Accu.	Increment	Accu.	Sources of Additional Sewage Flow *	Contributing Population	(Incl. stormwater allowance)	PDWF (m³/s)	Area of Flow (m²)	Slope	Velocity (m/s)	Capacity (m³/e)	Peak Flow/ Capacity	Capacity> ADWF?
		(a)	(b)									(c)	Area	(f) = (c) /0.27	(h)	(i) = (c) × (h)/3600/24	(j) =((a)*2 /4) x(b) x π /100000		(k)	(l) = (j) × (k)	(1) / (1)	
FMH7063200	FMH7042751	375	-	32.0		4.050		-		0	1146.00	1,146	Area 55b	4244	6	0.080	0.110					<u> </u>
FMH7042751	FMH7042750	450	- 1	45.0	4.050	3.920	0.289	346.154		0		1,146		4244	6	0.080	0.159	0.003	0.874	0.139	0.573	Ok
FMH7042750	FMH7042752	450	ı	3.9	3.920	3.305	15.974	6.260		0	52.00	1,198	Gas stations, Public Works Regional Laboratory (North Lantau), The Visionary, a construction site office	4437	6	0.083	0.159	0.160	6.515	1.036	0.080	Ok
FMH7042752	FMH7042753	450	-	3.8	3.770	3.660	2.918	34.273		0		1,198		4437	6	0.083	0.159	0.029	2.783	0.443	0.188	Ok
FMH7042753	FMH7042754	450	- 1	40.0	3.660	2.463	2.993	33.417		0		1,198		4437	6	0.083	0.159	0.030	2.819	0.448	0.186	Ok
FMH7042754	FMH7042755	450	-	39.0	3.530	3.420	0.282	354.545		0		1,198		4437	6	0.083	0.159	0.003	0.863	0.137	0.607	Ok
FMH7042755 FMH7042756	FMH7042756 FMH7042757	450 450	-	39.0 39.0	3.410 3.290	3.290 3.180	0.308	325.000 354.545		0		1,198		4437 4437	6	0.083	0.159	0.003	0.902	0.143	0.582	Ok Ok
FMH7042756 FMH7042757	FMH7042757 FMH7042758	450	-	29.0	3.160	3.180	0.282	414.286		0		1,198		4437	6	0.083	0.159	0.003	0.863	0.137	0.655	Ok
FMH7042758	FMH7042759	450	i	36.0	3.070	2.960	0.306	327.273		0		1,178		4437	6	0.083	0.159	0.002	0.899	0.127	0.582	Ok
FMH7042759	FMH7042743	450	ı	38.0	2.920	2.800	0.316	316.667		0	1174.00	2,372	Caribbean Coast (1552 out of 5336 flat) , Ho Yu College and Primary Schoo	8785	5	0.137	0.159	0.003	0.914	0.145	0.947	Ok
FMH7042743	FMH7042744	450	- 1	39.0	2.660	1.160	3.846	26.000		0		2,372		8785	5	0.137	0.159	0.038	3.196	0.508	0.270	Ok
FMH7042744	FMH7042763	525	-	45.0	0.940	0.840	0.222	450.000		0	1300.00	3,672	Tung Chung Traction Substation, Caribbean Coast, Ho Yu College, Ho Yu Primary School, FMH7042744	13600	4	0.170	0.216	0.002	0.848	0.184	0.924	Ok
FMH7042763	FMH7042762	525	_	31.0	0.840	0.800	0.129	775.000		0		3,672		13600	4	0.170	0.216	0.001	0.646	0.140	1.214	Not OK
FMH7042762	FMH7042761	525	- 1	40.0	0.750	0.650	0.250	400.000		0		3,672		13600	4	0.170	0.216	0.003	0.900	0.195	0.872	Ok
FMH7042761	FMH7042760 FMH7042768	525 525	- !	38.0 44.0	0.640	0.530	0.289	345.455 440.000		0		3,672 3.672		13600	4	0.170	0.216	0.003	0.968	0.210	0.810	Ok Ok
FMH7042760 FMH7042768	FMH7042768 FMH7042767	525	-	39.0	0.530	0.430	0.227	557.143		0	2684.00	6356	0.4.0.0704 (5334.0.)	23541	4	0.170	0.216	0.002	0.858	0.186	1.783	Nor OK
FMH7042767	FMH7042766	525	-	32.0	0.410	0.260	0.179	533,333		0	2684.00	6,356	Caribean Coast (3784 of 5336 flats)	23541	4	0.294	0.216	0.002	0.762	0.163	1.763	Not OK
FMH7042766	FMH7042108	525	i	39.0	0.260	0.170	0.231	433.333		0		6,356		23541	4	0.294	0.216	0.002	0.864	0.187	1.574	Not OK
FMH7042108	FMH7042107	525	- 1	43.0	0.140	0.030	0.256	390.909		0		6,356		23541	4	0.294	0.216	0.003	0.910	0.197	1.494	Not OK
FMH7042107	FMH7042106	525	ı	37.0	0.030	-0.010	0.108	925.000	2,009	2,009	563.00	6,919	Tung Chung Park, FMH7042744, Part of Caribbean Coast	25626	4	0.320	0.216	0.001	0.591	0.128	2.503	Not OK
FMH7042106	FMH7042105	600	-	21.0	0.020	-0.120	0.667	150.000		2,009		6,919		25626 25626	4	0.320	0.283	0.007	1.605	0.454	0.706	Ok Ok
FMH7042105 FMH7042104	FMH7042104 FMH7042103	600	-	28.0	-0.530	-0.530	0.179	560.000		2,009		6,919		25626	4	0.320	0.283	0.010	0.829	0.556	1369	Not OK
FMH7042103	FMH7042101	600	i	31.0	-0.600	-0.670	0.226	442.857		2,009		6,919		25626	4	0.320	0.283	0.002	0.933	0.264	1.213	Not OK
FMH7042101	FMH7042102	675	i	28.0	-0.760	-0.810	0.179	560.000		2,009	1918.00	8,837		32730	4	0.409	0.358	0.002	0.896	0.320	1.279	Not OK
FMH7042102	FMH7042088	675	- 1	33.0	-0.810	-0.850	0.121	825.000		2,009		8,837		32730	4	0.409	0.358	0.001	0.737	0.264	1.550	Not OK
FMH7042088	FMH7042086	675	- 1	48.0	-0.870	-0.920	0.104	960.000		2,009		8,837		32730	4	0.409	0.358	0.001	0.683	0.245	1.670	Not OK
FMH7042086	FMH7042087	750	ı	74.0	-0.970	-1.140	0.230	435.294	14,729	16,738	4186.00	13,023	Coastal Skyline (3329 out of 3380 flat), Seaview Cresent, Ling Liang Church Sau Tak Primary School, Ling Liang Church E Wun Secondary School, Tung Chung Municipal Services Building and Tung Chung Public Library, Novotel Citygate Hong Kong Hotel	48233	4	0.603	0.442	0.002	1.088	0.481	1.253	Not OK
FMH7042087	FMH7042062	750	- 1	7.0	-1.140	-1.310	2.429	41.176		16,738		13,023		48233	4	0.603	0.442	0.024	3.544	1.566	0.385	Ok
FMH7042062 FMH7043282	FMH7043282 FMH7043283	750 750	-	99.0 38.0	-1.420 -1.600	-1.600 -1.730	0.182	550.000 292.308		16,738		13,023		48233 48233	4	0.603	0.442	0.002	0.968	0.427 0.587	1.412	Not OK Not OK
FMH7043282 FTH7001645	FMH7043283 FMH7042090	300		10.0	-1.000	3.210	0.342	272.308	6.969	6,969	1882.00	1,882	Area 55a	6970	5	0.109	0.442	0.003	1.320	0.307	1.027	Ok
FMH7042090	FMH7042091	400	- 1	27.0	3.120	2.940	0.667	150.000		6,969		1,882		6970	5	0.109	0.126	0.007	1.229	0.154	0.707	Ok
FMH7042091	FMH7042092	400	- 1	15.0	2.910	2.850	0.400	250.000		6,969		1,882		6970	5	0.109	0.126	0.004	0.952	0.120	0.908	Ok
FMH7042092	FMH7042093	400	- 1	28.0	2.820	2.680	0.500	200.000		6,969		1,882		6970	5	0.109	0.126	0.005	1.064	0.134	0.813	Ok
FMH7042093	FMH7042094	400	- 1	25.0	2.670	2.510	0.640	156.250		6,969		1,882		6970	5	0.109	0.126	0.006	1.204	0.151	0.721	Ok
FMH7042094	FMH7042095	400	- 1	39.0	2.510	2.280	0.590	169.565		6,969		1,882		6970	5	0.109	0.126	0.006	1.156	0.145	0.751	Ok
FMH7042095	FMH7042096	400	- 1	40.0	2.280	2.100	0.450	222.222		6,969		1,882		6970	5	0.109	0.126	0.004	1.010	0.127	0.858	Ok
FMH7042096	FMH7042097 FMH7042098	400 400	-	39.0 40.0	2.060 1.850	1.860	0.513	195.000	131	6,969 7,100	35.00	1,882	6 10 h 51 (200 : :	6970 7100	S S	0.109	0.126	0.005	1.078	0.135	0.807	Ok Ok
			1 1	40.0	1.850	1.650	0.500	200.000	131		35.00	1,917	Coastal Skyline (51 out of 3380 flat)							0.134	0.828	
FMH7042097			-	39.0	1 590	1.420	0.434	229.412		7 100		1917		7100		0.111			0.994	0.125	0.000	
	FMH7042099 FMH7042100	400 400	-	39.0 39.0	1.590	1.420	0.436	229.412		7,100		1,917		7100 7100	5	0.111	0.126	0.004	1.022	0.125	0.888	Ok Ok

Notice:

| Concentrating Population = Actu. ADVPT34*1000027, the pask flow factor refer to contributing population
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Proposed Public Housing Development at Tung Chung Area 109 in Tung Chung

Sizing of Rising Main

Scenarios	ADWF (m3/day)	Peaking Factor	Peak Flow (m3/s)	Estimated Flow in One RM (m3/s)	Pipe Internal Diameter (mm)	Area of Flow (m2)	Flow Velocity (m/s)	Remarks
Flow from West SPS catchment + Flow from Area 56 (excluding Stormwater Allowance)	14706.70	2.04	0.35	0.17	395.6	0.12	1.41	Two Duty RMs under Normal Operation
	14706.70	2.04	0.35	0.35	395.6	0.12	2.82	One Duty and One Standby under Emergency Condition

Proposed Public Housing Development at Tung Chung Area 109 in Tung Chung Western Sewage Pumping Station

Wet Well		
Ground Level =	5.5	mPD
Breath =	11.5	m
Width =	4	m
Inlet pipe invert level	-3.248	mPD
Inlet chamber floor level, L1	-3.398	mPD
High Level Alarm, HLA (I2)	-3.548	mPD
Overflow Level	3.5	mPD
Retention Time in wet well		
Total available storage area	46	m2
Water Depth	7.048	m
Total storage capacity	324.208	m3
Retention Time in wet well	1904.681	S
	31.745	mins
Retention Tank Design:		
Withstanding 6 hours of ADWF		
ADWF =	0.170	m3/s
Volume of 6-hr ADWF =	3676.7	m3
Valve Chamber Invert =	-6.4	mPD
Overflow Pipe Invert =	3.5	mPD
Retention Tank Invert =	-7.3	mPD
Storage volume at Wet Well =	324.21	m3
Required storage tank volume =	3309.008	m3

	Length	Width	Depth	Volume	
Volume of Storage Tank, Portion A1 =	3.10	4.35	5 10.80	145.64 m3	
Volume of Storage Tank, Portion A2 =	19.25	14.90	10.80	3097.71 m3	
Volume at distribution chamber =	1.55	12.30	9.90	188.74 m3	
Volume at inlet and outlet chgamber of screen house	4.80	4.00	6.80	125.79	
Adopting 1 in 50 fall	Reduced in	olume due to	fall and column	139.79 m3	
Total Volume of Storage =				3742.30 m3	OK

Appendix 4

Technical Assessments – Part 2
(Water Works Impact Assessment)

Hong Kong Housing Authority

Agreement No. CB20180310
HKHA Term Engineering Consultancy Services 2018-2020
For Kowloon Central & West and Islands Region

Proposed Public Housing Development at Tung Chung Area 109

Water Works Impact Assessment (Draft Final)



Document No. Q1021/C006/1 Issue 5

December 2021



Proposed Public Housing Development at Tung Chung Area 109

Water Works Impact Assessment (Draft Final)

Approved for Issue by:								
	William So							
Position:	Project Manager							
Date:	December 2021							

Hong Kong Housing Authority 6/F, Block 3 Hong Kong Housing Authority Headquarter 33 Fat Kwong Street Ho Man Tin Kowloon Mannings (Asia) Consultants Ltd 5/F, Winning Commercial Building 46-48 Hillwood Road Tsim Sha Tsui Kowloon

Proposed Public Housing Development at Tung Chung Area 109

Water Works Impact Assessment (Draft Final)

Issue	Prepared by	Reviewed by	Date
I	KA	JL	March 2021
2	MWS	WS	September 2021
3	MWS	WS	November 2021
4	MWS	WS	November 2021
5	MWS	WS	December 2021

HKHA Term Engineering Consultancy Services 2018-2020





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Executive Summary

To meet the public housing target, the Hong Kong Housing Authority (HKHA) was invited "to study the potential increase of housing provision in Tung Chung East". Tung Chung Area 109 (hereinafter refer as "the Subject Site") at Tung Chung East is being explored.

The potential population of the subject site is about 3,763 respectively. Tentatively, the subject site is targeted to complete the potential development in 2025/26.

The water demands of both the existing and potential development were estimated with reference to the Departmental Instruction (DI) No. 1309 published by Water Supplies Department (WSD) and AECOM report "Fresh and Salt Water Supply Review for Population Increase and Development Intensity - CASE 2 Scenario 2B (Final)" (Ref. PI21-02) with permission of use by HKHA.

The results showed that the revised estimated fresh water demand of the Subject Site is smaller than that in the original design (-0.02%). For flushing water demand, the revised estimation is larger than that in the original design (+0.02%). The newly estimated MDD for Fresh Water services will not exceed the current proposed capacity of Siu Ho Wan Fresh Water Service Reservoir (i.e. 64,600 m³⁾ whereas the newly estimated MDD for Salt Water services will exceed the Tung Chung Salt Water Service Reservoir (i.e. 11,500 m³), which can be catered by the factor of additional 25% of MDD as safety margin in the design assumption, and thus no insurmountable technical problem shall be induced from the capacity of the planned water services facilities.



1.0 Introduction

- Civil Engineering and Development Department (CEDD) is carrying out reclamation and infrastructure works for the development of Tung Chung New Town Extension (TCNTE) -East. In response to the policy on site optimisation and intensification, CEDD has carried out studies to assess the potential increase of housing provision in Tung Chung East. Tung Chung Area 109 (hereinafter refer as "the Subject Site") at Tung Chung East is being explored (See Appendix A). Tentatively, the proposed public housing developments at the Subject Site is targeted to complete in 2025/26.
- 1.1.2 Mannings (Asia) Consultants Ltd has been commissioned by the Hong Kong Housing Authority (HKHA) under the Agreement No. CB20180310 HKHA Term Engineering Consultancy Services 2018-2020 to undertake the Water Works Impact Assessment (WWIA) (hereinafter refer as "the Subject Study") to support the s.16 planning application for the proposed public housing development at the Subject Site.

2.0 **Background**

2.1.1 The potential population of the Subject Site is about 3,763. Tentatively, the subject site is targeted to complete the potential development in 2025/26.

3.0 Study Objective

- 3.1.1 The objective of the study is:
 - To assess the fresh and flushing water demands of the Subject Site
- The major tasks to achieve these objectives include:
 - Acquire background information and predict water demands in the Subject Site;
 - Assess the impacts of the potential development's water demands on the original design

4.0 **Data Collection**

4.1.1 Data used for this assessment were based on the HKHA information, Water Supplied Department (WSD) Departmental Instruction No. 1309 and the AECOM report "Fresh and Salt Water Supply Review for Population Increase and Development Intensity - CASE 2 Scenario 2B(Final)" (Ref. Pl21-02) with permission of use by CEDD.



5.0 Tung Chung Area 109

5.1.1 The Subject Site, with a site layout plan shown in Appendix A, will include domestic blocks, nondomestic facilities including retail and social welfare block. A summary of the development parameters of the Subject Site in the assessment were presented in Table 5.1.

Table 5.1 – Development Parameters of the Subject Site

	Tung Chung Area 109		
Target Completion Year	2025/26		
Public Rental Housing (PRH)			
No. of Flats	1,344		
Average Household Size (Persons per flat)	2.8		
Population (Without 10% design buffer)	3,763		
Non-domestic Facilities			
Size	3,600 m ² GFA		



6.0 Existing and Proposed Fresh and Salt Water Supply System

6. I **Existing Fresh Water Supply Condition**

6.1.1 The existing fresh water connection point was located at southwest side of the Subject Site at Ying Tung Road of Tung Chung. No fresh water was supplied to the Subject Site. A record plan of existing fresh water mains is appended in **Appendix B**.

6.2 **Existing Flushing Water Supply Condition**

- 6.2.1 The flushing water system of the Subject Site was supplied by salt water.
- 6.2.2 The existing flushing water connection point was located at southwest side of the Subject Site at Ying Tung Road of Tung Chung. No salt water was supplied to the Subject Site. A record plan of existing flushing water mains is appended in Appendix C.

6.3 **Proposed Fresh Water Supply**

6.3.I It is anticipated that the location of the fresh water connection point for the Subject Site would be placed outside the boundary of the Subject Site. The proposed fresh water connection point shall be aligned with the connection points at detail design stage.

6.4 **Proposed Flushing Water Supply**

6.4.1 It is anticipated that the location of the flushing water connection point for the Subject Site would be placed outside the boundary of the Subject Site. The proposed salt water connection point shall be aligned with the connection points at detail design stage.



7.0 Assessment Methodology

7.1 Assumptions

- 7.1.1 The unit demands of the residential population and the services trade are based on the Water Supplies Department (WSD) Departmental Instruction (DI) No. 1309.
- 7.1.2 The assumptions on flat occupancy were based on Housing in Figures 2020 published by Transport and Housing Bureau.
- 7.1.3 The actual demand is subject to the planning on the Assignment. The scheme adopted in the scheme is preliminary and the layout will be updated subject to the scheme evaluation and liaison with relevant departments.

7.2 Unit Demand

7.2.1 In accordance with WSD's DI No. 1309 and other reference, the following unit demand factors are adopted in this assessment and summarized in Table 7.1:-

Table 7.1 – Unit Demand Rates for the Potential development

	Unit Portable Water	Unit Flushing Water
Population or Employment Type	Demand	Demand
	(l/h/d)	(l/h/d)
Residential – Public Housing	140	70
Service Trades	40	
Non-residential	40	20(1)

Note:

(I) The unit flushing water demand is referred to that of Categories – General Government/Institution/Community (GIC) and Office in Annex B2 of AECOM report "Fresh and Salt Water Supply Review for Population Increase and Development Intensity – CASE 2 Scenario 2B (Final)" (Ref. PI21-02)

7.3 Required Water Demands for Fresh and Salt Water

- 7.3.1 This assessment will be evaluated based on the estimated fresh and salt water demands of the Subject Site. The estimated values are then added to the required fresh and salt water demands without the Subject Site. According to Annex B2 of AECOM report "Fresh and Salt Water Supply Review for Population Increase and Development Intensity CASE 2 Scenario 2B (Final)" (Ref. PI2I-02) (See Appendix DI), the fresh and salt water demands of Tung Chung East and West Developments (including that of the Subject Site) are 64,498 m³ and 45,491 m³ respectively. Table 7.2 provides demand estimates of the development without the Subject Site.
- 7.3.2 Area 103, being in close proximity of Area 109 and close targeted completion year, 2026/27, with Area 109, the proposed increased intensity for Area 103 will be considered together with the Subject Site.
- 7.3.3 Coordination has been undertaken with CEDD. The water demand of Area 33 will be intensified. The updated estimated daily demands of fresh water and salt water from TCW are 9,759m3/d and 4,224 m3/d respectively.



- 7.3.4 Since the original water demands of non-residential facilities of the Subject Site are unknown, deduction of them will be assumed as negligible on estimating the water demands of Tung Chung East Development without the Subject Site.
- 7.3.5 The demand estimates from Table 7.2 will be used to summate the estimated fresh and salt water demands based on the development parameters summarized in Table 5.1 to assess the adequacies of the fresh and salt water service reservoirs.

Table 7.2 – Demand Estimates of Tung Chung East and West Developments without the Subject

Population	Fresh Water	Fresh	Salt Water	Salt Water
(Head)	Unit Demand	Water	Unit	Demand
(From	(l/h/d)	Demand	Demand	(m³/day)
AECOM		(m³/day)	(l/h/d)	
report)				
		64,498		45,491
6,322	140	885.08	0.07	442.54
4,113	140	575.82	0.07	287.91
10,435	40	417.40		
		<mark>9,589.00</mark>	<u>-</u>	<mark>4,052.00</mark>
<u>-</u>		11,467.30		<mark>4,782.45</mark>
			•	
		<mark>9,759.00</mark>		<mark>4,224.00</mark>
-		<mark>9,759.00</mark>		<mark>4,224.00</mark>
		<mark>62,789.70</mark>		44,932.55
	(Head) (From AECOM report) 6,322 4,113	(Head) Unit Demand (I/h/d) AECOM report) 6,322 140 4,113 140	(Head) (From (I/h/d) Unit Demand (I/h/d) Demand (m³/day) report) 64,498 6,322	(Head) (From (I/h/d) Demand (m³/day) (I/h/d) Demand (m³/day) (I/h/d) 6,322

(2) Including Service Trade.

⁽I) According to Table 2 of WSD Departmental Instruction No. 1309, an allowance should be added for service trades use. A 40l/h/d is used for service trades use for the Subject Site locate in Tung Chung, Islands.



8.0 Assessment

8.1 Supply Zone

8.1.1 The Subject Site are fallen within the Supply Zone of Tung Chung Fresh Water Service Reservoir and Tung Chung Salt Water Service Reservoir (See **Appendices B** and **C**). According to the report from AECOM (Ref. Pl21-02), the existing Tung Chung Fresh Water Reservoir is not able to cater for the fresh water demands in Tung Chung East West Developments. A newly-proposed fresh water service reservoir at Siu Ho Wan shall be constructed to serve the demand. For the flushing water supply, the newly proposed Tung Chung Salt Water Service Reservoir shall be used to serve as the flushing water supply for this new development.

8.2 Proposed Water Demand

8.2.1 With reference to DI No. 1309, the estimate of fresh and flushing water demand for the proposed redevelopment is summarized in Table 8.1. The detailed breakdown is attached in Appendix E.

Table 8.1 - Summary for Fresh and Flushing Water Daily Demands for the Subject Site

	Fresh Water Demand (m³/d)		Flushing Water	Demand (m ³ /d)
	Area 103	Area 109	Area 103	Area 109
Total	1015.02	<mark>677.34</mark>	394.73	<mark>263.41</mark>

Remarks: The estimation of Fresh and Flushing Water Daily Demands of Area 103 refers to the report named "Proposed Public Housing Development at Tung Chung Area 103 Water Works Impact Assessment (Draft Final)" (Document no. Q1021/C006/2) under separate submission.

8.2.2 By summating the required water demands of the Tung Chung East Development within the Subject Site, the total required water demands are summarized in Table 8.2.

Table 8.2 – Summary for Total Fresh and Flushing Water Daily Demands

Total	<mark>64,482.06</mark>	<mark>45,590.69</mark>
Sub-total	<mark>1692.36</mark>	<mark>658.14</mark>
109)		
Estimated Water demand (Area	<mark>677.34</mark>	<mark>263.41</mark>
103)		
Estimated Water demand (Area	1015.02	<mark>394.73</mark>
Newly-estimated demand to be add	led	
Subject Site)		
Existing demand (Without the	<mark>62,789.70</mark>	<mark>44,932.55</mark>
	Demand (m³/d)	Demand (m³/d)
	Fresh Water	Flushing Water



8.3 Checking of Distribution Mains and Service Reservoir

- **8.3.1** Given that no distribution mains are constructed around the Subject Site yet, no checking on the distribution mains would be required.
- 8.3.2 A summary indicating the comparison between the total water demands of the original and the newly-estimated values is shown in Table 8.3 for easy reference.

Table 8.3 – Summary for Total Fresh and Flushing Water Daily Demands between original and newly-estimated values

,	Fresh Water	Flushing Water	
	Demand (m³/d)	Demand (m ³ /d)	
Original	64,498	45,491	
Newly-estimated	<mark>64,483</mark>	<mark>45,59</mark> 1	
Difference (Smaller/larger than the	15 (Smaller)	100 (Larger)	
original value)			
Overall demand	<mark>64,483</mark>	<mark>45,59</mark> 1	
Overall percentage change (%)(1)	<mark>-0.02%</mark>	+0.22 <mark>%</mark>	

Note:

- (1) Positive sign denotes increase, whereas negative sign denotes reduction.
- 8.3.3 For the service reservoir, a new Siu Ho Wan Fresh Water Service Reservoir is proposed to serve as fresh water supply of Tung Chung West and Tung Chung East Areas. Also, an existing Tung Chung Salt Water Service Reservoir is used to serve as flushing water supply of the above two areas. The newly estimated MDD for both Fresh Water and Salt Water services will not exceed the current proposed capacity of Siu Ho Wan Fresh Water Service Reservoir (i.e. 64,600 m3) and Tung Chung Salt Water Service Reservoir (i.e. 11,500 m3) and thus no insurmountable technical problem shall be induced from water supply perspective and the capacity of the planned salt water pumping station.
- 8.4 Assessment Result
- 8.4.1 The proposed fresh water demands for the Subject Site is 394.73 m³/d.
- 8.4.2 The proposed flushing water demands for the Subject Site is 263.41 m³/d.
- 8.5 Impact on Original Design
- 8.5.1 According to the results in Table 8.3, the overall demand of fresh water and salt water is changed by -0.02% and +0.22% respectively. For salt water supply, there is a factor of additional 25% of MDD as safety margin in the design assumption from Annex C2 of AECOM report "Fresh and Salt Water Supply Review for Population Increase and Development Intensity CASE 2 Scenario 2B (Final) (Ref. PI2I-02)" (See Appendix D2). The newly estimated MDD for both Fresh Water and Salt Water services will not exceed the current proposed capacity of Siu Ho Wan Fresh Water Service Reservoir (64,600 m3) and Tung Chung Salt Water Service Reservoir (i.e. II,500 m3) and thus no insurmountable technical problem shall be induced from the capacity of the planned water services facilities.



9.0 **Summary & Conclusion**

- 9.1.1 The main objective of this WWIA study is to evaluate the impact of the estimated fresh water and flush water demands of Tung Chung 109 to the newly-proposed Siu Ho Wan Fresh Water Service Reservoir and existing Tung Chung Salt Water Service Reservoir.
- The mean daily demand (MDD) on fresh water would be 1015.02 m³/d (Area 103) and 667.34 m³/d (Area 109) respectively. According to the capacity of the proposed Siu Ho Wan Fresh Water Service Reservoir (64,600 m³), the newly-estimated total water demand including that of the Subject Site (i.e. 64,483 m³) is decreased by -0.02% of than that of the original value. The total fresh water demand including that of the Subject Site is well within the original design and thus no insurmountable technical problem shall be induced from the capacity of the planned fresh water services facilities.
- 9.1.3 The MDD on flushing water would be 394.73 m³/d (Area 103) and 263.41 m³/d (Area 109) respectively. According to the proposed capacity of (46,000 m³), the newly-estimated total water demand including that of the Subject Site (i.e. 45,591 m³) is increased by +0.22% of than that of the original value. The newly estimated MDD for Salt Water services will slightly exceed the current proposed capacity of and Tung Chung Salt Water Service Reservoir (i.e. 11,500 m³), which can be catered a factor of additional 25% of MDD as safety margin in the design assumption, and thus no insurmountable technical problem shall be induced from the capacity of the planned salt water pumping station.
- 9.1.4 It is proposed to serve the Subject Site by using the connection points which are subject to the final design at detail design stage. No new fresh and salt distribution mains were proposed.
- 9.1.5 To monitor the water usage and carry out leakage detection, Automatic Meter Reading (AMR) system could be included in the detailed design of the buildings blocks. The standard and requirements shall comply with WSD's standards.

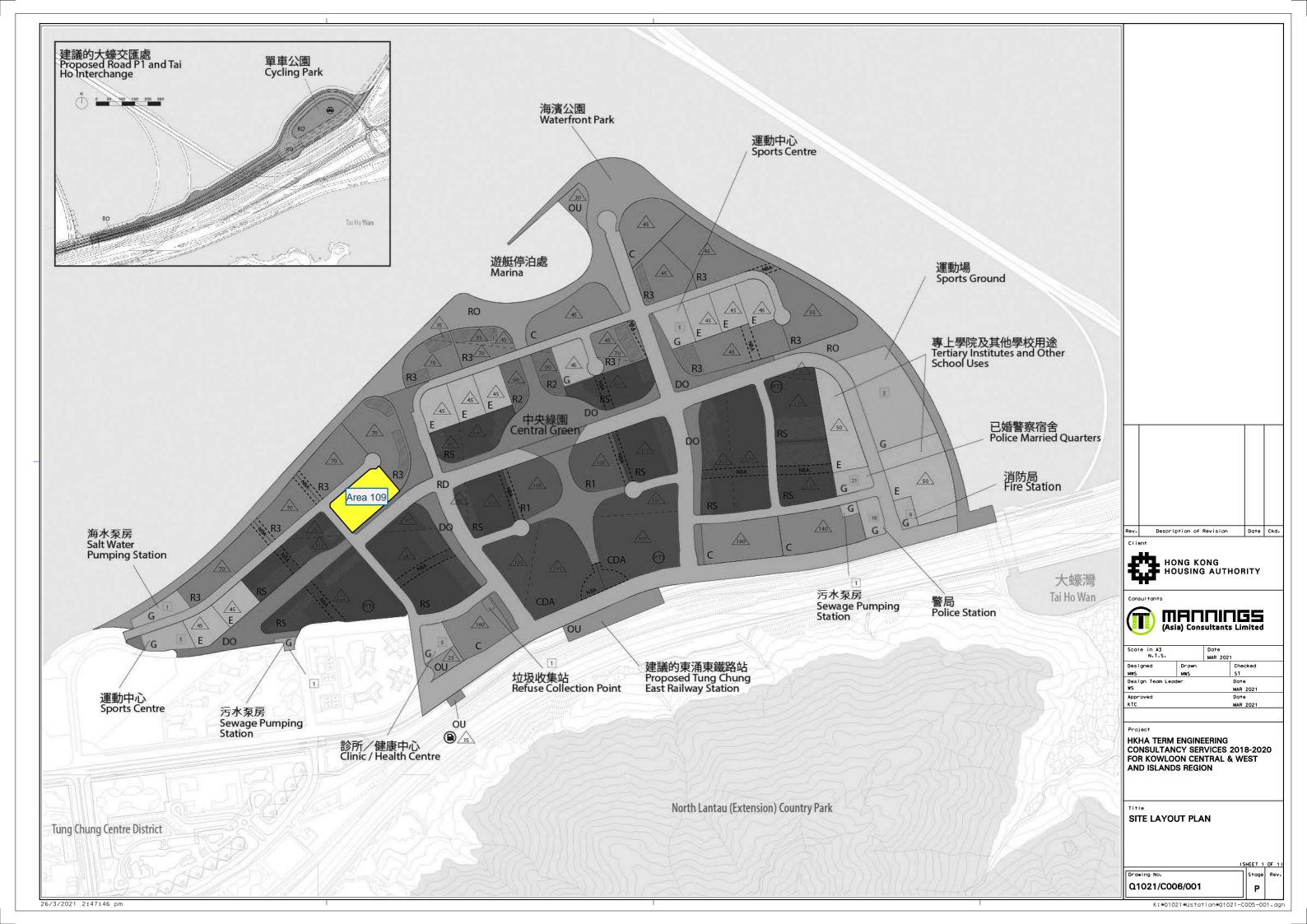
10.0 References

- (1) Departmental Instruction No. 1309, Water Supplied Department, HKSAR
- (2)Fresh and Salt Water Supply Review for Population Increase and Development Intensity -CASE 2 Scenario 2B (Final) (Ref. PI21-02), AECOM Asia Company Limited, HKSAR





APPENDIX A SITE LAYOUT PLAN

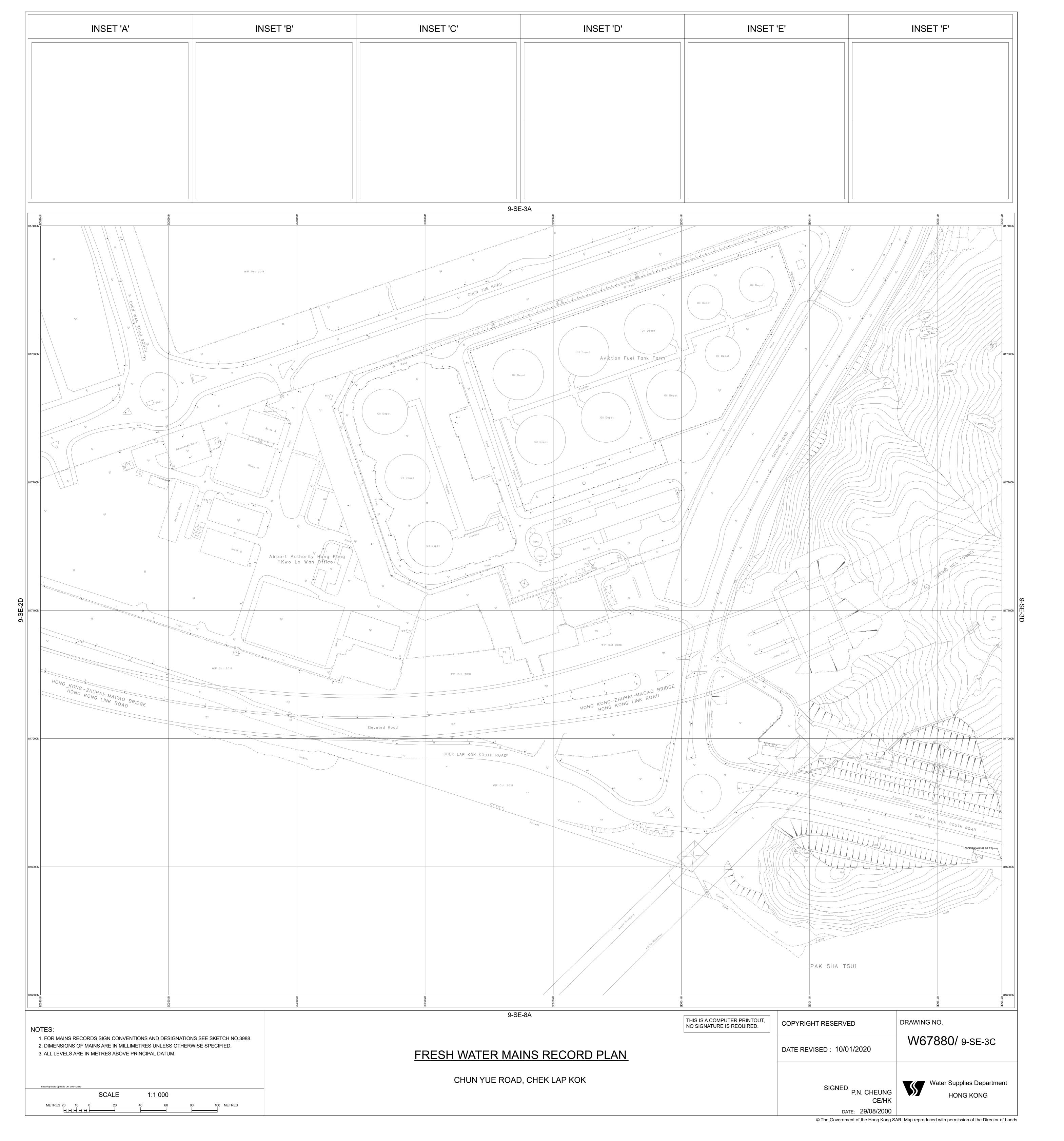




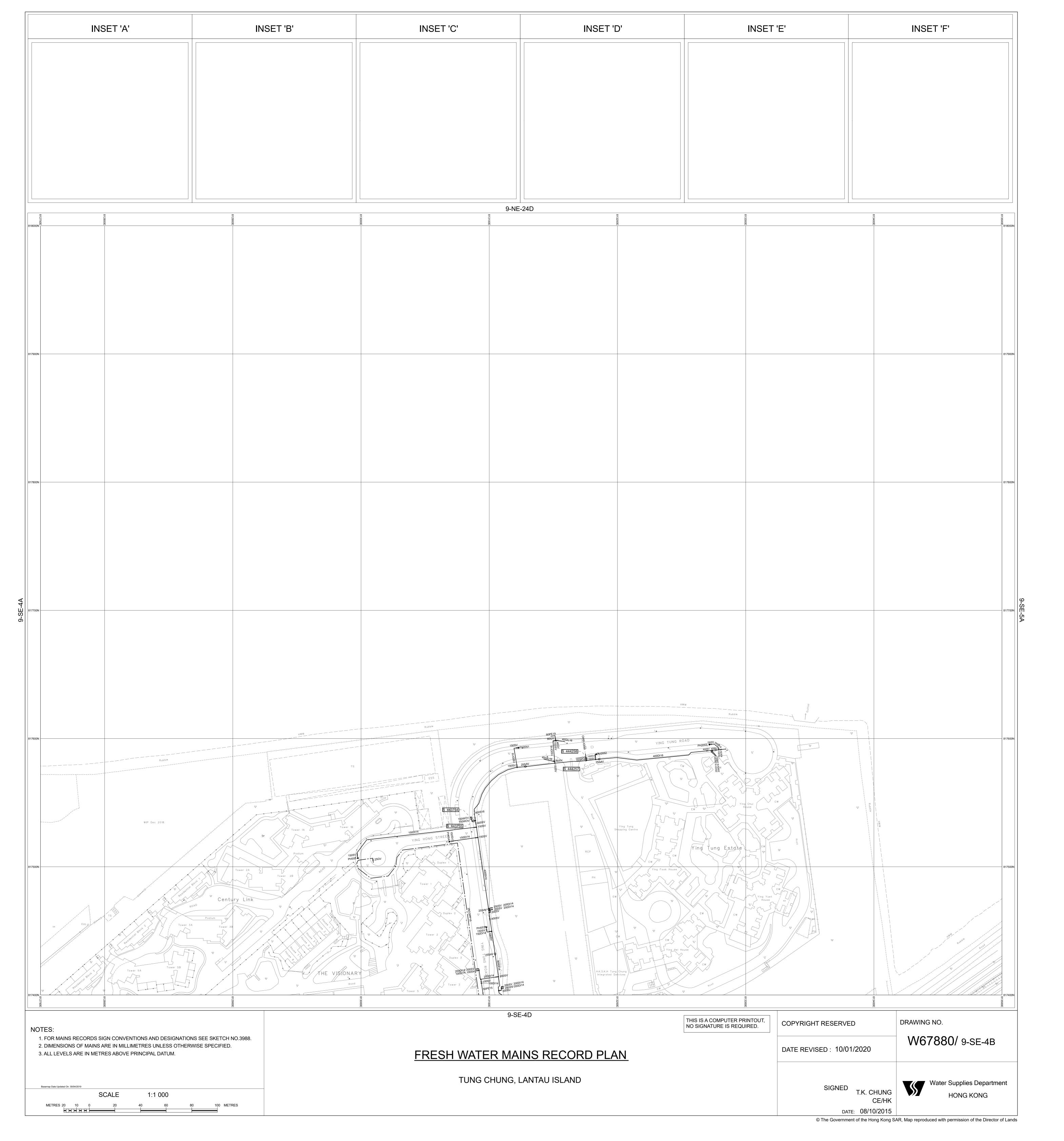


APPENDIX B

Water Mains Record (Fresh Water)

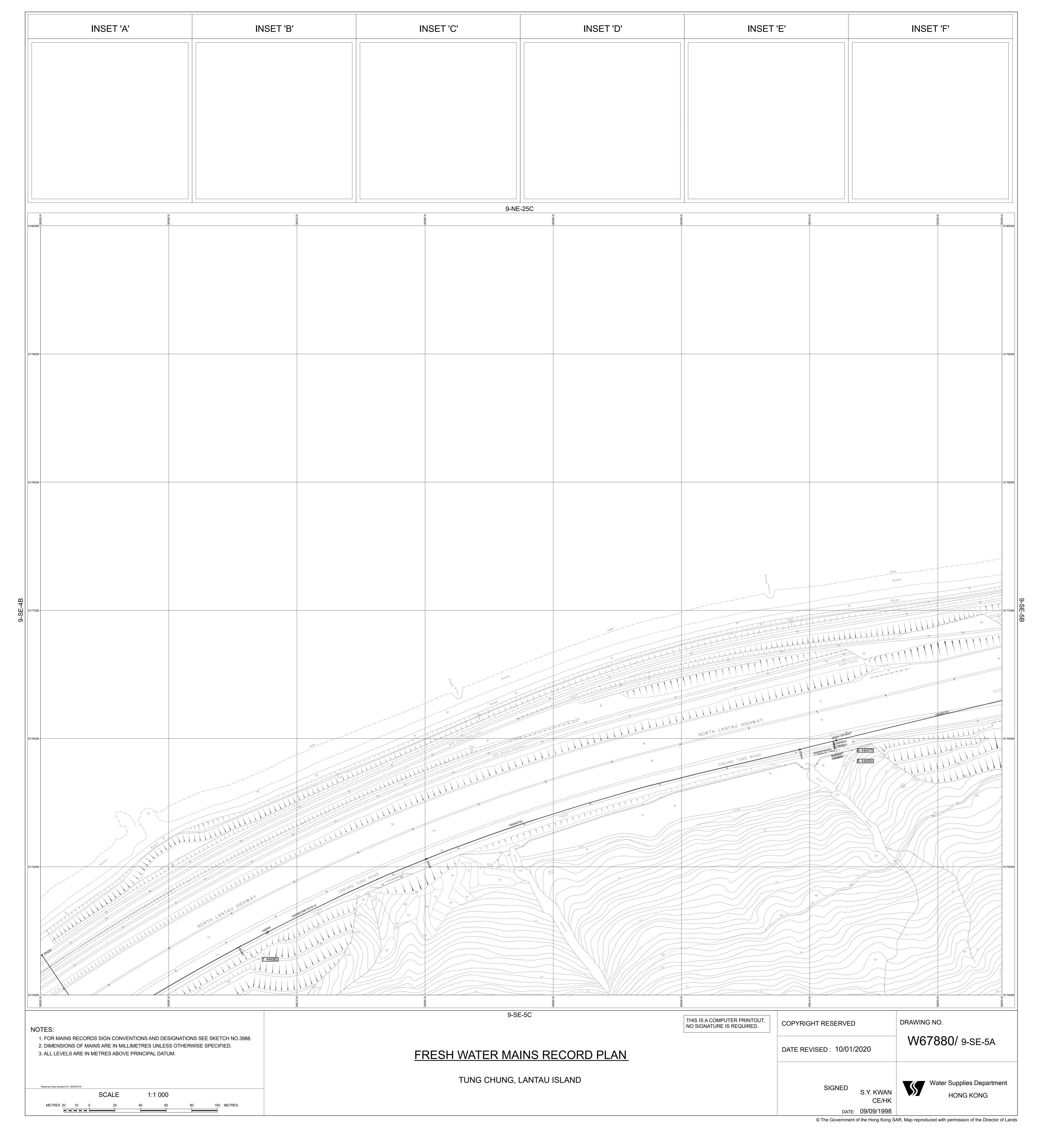


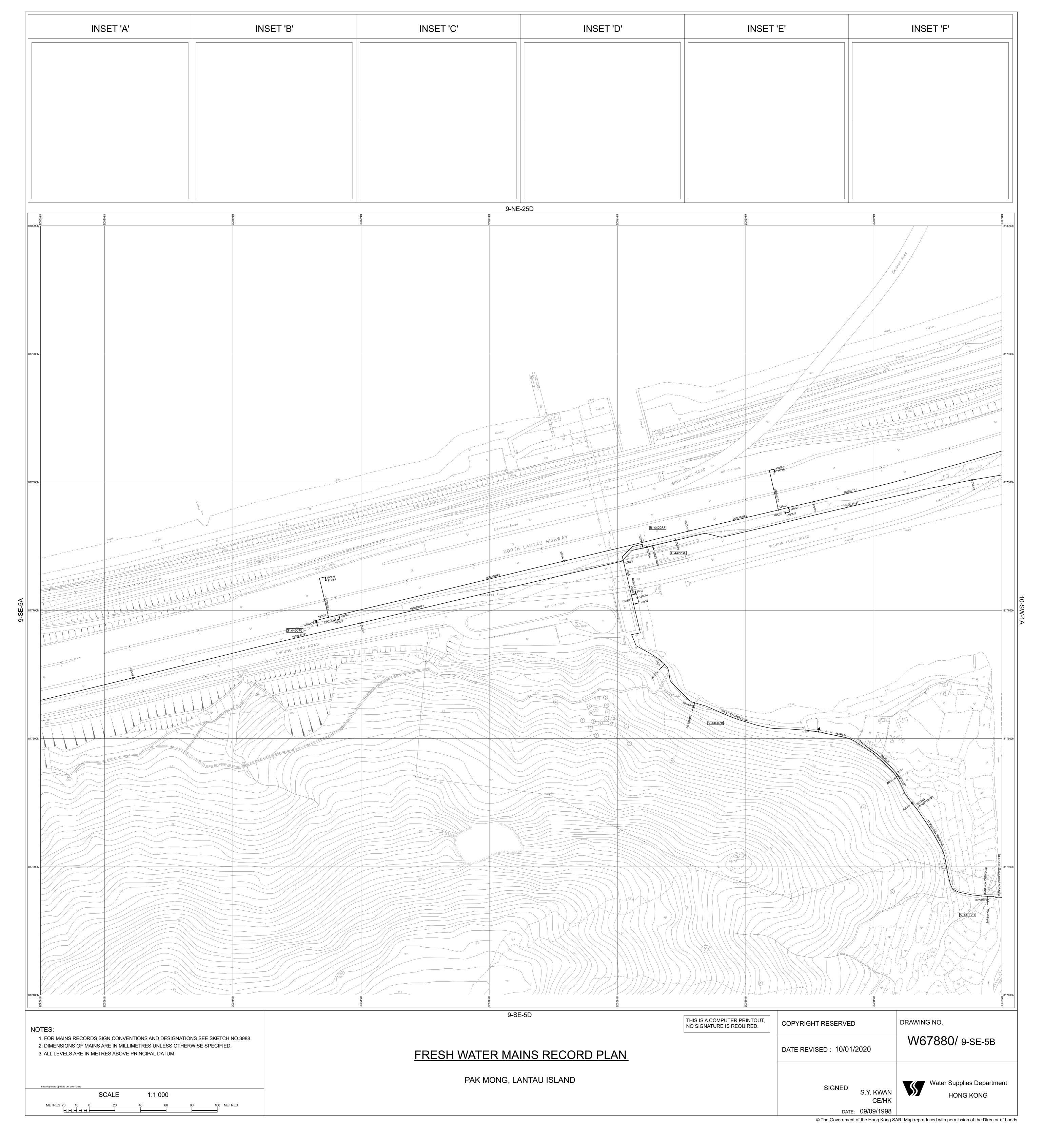


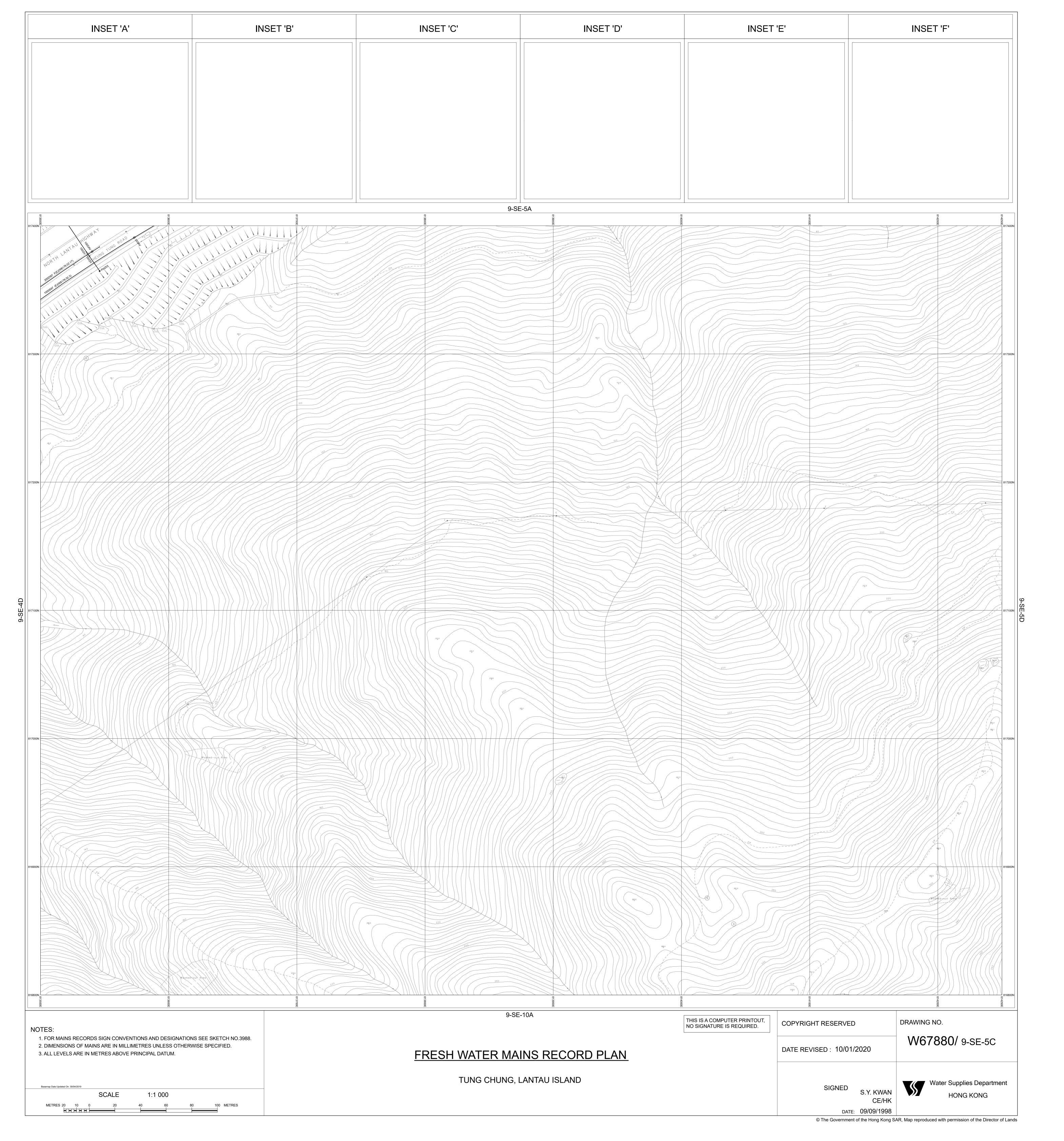


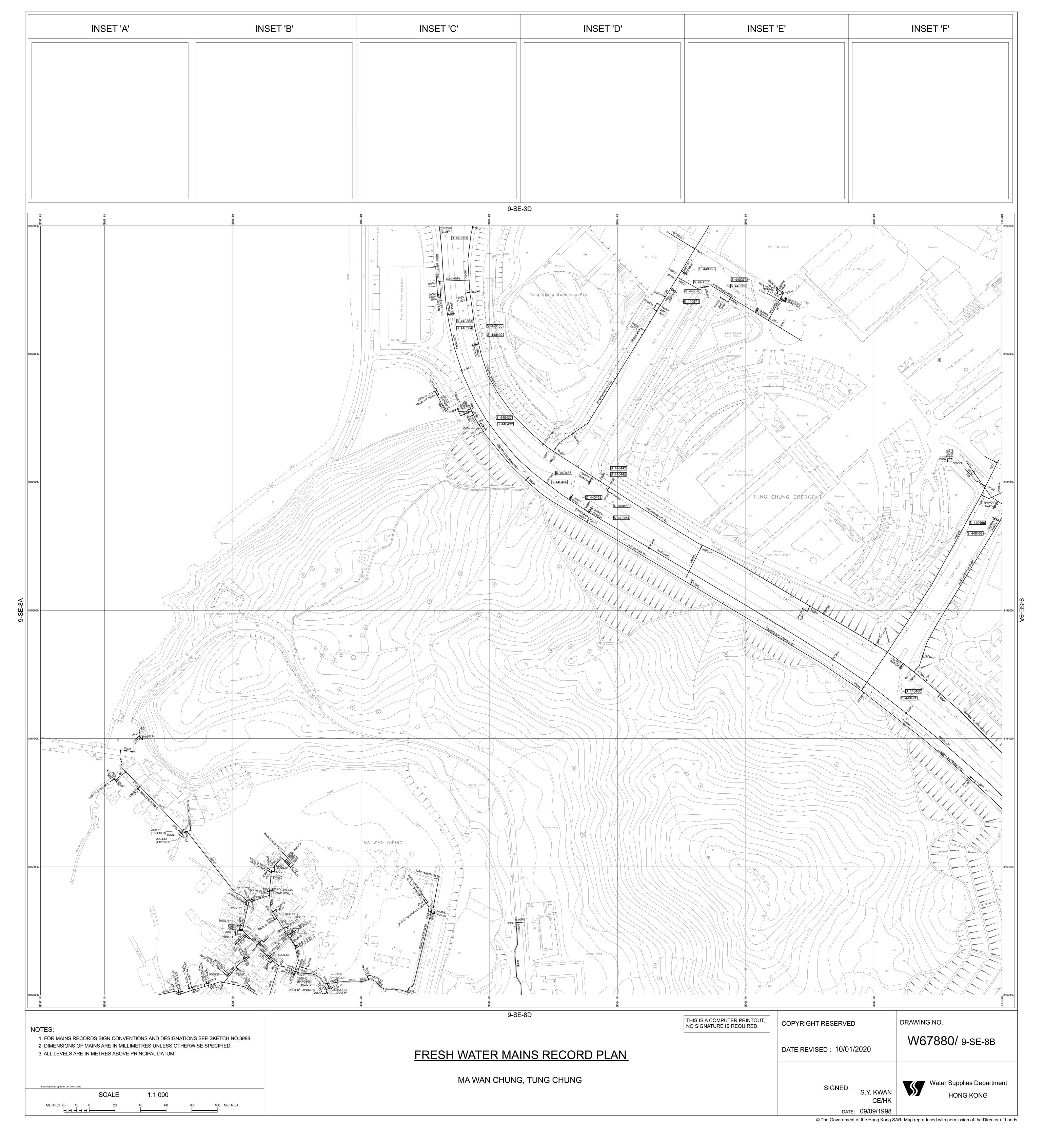


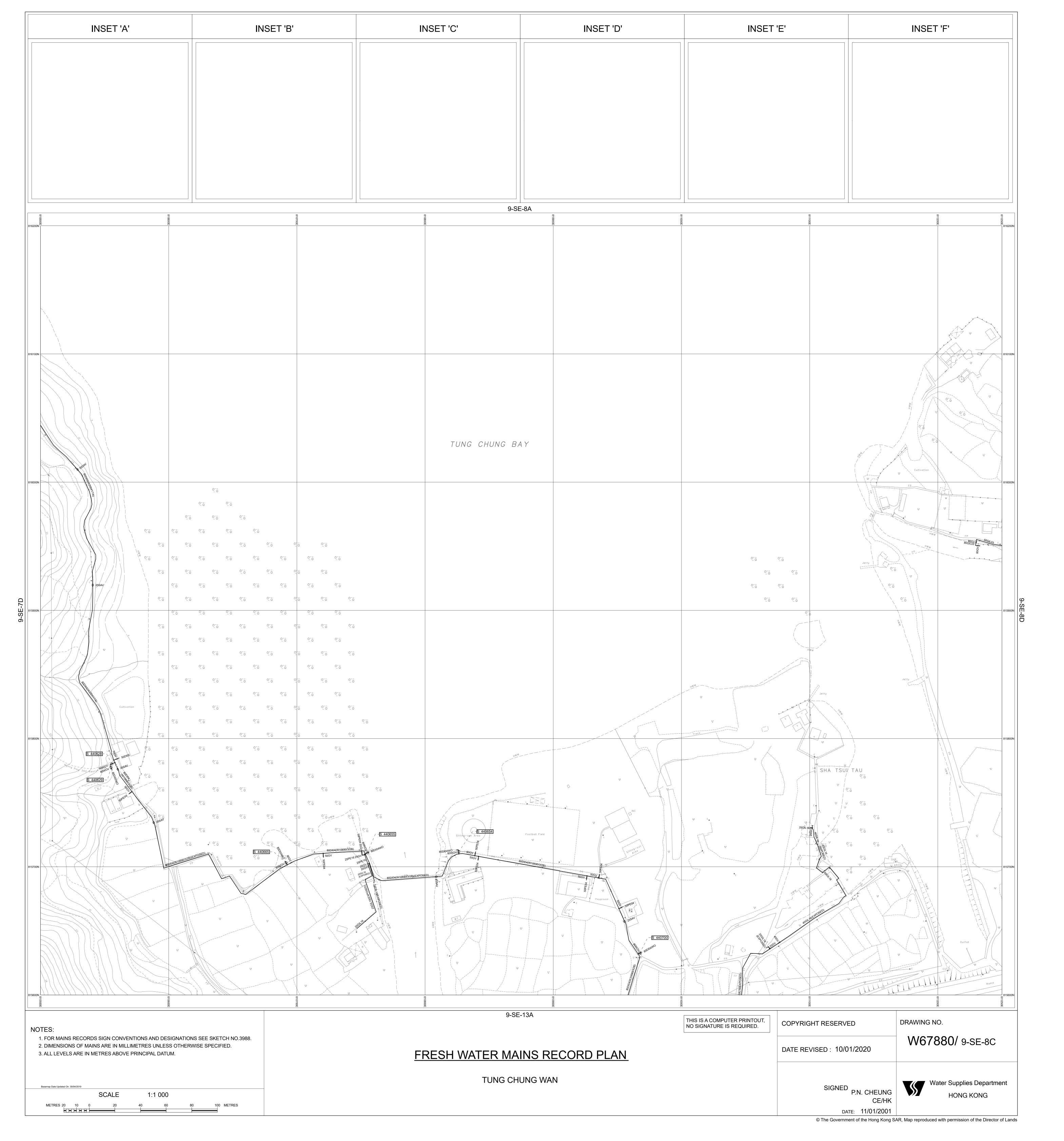


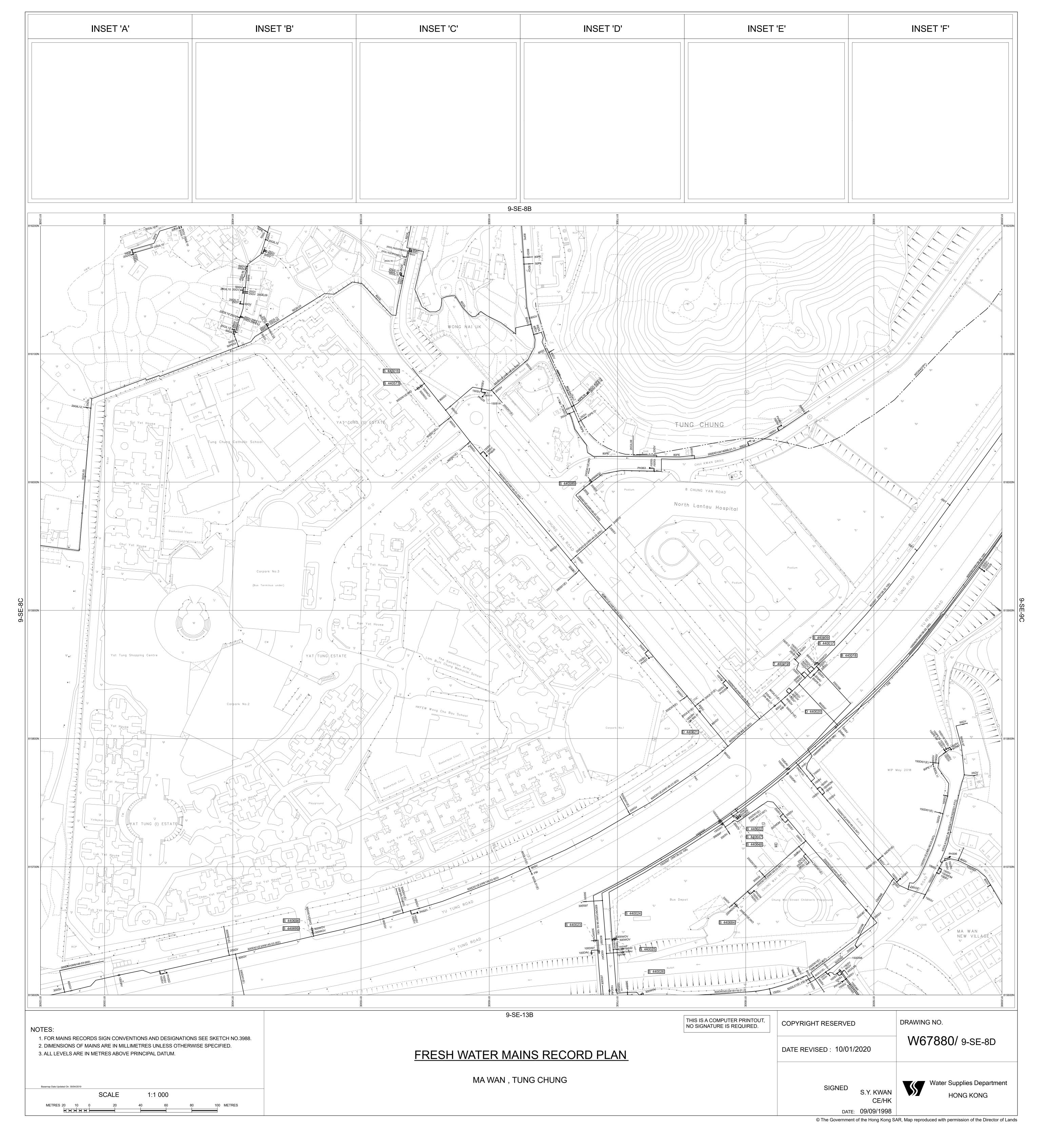


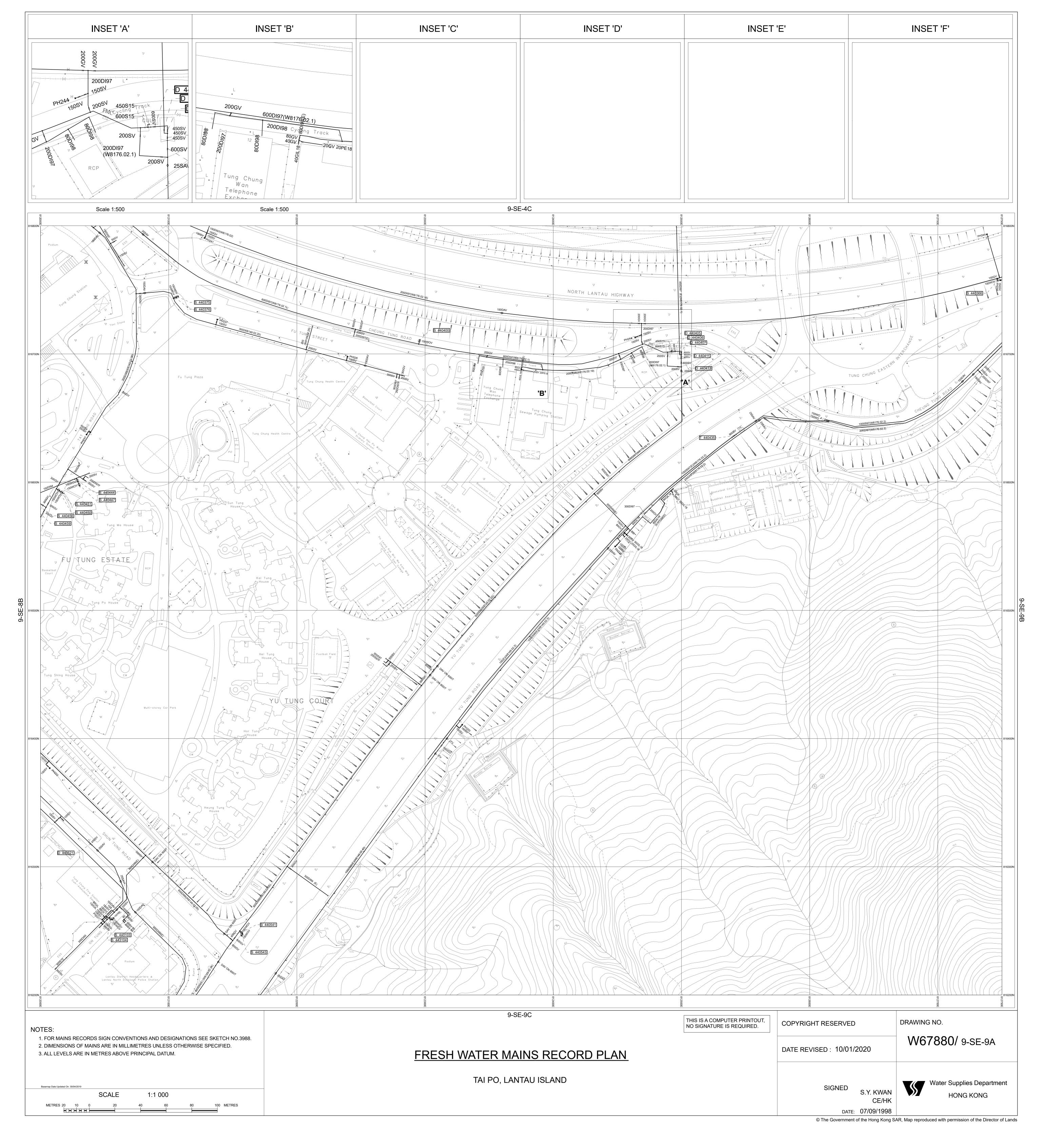


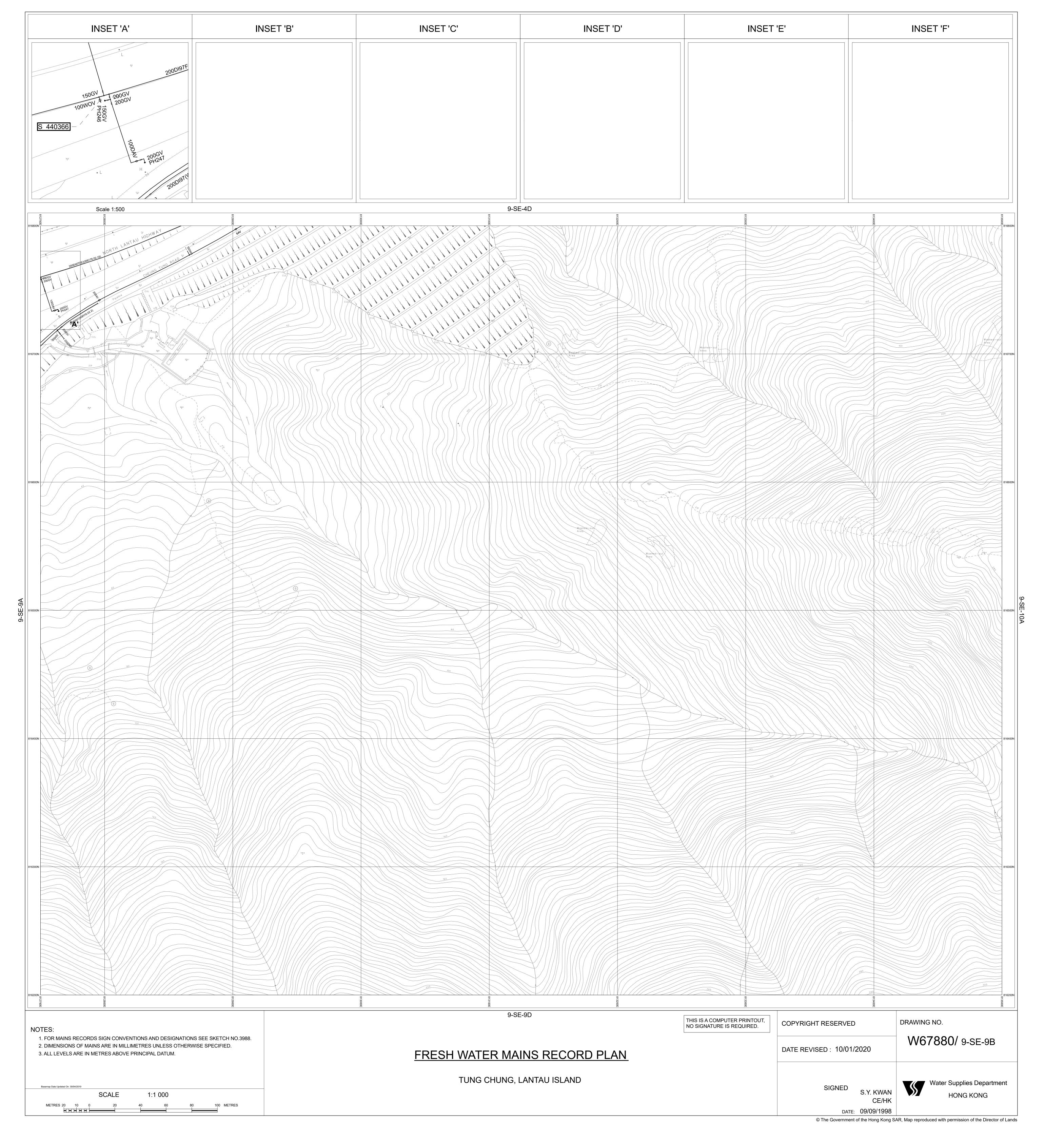


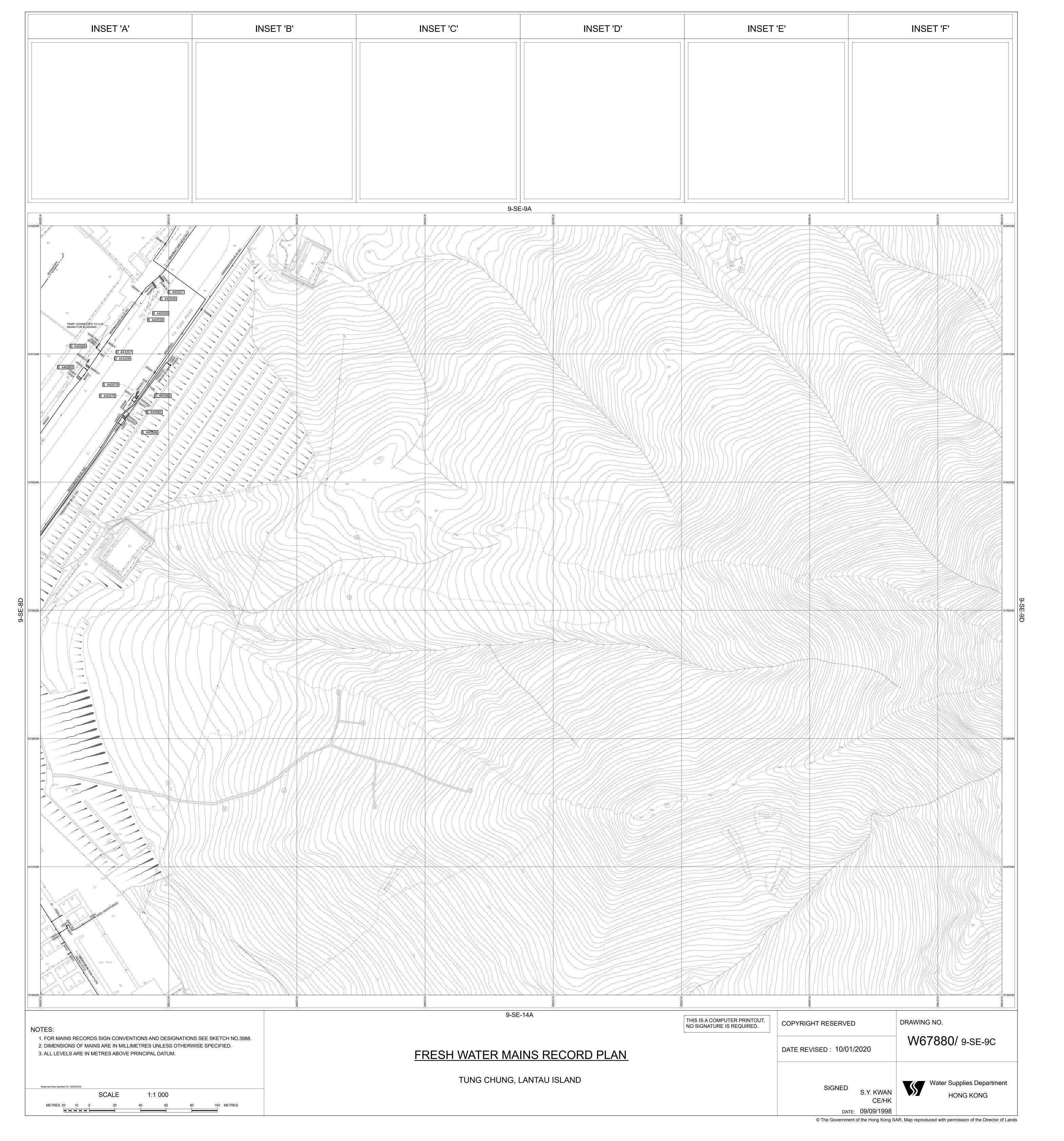


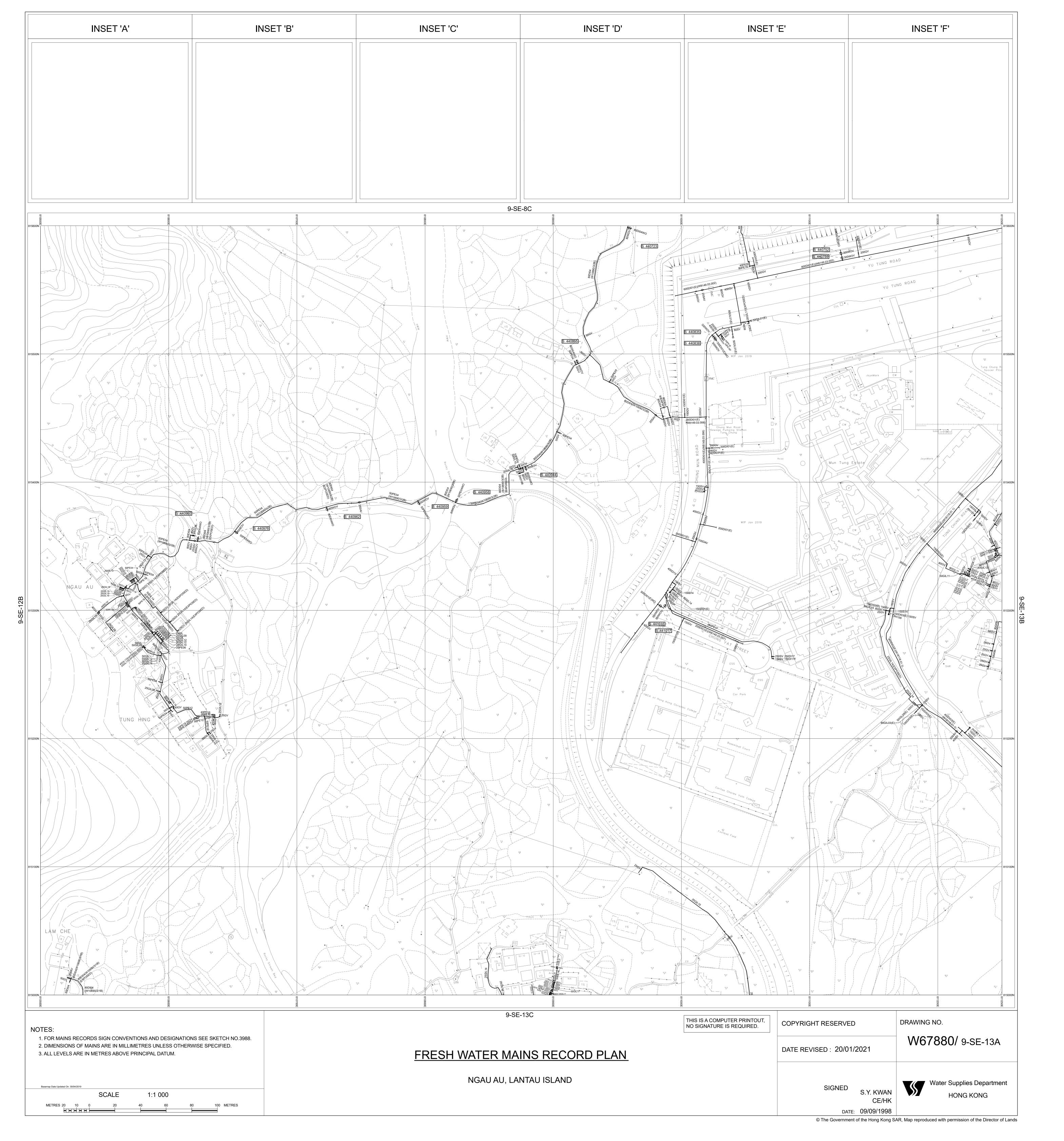


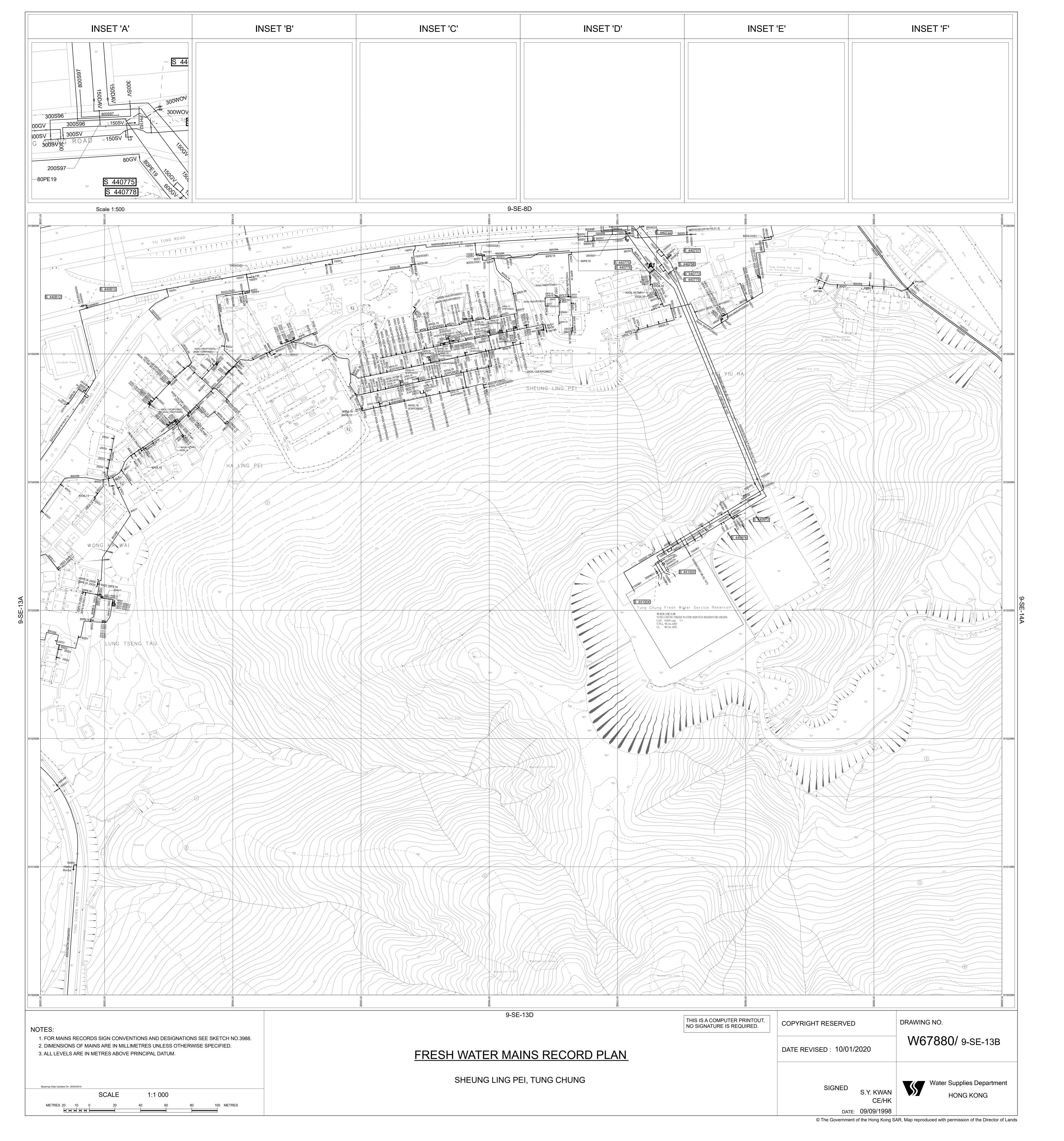


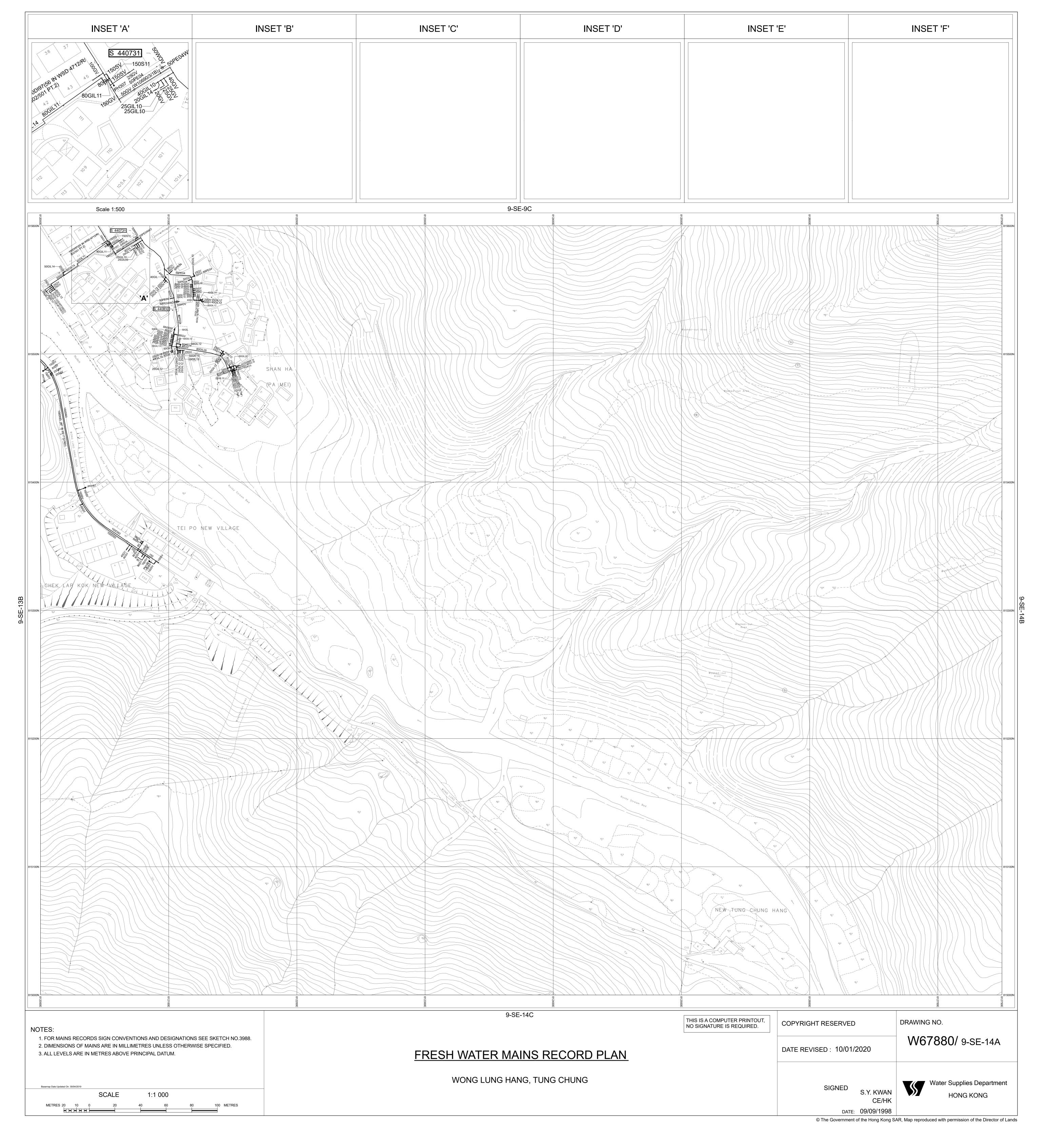


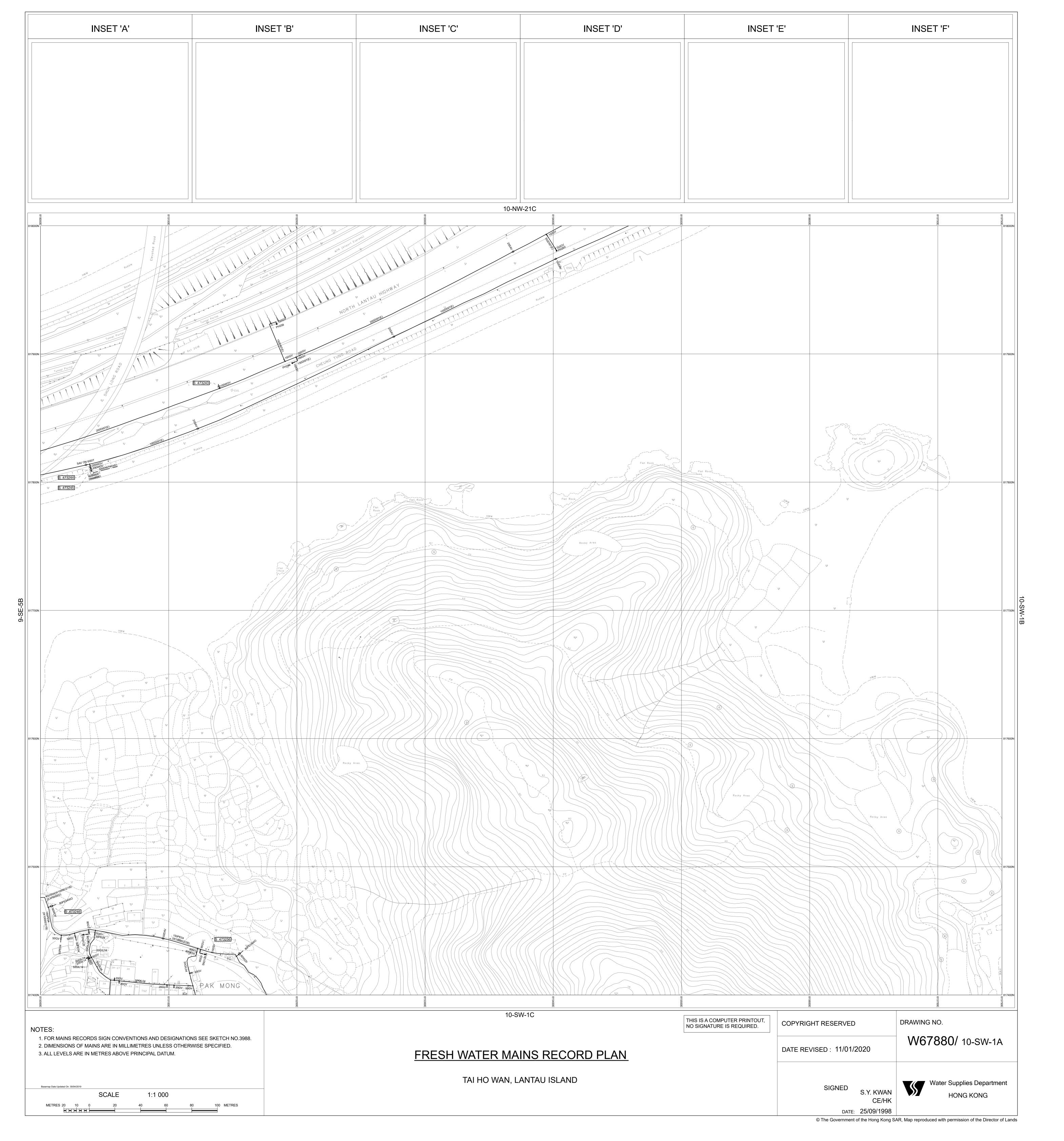


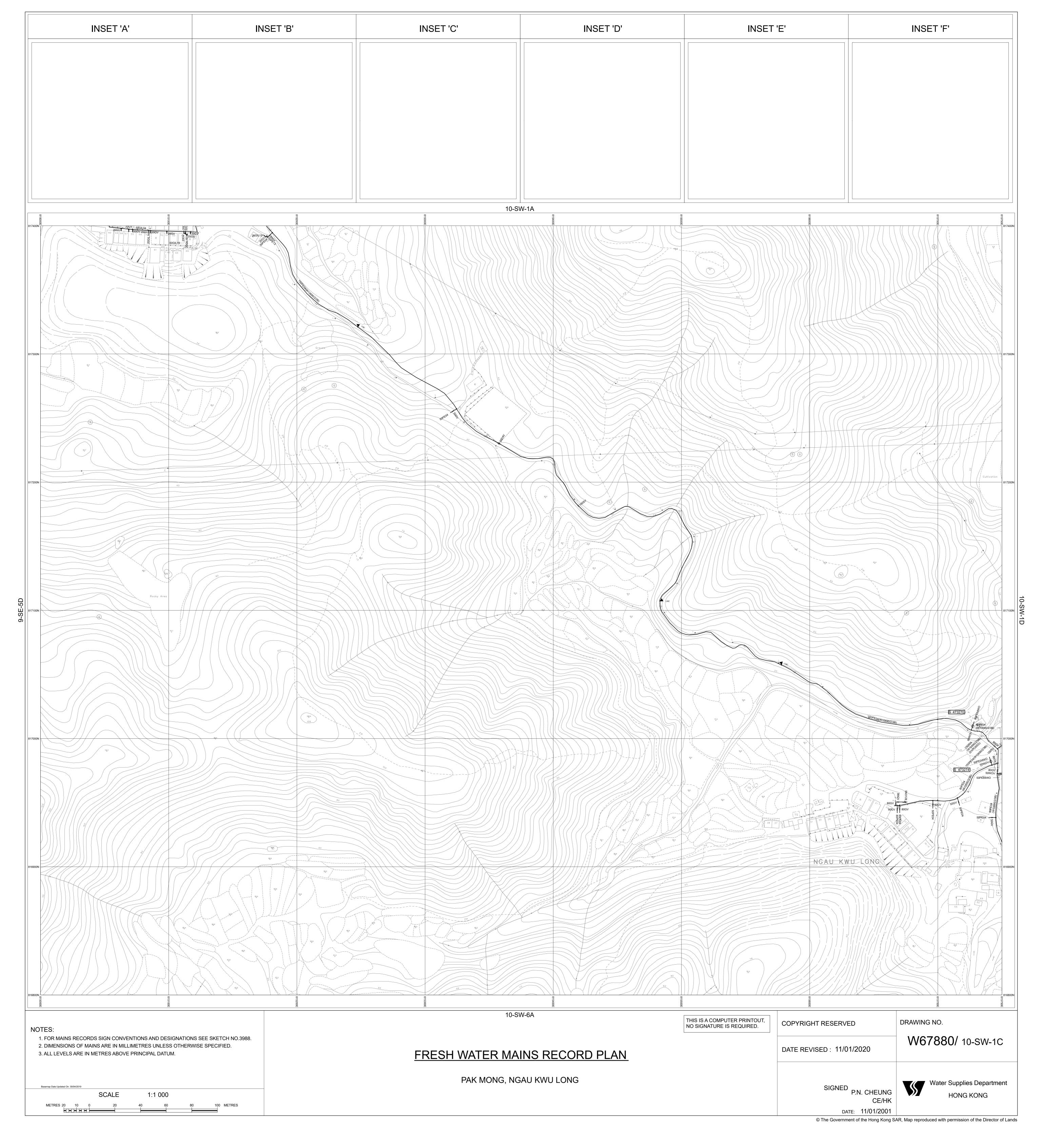












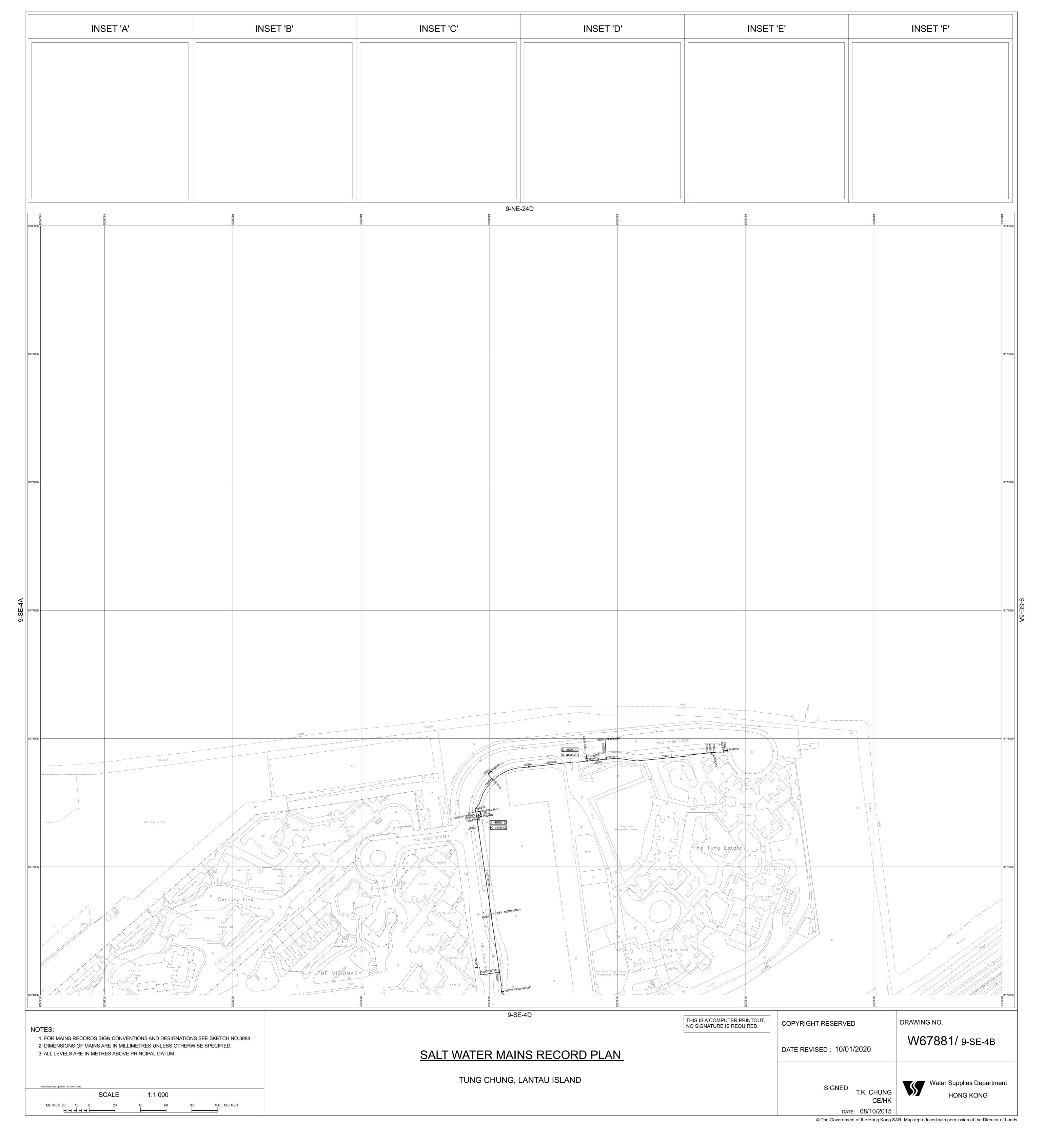




APPENDIX C

Water Mains Record (Salt Water)



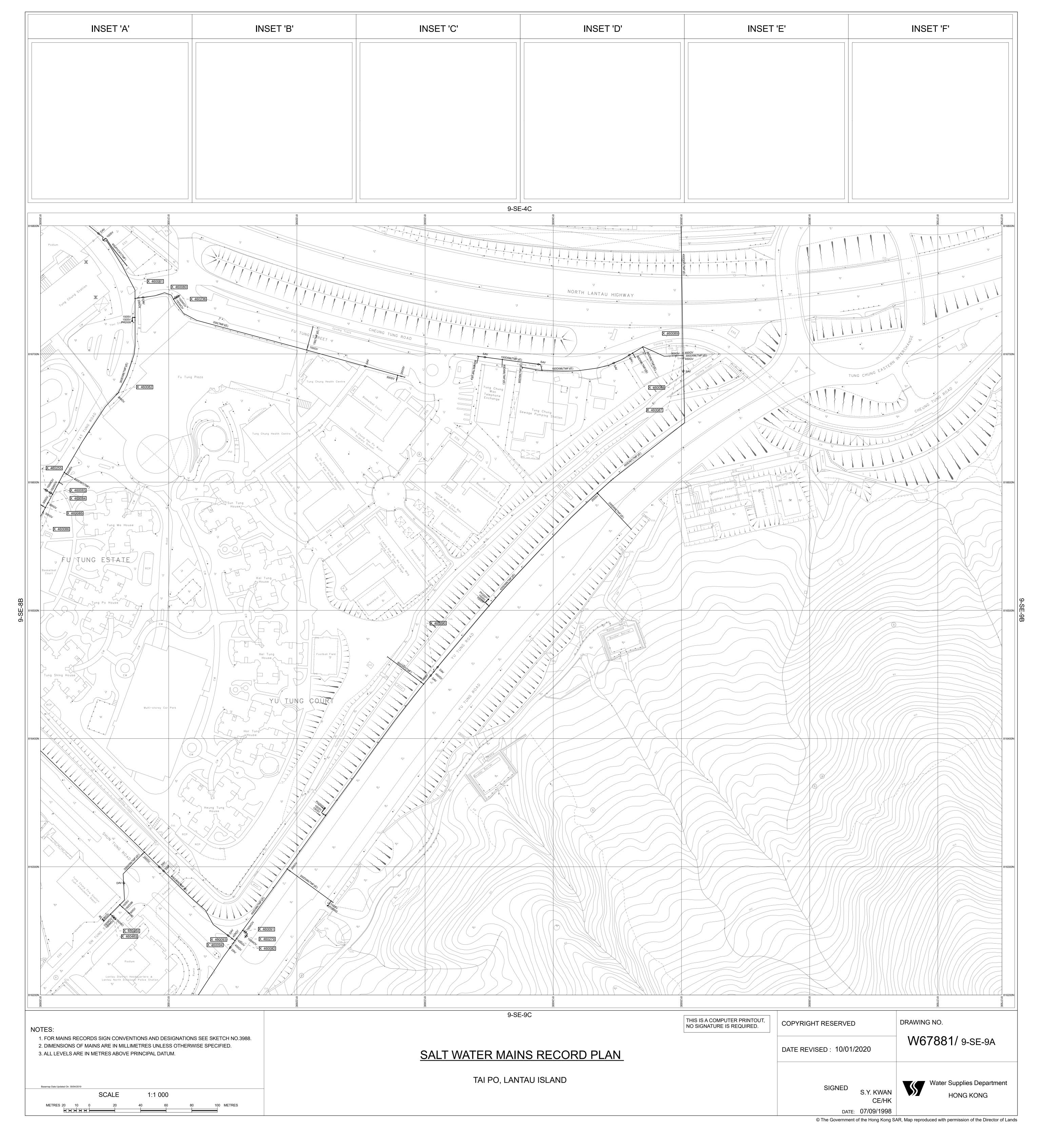


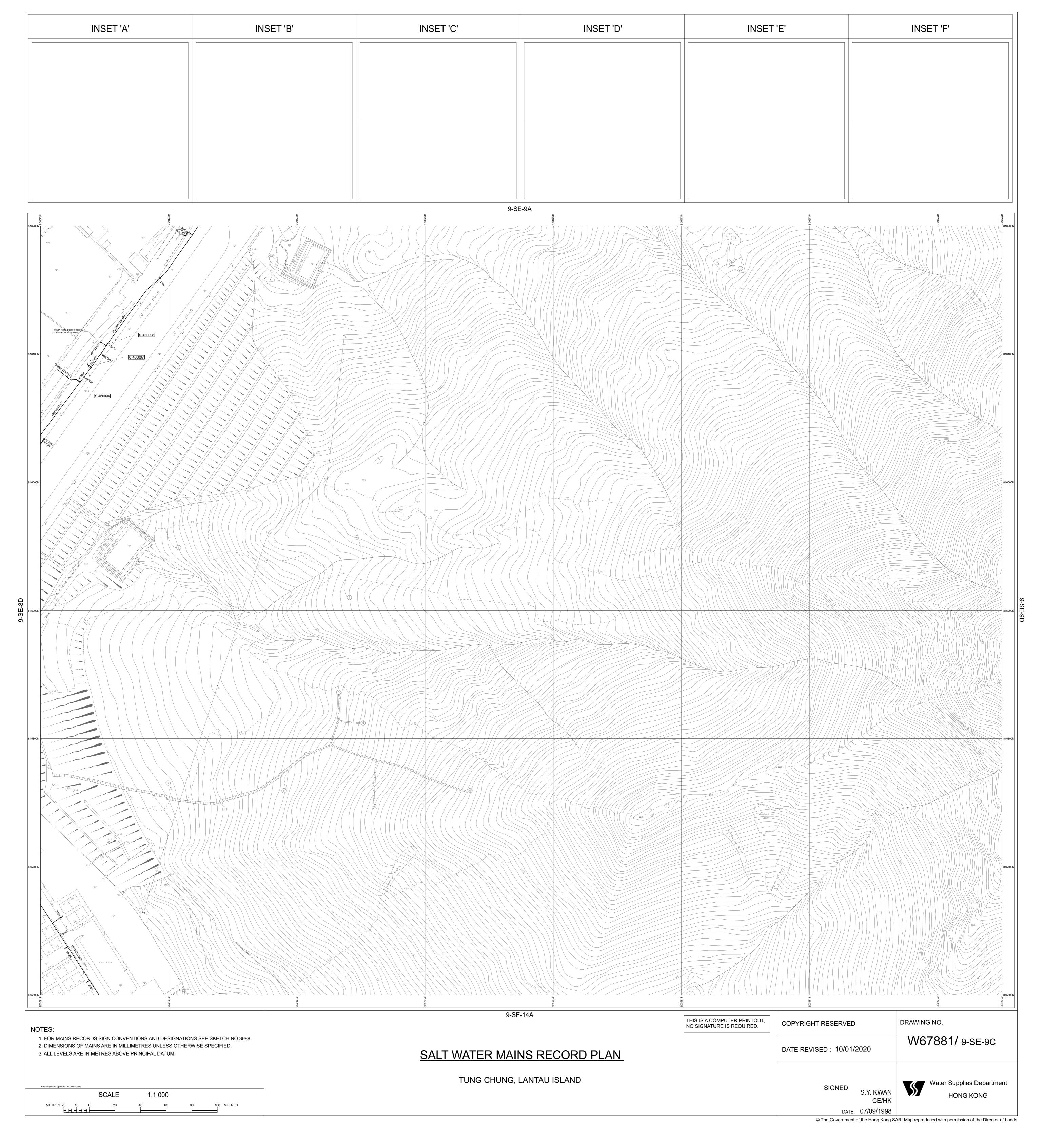


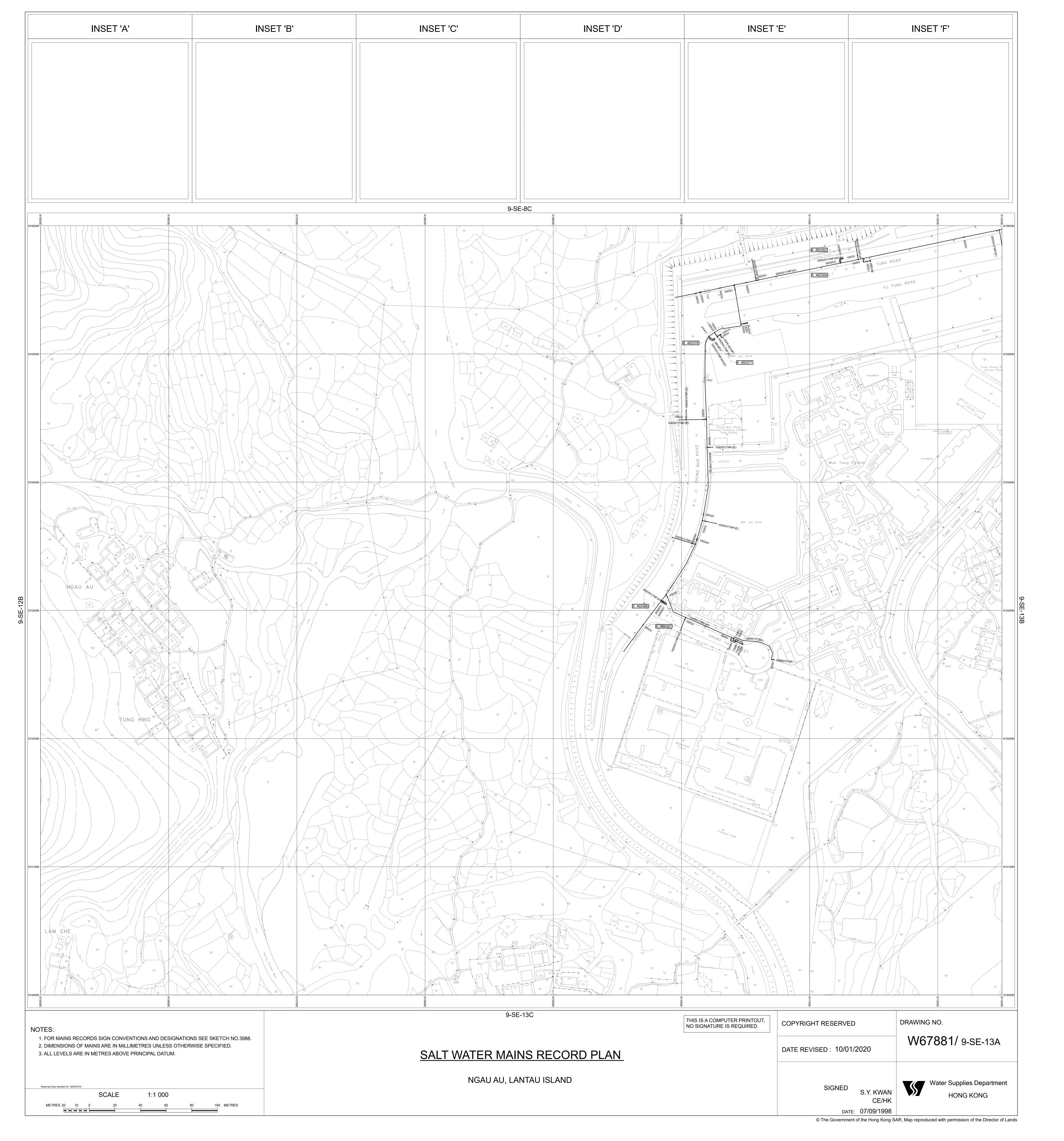


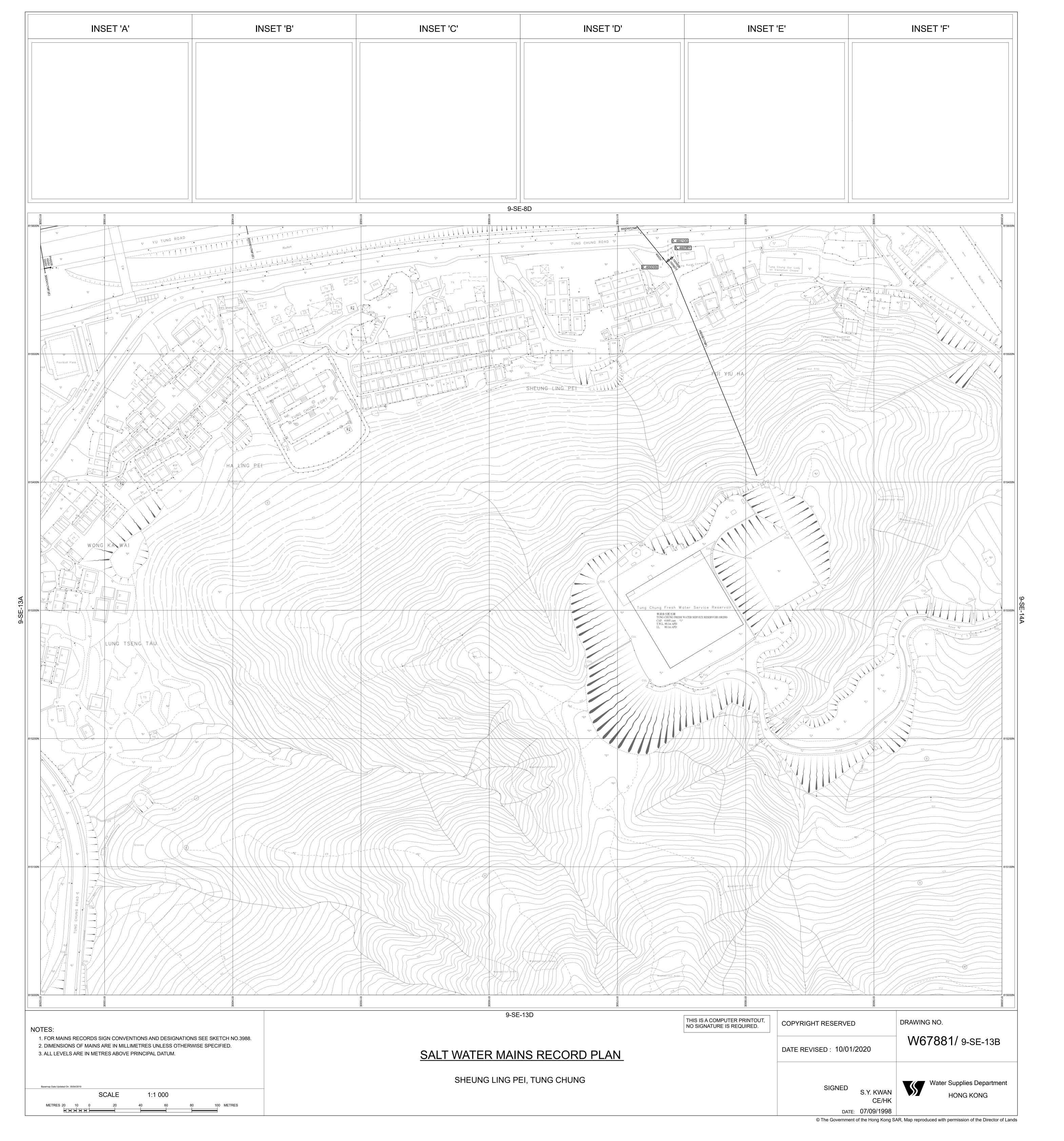


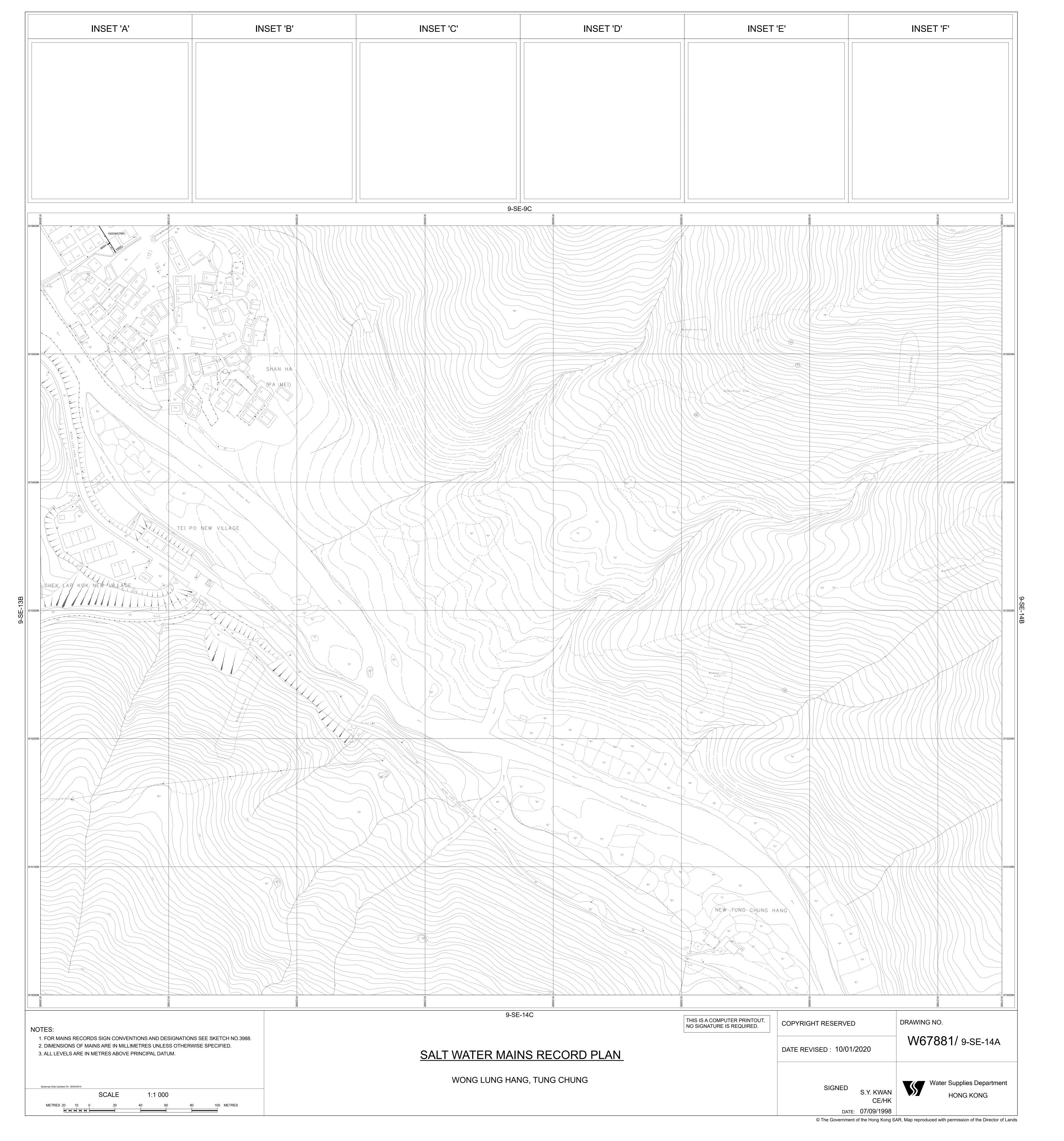
















HKHA Term Engineering Consultancy Services 2018-2020

APPENDIX DI

Annex B2 of AECOM Report "Fresh and Salt Water Supply Review for Population Increase and Development Intensity – CASE 2 Scenario 2A (Draft)"

Summary of Water Demand Estimate for Year 2031

183,799 Total Planned Population (TCE + TCW), excluding existing villages (population 5,298)

Estimated Water Demand of Tung Chung East D	avalanment - Based on CEDD's amail regard	dina nonulation increase Case 2 on 12 No	wombor 2010

Location	Population (Head)	Fresh Water	FW Demand	Salt Water	SW Demand	Remarks
	(,	Unit Demand	(m3/d)	Unit Demand	(m3/d)	
		J 2 G	(,,	omi Demana	(, a)	
Comprehensive Development (CDA)	18,305	0.230	4,210	0.070	1,281	FW/SW Unit Demand based on R1 (All areas), WSD DI 1309, Table 1
Residential (R1)	7,050	0.230	1,622	0.070	494	FW/SW Unit Demand refer to WSD DI 1309, Table 1
Residential (R2)	2,030	0.300	609	0.070	142	FW/SW Unit Demand refer to WSD DI 1309, Table 1
Residential (R3)	12,759	0.390	4,976	0.070	893	FW/SW Unit Demand refer to WSD DI 1309, Table 1
Service Trades for Above Residential Types	40,144	0.040	1,864	-	-	Unit Demand refer to WSD DI 1309, Clause 3 and Table 2. Fresh water demand has been proportionately increased by 16.07%
						due to the increase in GFA for Service Trades from C2S2A to C2S2B.
Residential (RS)	105,583	0.140	14,782	0.070	7,391	FW/SW Unit Demand based on Government Housing Estate (All areas), WSD DI 1309, Table 1
Service Trades for RS Types	105,583	0.040	4,902	-	-	Unit Demand refer to WSD DI 1309, Clause 3 and Table 2. Fresh water demand has been proportionately increased by 16.07%
						due to the increase in GFA for Service Trades from C2S2A to C2S2B.
Sub-total (Residential)	145,727		32,964		10,201	Sum of all residential types (sum of demand = domestic demand + service trades)
Location	Unit for Demand	Fresh Water	FW Demand	Salt Water	SW Demand	Remarks
	Factor	Unit Demand	(m3/d)	Unit Demand	(m3/d)	
School (SCH)	11,810 heads		-	0.025	295	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
Clinic (HSP)	801 HSP beds		-	0.295	236	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
General Government/Institution/Community (GIC)	145,487 m2		-	0.0200	2,910	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
Office (O)	475,447 m2	0.040	19,018	0.020	9,509	FW and SW unit demands were based on Table 1 of WSD's Planning Report No. 6/2001 (also SW Unit Demand refers to WSIA
						report under CE 32/2011(CE))
Hotel (HTL)	1,000 HTL rooms	1.200	1,200	0.140	140	GFA is 48,573 sqm. The room number is assumed to be 1000 (Section 7.1.4 of RODP refers). FW/SW Unit Demand refer to WSIA
						report under CE 32/2011(CE), with unit of m3/room/day.
Retail (RT)	44.000					
	11,989 heads		-	0.050	599	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
Commercial (C)	11,989 neads 41,919 m2		-	0.050 0.020		FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE) FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
Commercial (C) Other - District Cooling System (DCS) Plant	,	-	- - 9			
	41,919 m2	-	- - 9		838	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
	41,919 m2	-	- - 9		838	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE) Ref. (15) in WSD/M/SP 3066/165/5/20 Pt.1 requesting for fresh water of 9m3/day for the DCS in this project. No request has
Other - District Cooling System (DCS) Plant	41,919 m2 N/A	-	- - 9 60 45		838	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE) Ref. (15) in WSD/M/SP 3066/165/5/20 Pt.1 requesting for fresh water of 9m3/day for the DCS in this project. No request has been made for salt water for DCS plant.
Other - District Cooling System (DCS) Plant Tung Chung East MTR Station	41,919 m2 N/A	-			838	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE) Ref. (15) in WSD/M/SP 3066/165/5/20 Pt.1 requesting for fresh water of 9m3/day for the DCS in this project. No request has been made for salt water for DCS plant. Mean daily demand for fresh and salt water provided by email on 22 May 2021 by MTR.

Estimated Water Demand of Tung Chung West Development - Based on TCW latest information via CEDD's email dated 6 January 2020

Location	Population (Head)	Fresh Water	FW Demand	Salt Water	SW Demand	Remarks
		Unit Demand	(m3/d)	Unit Demand	(m3/d)	
Residential (R3)	3,738	0.390	1,458	0.070	262	
Residential (R4)	2,880	0.390	1,123	0.070	202	FW/SW Unit Demand refer to WSD DI 1309, Table 1
Service Trades for Above Residential Types	6,618	0.040	265	1	-	Unit Demand refer to WSD DI 1309, Clause 3 and Table 2
Residential (RS)	31,454	0.140	4,404	0.070	2,202	FW/SW Unit Demand based on Government Housing Estate (All areas), WSD DI 1309, Table 1
Service Trades for RS Types	31,454	0.040	1,258	-	-	Unit Demand refer to WSD DI 1309, Clause 3 and Table 2
Sub-total (Residential)	38,072		8,507		2,665	Sum of all residential types (excluding existing villages) (sum of demand = domestic demand + service trades)
Village (Traditional Type)	5,298	0.185	980	-	-	FW to supply flushing, FW Unit Demand (fresh + flushing) refer to WSD DI 1309, Table 1
Location	Unit for Demand	Fresh Water	FW Demand	Salt Water	SW Demand	Remarks
	Factor	Unit Demand	(m3/d)	Unit Demand	(m3/d)	
School (SCH)	445 heads	-		0.025	11	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
General Government/Institution/Community (GIC)	28,534 m2	-		0.020	571	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
Landscape (Irrigation for Amenity Area)	10,139 m2	0.010	101	-	112	FW Unit Demand per planting area refers to WSIA report under CE 32/2011(CE). SW demand refers to estimate of TCW Project.
Retail (RT)	919 heads	-	-	0.050	46	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
Commercial (C)	32,343 m2	-	-	0.020	647	FW demand included in Service Trades, SW Unit Demand refers to WSIA report under CE 32/2011(CE)
Sub-total (Non-residential)			101		1,387	





HKHA Term Engineering Consultancy Services 2018-2020

APPENDIX D2

Annex C2 of AECOM Report "Fresh and Salt Water Supply Review for Population Increase and Development Intensity – CASE 2 Scenario 2A (Draft)"

Capacity assessment of proposed FWSR & SWSR

Intensification Case 2 Scenario 2B

Capacity of the proposed Siu Ho Wan Fresh Water Service Reservoir (SHW FWSR)

	Estimated sh	Total	
1. Estimated Fresh Water Mean Daily Demands (m3/d)	TCE	TCW	(TCE + TCW)
Housing MDD from Private Housing only	13,280	2,846	16,126
10% Contingency for H	ousing MDD, from	Private Housing only	1,613
Total MDD	53,296	9,589	62,885

Design MDD for sizing FWSR = Total MDD + Contingency for Housing MDD =

64,498 m3/d

Reference
2. Sizing factors for SHW FWSR:

(a) interconnected supply zone
75% x Design MDD WSD DI1309
(b) primary storage for Lantau
20% x Design MDD WSD PR 6/2001
(c) to supply critical consumers
5% x Design MDD WSD DI1309

Total 100% x Design MDD

3. Required capacity of SHW FWSR = 64,500 m3, $\approx 103\% \text{ x MDD}$

Details of the proposed SHW FWSR: (Design TWL increased by 0.6m based on Existing Design)

A. Invert Level (IL) = 70.00 mPD

B. Top Water Level (TWL) = 80.90 mPD

B. Top Water Level (TWL) = 80.90 mPD increased 0.6m C. Water Depth inside FWSR = 10.90 m increased 0.6m

D. Available footprint on site = 6,030 m2 E. Approximate footprint of internal walls and columns 100 m2 F. Approximate net volume of the proposed FWSR = 64,637 m3

Capacity of the proposed FWSR = 64,600 m3

Capacity of the proposed Tung Chung Salt Water Service Reservoir (TC SWSR)

Assumptions:-	Estimated sh	nown in Annex C2	(Input from CE 32		
1. Estimated Salt Water Demands (m3/d)	TCE	TCW	Existing TCNT	SHW Topside	Sum
Total MDD	24.735	4.052	13.105	3.600	45,491

(Assume TC SWSR to serve all supply zones including FSP and VSP system to enhance reliability)

Reference

2. Sizing factors for TC SWSR: (e) balancing tank 0.25 x MDD WSD DI1309

3. Required capacity of TC SWSR = 11,400 m3

Details of the proposed TC SWSR: (Existing Design)

1. Invert Level (IL) = 65.00 mPD
2. Top Water Level (TWL) = 75.00 mPD
3. Water Depth inside SWSR = 10.00 m
4. Available footprint on site = 1,500 m2
5. Approximate footprint of internal walls and columns 350 m2
6. Approximate net volume of the proposed SWSR = 11,500 m3

Capacity of the proposed SWSR = 11,500 m3 ok





HKHA Term Engineering Consultancy Services 2018-2020

APPENDIX E

Estimation of Water Demand of the Subject Site

MH MH		Waterworks Impact Assessment	Job No.		Q1021	Sheet No	O.	1	Rev.	0
	onsultants Limited	Tung Chung Area 103 and 109, Tung Chung	Dwg. Re	f.						
Job Title:	Agreement No.	Agreement No. CB20180310		c.						
	Term Engineering Consultancy Services 2018-2020									
	For Kowloon Ce	entral and West and Islands Region	Calc'd	KA	Chd.	.II.	Date		17/12/2021	

0. General

Reference

- 1. Departmental Instruction No. 1309, WSD
- 2. Hong Kong Planning Standards and Guidelines, PlanD
- 3. AECOM Report "Fresh and Salt Water Supply Review for Population Increase and Development Intensity CASE 2 Scenario 2B (Final)"
- 4. Housing in Figures 2020 Transport and Housing Bureau

1. Data Input

Summary of Development Parameters

Area	103	109	
Alea	Qty.	Qty.	Unit
1. Residential (PRH)	2,014	1,344	Flats

2. Water Demand

2.1 Tung Chung Area 103

Water Demand

1. Residential (PRH)	=	2,014 Flats	
Estimated Resident Population	=	2,014 x 2.8	(Housing in Figures 2020, THB)
	=	5,639 persons	
Esimated Resident Population (With 10% design buffer)	=	6,203 persons	
Service Trades for Residential Types	=	0.04 m ³ /h/d	(Table 2, DI 1309)
Fresh water unit daily demand	=	0.14 m ³ /h/d	(Table 1, DI 1309)
Fresh water mean daily demand	=	1116.52 m ³ /d	
Flushing water unit daily demand	=	0.07 m ³ /h/d	(Table 1, DI 1309)
Flushing water mean daily demand	=	434.20 m ³ /d	

MAUUIUGS		Waterworks Impact Assessment	Job No.		Q1021	Sheet N	0.	1	Rev.	0
(Asia) (Consultants Limited	Tung Chung Area 103 and 109, Tung Chung	Dwg. Re	f.						
Job Title:	Agreement No.	CB20180310	Mbr. / Loc.							
	Term Engineeri	ng Consultancy Services 2018-2020								
	For Kowloon C	entral and West and Islands Region	Calc'd	KA	Chd.	JL	Date		17/12/2021	

2.1 Tung Chung Area 109

Water Demand

1. Residential (PRH)	=	1,344 Flats	
Estimated Resident Population	=	1,344 x 2.8	(Housing in Figures 2020, THB)
	=	3,763 persons	
Esimated Resident Population (With 10% design buffer)	=	4,139 persons	
Service Trades for Residential Types	=	0.04 m ³ /h/d	(Table 2, DI 1309)
Fresh water unit daily demand	=	0.14 m ³ /h/d	(Table 1, DI 1309)
Fresh water mean daily demand	=	745.07 m ³ /d	
Flushing water unit daily demand	=	0.07 m ³ /h/d	(Table 1, DI 1309)
Flushing water mean daily demand	=	289.75 m ³ /d	

Summary of Fresh Water & Flushing Water Mean Daily Demand (MDD)

	Area	a 103	Area 109		
Type of Development	Fresh Water MDD (m ³ /d)	Flushing Water MDD (m ³ /d)	Fresh Water MDD (m ³ /d)	Flushing Water MDD (m ³ /d)	
1. Data Input	<u>1116.52</u>	<u>434.20</u>	<u>745.07</u>	<u>289.75</u>	

Appendix 5

Technical Assessments – Part 3

(Traffic Impact Assessment)





Agreement No. CB20180686 Term Traffic and Environmental Consultancy Services 2019 – 2021 for Kowloon Central and West and Islands Region

Instruction No. K10
Proposed Housing Developments at
Tung Chung Areas 103 and 109
Traffic Impact Assessment (TIA)

Traffic Impact Assessment Report

– Tung Chung Area 109 (Revision 1)

Hong Kong Housing Authority

December 2021

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Appendices

Appendix A	Swept Path Analysis Resutls for Vehicular Access
Appendix B	Trip Generation of Attraction of Tung Chung East
Appendix C	Proposed Junction Improvement Measures under TCNTE (East) Contract

1. Introduction

1.1. Background

- 1.1.1. Civil Engineering and Development Department (CEDD) is carrying out reclamation and site formation works for the development of Tung Chung New Town Extension (TCNTE) East (hereafter the CEDD's Project). Hong Kong Housing Authority (HKHA) has identified potential site for developing public housing developments at Tung Chung Area 109 (hereafter the Proposed Development) in the Tung Chung East (TCE) extension area.
- 1.1.2. In response to the latest policy on site optimisation and intensification, CEDD has carried out a Traffic Impact Assessment (hereafter the CEDD's TIA) study to review the proposed increase in population and residential flats of TCE under Agreement No. CE69/2015 (CE) "Tung Chung New Town Extension (East) Design and Construction". The CEDD's TIA study (Ref. PI24-02) covered the Case 2 Scenario 2B¹, which is refined as Scenario L under this HKHA's project.
- 1.1.3. Atkins China Limited (Atkins) was commissioned by HKHA to conduct a Traffic Impact Assessment (TIA) Study to support the Section 16 application for the proposed minor relaxation of maximum overall Plot Ratio (PR) from PR 5.4 to 5.8 for the Proposed Development with consideration of the traffic impact of the potential increase of housing provision (i.e. from total of 1,102 flats to 1,344 flats) to the surrounding road network. The detailed schedules will be described in **Chapter 2**.
- 1.1.4. The purpose of this TIA Report is to summarize the findings of Scenario L based on the CEDD's TIA results under TCNTE (East) for the purpose of supporting the Section 16 Application for the Proposed Development.

1.2. Scope

- 1.2.1. The scope of this TIA is outlined as follow:
 - estimate vehicular traffic demand generated by the Proposed Development;
 - analyse the vehicular traffic impact of the Proposed Development to the surrounding road network; and
 - recommend improvement measures to the problematic roads and junctions, if considered necessary, due to the Proposed Development wherever applicable.

¹ Case 2 Scenario 2B under CEDD's TIA Study – Test scenario for allocating 30% of the overall GFA of Area 57 as retail use and the remaining 70% of GFA as office use. Allow additional GFA for welfare purposes in Areas 114, 117, 119, 122, 133A, 133B and 133C in accordance with Policy Address 2020. Development parameters of all other development areas remains the same as Case 2 Scenario 2A.

Case 2 Scenario 2A under CEDD's TIA Study – Test scenario for increasing development intensity for Areas 99, 103, 109, 133A, 133B and 133C by both Housing Department (HD)'s Site Optimisation and Executive Council Intensification Policy and for all other public housing sites at TCE by HD's Site Optimisation.

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1.3. Report Structure

- 1.3.1. Following this introductory chapter, there are 5 further chapters.
 - **Chapter 2** The Proposed Development, presents the proposed development schedule:
 - Chapter 3 Traffic Context, describes the road network and transport facilities in the vicinity;
 - Chapter 4 Traffic Forecasts, describes the methodology of traffic forecasting;
 - Chapter 5 Traffic Impact Assessment, presents the results of the TIA at the adopted design years, and recommends any improvement measures to alleviate the foreseeable traffic problem, if considered necessary; and
 - **Chapter 6** Summary and Conclusion, summarizes the findings of the study and presents the conclusion accordingly.

2. The Proposed Development

2.1. Site Location

2.1.1. The subject iste is located in the north-eastern part of Tung Chung which is at a newly reclaimed area (currently under construction by CEDD) of the CEDD's Project. The Proposed Development is surrounded by planned residential developments (Tung Chung Areas 99,100, 103 and 110, etc.). It is bounded by planned Roads L3, L4 and D4 at the north-western, south-western and south-eastern sides, respectively. The location of the subject site is indicated in Figure 2.1.

2.2. Development Schedule

- 2.2.1. The Proposed Development comprises two housing blocks which accommodates management offices and facilities ancillary to the domestic use (including the electrical and mechanical facilities, fire services, sprinkler facilities, transformer room, etc.).
- 2.2.2. The proposed development schedules of the Proposed Development as given in the Baseline Scheme (OZP compliance scheme), Case 2 Scenario 2B under TCNTE(East) project for site optimisation and intensification and the latest development proposal (i.e. "Scenario L") are summarized in **Table 2.1**.

Table 2.1 – Development Schedules under Different Scenarios

Development Components	Baseline Scheme	Case 2 Scenario 2B	Proposed Scheme (Scenario L)
Public Housing - Subsidised Sale Flats (SSF)	1,102 flats	1,344 flats	About 1,344 flats
Non-Domestic	4,406 m ² GFA	3,602 m ² GFA	3,600 m ² GFA

Notes: The development parameters of Tung Chung Area 109 have been updated slightly under HKHA's Scenario L to suit actual housing development.

2.2.3. It is anticipated that the project completion years will be 2025/26.

2.3. Proposed Parking and Loading / Unloading Facilities

2.3.1. The provision of parking and servicing facilities of the Proposed Development will be made reference to the Hong Kong Planning Standard and Guideline (HKPSG) published by Planning Department (PlanD) as well as requests from relevant government departments as shown in **Table 2.2**.

Table 2.2 - Proposed Parking and Loading / Unloading Facilities Provision - Area 109

Parking and Loading / Unloading Facilities	Component	Requirement	Proposed Provision (nos.) (1)
Car Parking Space Domestic 1 per 11 flats Additional of 46 nos. to n		1 per 11 flatsAdditional of 46 nos. to meet local needs	168 (incl. 2 accessible parking spaces)
	Visitors	• 5 per domestic block	10
	Retail and Commercial (2)	• 1 per 150 sqm GFA	4 (incl. 1 accessible parking space)
	District Maintenance Office (3)	• 1 per 200 sqm GFA	3
Motorcycle Parking Space	Domestic	• 1 per 110 flats	12
Light Goods Vehicle Parking	Domestic	• 1 per 260 flats	5
Loading / Unloading	Domestic	2 per domestic block	4
Bay	Retail and Commercial (2)	• 1 per 800 sqm GFA	1
Bicycle Parking	Domestic	• 1 per 15 flats	90

Remarks:

- (1) The parking and loading / unloading facilities provisions are subject to finalized flat mix.
- (2) Total GFA for retail and commercial is 550 sqm.
- (3) Total GFA for district maintenance office is 400 sqm.

2.4. Vehicular Access Arrangement

2.4.1. The proposed vehicular access of the Proposed Development will be located at the planned Road L3 as shown in **Figure 2.2**. The swept path analysis results at the proposed vehicular access are shown in **Appendix A**.

2.5. Pedestrian Access Arrangement

2.5.1. The pedestrian accesses of the Proposed Development will be located at Road L3 and L4 as shown in **Figure 2.2**. The future planned pedestrian facilities are well-designed in the vicinity of the Proposed Development. Pedestrians can access the Proposed Development via the surrounding footpaths and at-grade crossings to / from the future bus laybys, public transport interchanges (PTI) and Tung Chung East Station. The anticipated major pedestrian routings from the Proposed Development to the adjacent public transport facilities is illustrated in **Figure 2.3**.

3. Traffic Context

3.1. Road Network

- 3.1.1. The Proposed Development located at the reclaimed area under TCE will be served by the planned local roads connecting with existing Ying Tung Road, Yi Tung Road and Ying Hei Road, and the planned primary distributor Road P1.
- 3.1.2. Yi Tung Road provides connection between planned Road L3 and Tung Chung Eastern Interchange. It will serve as the major linkage between Tung Chung Town Centre and TCE.
- 3.1.3. Ying Hei Road is a dual 2-lane carriageway running in west-east direction and will be one of the major connection road between Tung Chung and future TCE via the planned Road P1.
- 3.1.4. Road P1 is a dual 2-lane primary distributor which provide direct connection to Ying Hei Road at the west and planned Tai Ho Interchange at the east. It will be the major cross-district corridor to serve TCE area.
- 3.1.5. It is anticipated that the Proposed Development will be well served by the existing and planned road networks in the vicinity as shown in **Figure 2.1**.

3.2. Public Transport Services

- 3.2.1. The Proposed Development will be served by the planned public transport facilities provided in the vicinity.
- 3.2.2. To tie in with the phased development of TCE and the tentative completion of Tung Chung East station in 2029, the CEDD's Project has developed a public transport services and implementation strategy under the CEDD's TIA report (Ref. PI24-02). Three PTIs have been planned which will be located in Areas 99, 113 and 133 respectively. The nearest PTI to the Proposed Development will be located in Area 99.
- 3.2.3. For details of public transport services assessment in TCE, CEDD's TIA (Ref. PI24-02) for Case 2 Scenario 2B under TCNTE(TCE) could be referred.

4. Traffic Forecasts

4.1. Methodology

- 4.1.1. Years 2026 and 2031 (five years after population intake) have been adopted as design years for this TIA Study.
- 4.1.2. The comprehensive traffic models developed for the CEDD's Project was adopted for this study to present a holistic result. The traffic forecast methodology and assumptions were covered in a separate submission (namely Technical Note on Preliminary Findings of Traffic Impact Assessment for Population Increase and Development Intensity CASE 2 Scenario 1 ² (Ref. PI11)) conducted by CEDD.

4.2. Traffic Survey

4.2.1. According to the CEDD's TIA, manual classified traffic count surveys were conducted during the peak hour periods from 07:00 to 09:00 and from 17:00 to 19:00 between March 2019 and January 2020 to identify the existing traffic condition. The locations of the surveyed junctions in the vicinity are listed in **Table 4.1**. The observed traffic flows are presented in **Figure 4.1**.

Table 4.1 – Location of Surveyed Key Junctions

Index (1)	Junctions	Junction Type
J1	Tung Chung Waterfront Road / Ying Hei Road/ Yi Tung Road	Signal
J2	Ying Hei Road / Ying Tung Road	Signal
J3	Tung Chung Eastern Interchange	Roundabout

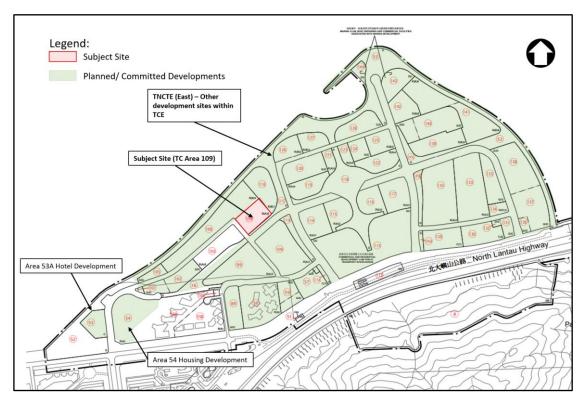
Remarks: (1) Refer to Figure 2.1.

4.3. Other Planned Development

- 4.3.1. There are several planned / committed developments in the vicinity of the Proposed Development. Development trips generated by the planned / committed developments were assigned onto the surrounding road network as part of the traffic model. The major planned / committed developments are summarized below:
 - TCNTE (East) Other development sites within TCE;
 - Area 54 Housing Development;
 - Area 53A Hotel Development; and
 - Area 89 School Development.

² Case 2 Scenario 1 under CEDD's TIA study – Test scenario for increase development intensity for Area 99 by both Housing Department (HD)'s Site Optimisation and Executive Council Intensification Policy and for all other public housing sites at TCE by HD's Site Optimisation

Diagram 4.1 Major Adjacent Planned/ Committed Developments



4.3.2. The details of trip generation and attraction of the housing development of Tung Chung East extracted from CEDD's report (Ref. PI24-02) are shown in **Appendix B**.

4.4. Development Traffic Generation

4.4.1. To estimate the traffic generation of the Proposed Development, appropriate trip rates should be adopted. Reference has been made to the Transport Planning and Design Manuel (TPDM) published by Transport Department (TD). Based on the development schedule in **Table 2.1** and the adopted trip rates in **Table 4.2**, the traffic generation of the Proposed Development due to the domestic flats and associated facilities were estimated during the morning and evening peak as summarized in **Table 4.2**.

Table 4.2 – Traffic Generation of the Proposed Development

		Traffic Generation (pcu/hr)					
	Parameters	AM I	Peak	PM Peak			
		GEN	ATT	GEN	ATT		
Adopted Trip Potes	SSF (pcu/hr/flat)	0.0483	0.0279	0.0244	0.0351		
Adopted Trip Rates	Non-domestic	0.1285	0.1525	0.2360	0.2622		
Case 2 Scenario 2B-	1,344 flats	65	37	33	47		
under CEDD's	3,602 m ² GFA (Non-domestic)	5	5	8	9		
Project	Total	70	42	41	56		
	About 1,344 flats	65	37	33	47		
HKHA's Proposed Scheme (Scenario L)	3,600 m ² GFA (Non-domestic)	5	5	8	9		
(3 00114110 2)	Total	70	42	41	56		

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4.4.2. As shown in **Table 4.2**, the Proposed Development would generate about 112 pcu/hr and 97 pcu/hr during the morning and evening peak hour periods respectively, which will have the same magnitude as that under Case 2 Scenario 2B under CEDD's Project. Therefore, the trip generation under Case 2 Scenario 2B is considered valid for this TIA study.

4.5. Design Traffic Flows

- 4.5.1. With consideration of same magnitude in trip generation between Case 2 Scenario 2B under TCNTE(TCE) Study and Proposed Scheme (Scenario L) of this study, it is considered that the years 2026 and 2031 design traffic flows developed by CEDD's Project are still valid and hence it will be adopted in this TIA study to tally with other Tung Chung traffic studies including Tung Chung West and Tung Chung East for consistency.
- 4.5.2. Years 2026 and 2031 traffic flows extracted from CEDD's TIA are summarized in **Figures 4.2** and **4.3** respectively.

5. Traffic and Transport Impact Assessment

5.1. Junction Operational Assessments

5.1.1. Based on the traffic flows from the future year traffic models in CEDD's TIA study, junction operational assessment was extracted from CEDD's TIA (Ref. PI24-02) for the existing and future junctions. The key junctions assessed are listed in **Table 5.1**.

Table 5.1	- Location	of Key	y Junctions
-----------	------------	--------	-------------

Index (1)	Junctions	Junction Type
J1	Tung Chung Waterfront Road / Ying Hei Road/ Yi Tung Road	Signal
J2	Ying Hei Road / Ying Tung Road / Road P1	Signal
J3	Tung Chung Eastern Interchange	Roundabout
J4 ⁽²⁾	Road L4 / Road L5	Signal
J5 ⁽²⁾	Road D4 / Road L4	Signal
J6 ⁽²⁾	Road L3 / Road L4	Priority
J7 ⁽²⁾	Road P1 / Road D5	Signal
J8 ⁽²⁾	Road D5 / Road L5	Signal
J9 ⁽²⁾	Road D1 / Road D4 / Road D5	Signal

Remarks:

- (1) Refer to Figure 2.1.
- (2) New junctions in TCE area
- 5.1.2. The planned / committed junction improvement schemes proposed under CEDD's Project have been taken into account for the junction operational assessment under years 2026 and 2031 Design Scenarios. The planned improvement schemes are given in Appendix C.
- 5.1.3. The results of the junction capacity analysis under the Observed Scenario, years 2026 and 2031 Design Scenarios extracted from CEDD's TIA (Ref. PI24-02) are summarized in **Table 5.2**.
- 5.1.4. Signal junction capacity is measured by Reserved Capacity (RC) of the junction. Priority junction and roundabout are measured by the ratio of Design Flow over Capacity (DFC).
- 5.1.5. According to the guideline from TD (Departmental Circular No. 3/2020 Supplementary notes to Guidelines and Requirements of Traffic Impact Assessment), the existing junction with RC of 15% or above or DFC of 0.85 or below is considered acceptable. Under serious site constraints, the requirements for the existing junctions may be relaxed to RC of 0% or above or DFC of 1.0 or below. On the other hand, new junctions should be designed to attain the target performance of RC of 25% or above or DFC of 0.75 or below, wherever possible, to allow adequate spare capacities catering for fluctuations during peak hours, natural growth of traffic demand and further developments in future years.

Table 5.2 – Junction Performance

	Reserve Capacity (RC) or Design Flow / Capacity Ratio (DFC) (2)							
Index (1)	2019 Ob	served	2026 D	esign	2031 Design			
	AM	PM	AM	PM	AM	PM		
J1 ⁽³⁾	>50%	>50%	38%	>50%	44%	45%		
J2 ⁽³⁾	>50%	>50%	32%	>50%	30%	26%		
J3	0.39	0.30	0.48	0.44	0.70	0.72		
J4	-	-	>50%	>50%	>50%	>50%		
J5	-	-	>50%	>50%	>50%	>50%		
J6	-	-	>50%	>50%	>50%	>50%		
J7	-	-	>50%	>50%	>50%	>50%		
J8	-	-	>50%	>50%	49%	>50%		
J9	-	-	>50%	>50%	31%	41%		

Remark:

- (1) Refer to Figure 2.1.
- (2) Junction performances are expressed in RC for signal junctions and DFC for priority junctions.
- (3) Short-term improvement schemes are adopted in Year 2026 Design Scenario and Ultimate improvement schemes are adopted in Year 2031 Design Scenario.
- 5.1.6. As shown in **Table 5.2**, all the junctions would operate within acceptable RC or DFC.

5.2. Road Link Operational Assessment

- 5.2.1. The link flows and operational performance of the identified key road links are extracted from CEDD's TIA (Ref. PI24-02) and summarized in **Tables 5.3** and **5.4** respectively.
- 5.2.2. The road link operational performance is measured the ratio of volume over capacity (V/C). according to the guideline from TD (Departmental Circular No. 3/2020 Supplementary notes to Guidelines and Requirements of Traffic Impact Assessments), roads should eb designed to attain the target performance of V/C less than 0.85, wherever possible, to allow adequate spare capacities catering for fluctuations during peak hours, natural growth of traffic demand and further developments in future years. Under serious site constraints, the requirements for the existing roads may be relaxed to V/C ratio of 1.0 or below.

Table 5.3 – Summary of Road Link Flows

			Link		Т	raffic Flov	vs (pcu/h	ır)	
Ref. (1)	Road Section	Dir.	Capacity	2019 Ob	served	Year 202	6 Design	Year 2031	l Design
			(pcu/hr)	AM	PM	AM	PM	AM	PM
1.4	North Lantau Highway (between	NB	6,100	2,325	1,945	3,275	2,460	3,745	2,545
L1	Chun Wan Road Interchange and Tung Chung Waterfront Road)	SB	6,100	1,475	2,505	1,245	2,310	1,465	2,350
L2	North Lantau Highway (between	EB	6,100	1,690	3,005	1,570	2,615	1,990	3,080
LZ	Tung Chung Waterfront Road and Tung Chung Eastern Interchange)	WB	6,100	2,795	2,085	3,385	2,695	3,920	2,800
1.2	North Lantau Highway (between	EB	6,100	2,515	4,145	2,795	3,850	3,560	4,560
L3	Tung Chung Eastern Interchange and Shun Long Road)	WB	6,100	3,610	2,715	4,640	3,810	5,725	4,645
	Tung Chung Waterfront Road (between Yi Tung Road and Wai Tung Road	ЕВ	2,800	210	210	355	565	550	635
L4		WB	2,800	270	240	485	290	410	395
L5	Vi Tung Dood	NB	2,800	460	320	690	515	1,135	1,045
Lo	Yi Tung Road	SB	2,800	380	400	565	715	735	795
L6	Ving Hai Dand	EB	2,800	335	340	510	325	815	640
LO	Ying Hei Road	WB	2,800	405	345	675	525	805	805
1.7	Vine Tune Dood	NB	920	260	225	555	495	575	500
L7	Ying Tung Road	SB	920	310	250	655	500	740	590
	Road L4 (between Road D4 and	NB	920	-	-	115	110	215	230
L8	` Road L5)	SB	920	-	-	230	165	345	275
10	Dood 1.2	NB	920	-	-	195	215	655	680
L9	Road L3	SB	920	-	-	105	110	150	205

Remark: (1) Refer to Figure 2.1.

Table 5.4 - Summary of Road Link Performance

	Table 3.4 – C						Ratio		
Ref.	Road Section	Dir.	Link Capacity	2019 C	bserved	Year 202	6 Design	Year 2031 Design	
(1)			(pcu/hr)	AM	PM	AM	PM	AM	PM
	North Lantau Highway (between	NB	6,100	0.38	0.32	0.54	0.40	0.61	0.42
L1	Chun Wan Road Interchange and Tung Chung Waterfront Road)	SB	6,100	0.24	0.41	0.20	0.38	0.24	0.39
1.0	North Lantau Highway (between	EB	6,100	0.28	0.49	0.26	0.43	0.33	0.50
L2	Tung Chung Waterfront Road and Tung Chung Eastern Interchange)	WB	6,100	0.46	0.34	0.55	0.44	0.64	0.46
1.2	North Lantau Highway (between	EB	6,100	0.41	0.68	0.46	0.63	0.58	0.75
L3	Tung Chung Eastern Interchange and Shun Long Road)	WB	6,100	0.59	0.45	0.76	0.62	0.94	0.76
L4	Tung Chung Waterfront Road	EB	2,800	0.08	0.08	0.13	0.20	0.20	0.23
L4	(between Yi Tung Road and Wai Tung Road	WB	2,800	0.10	0.09	0.17	0.10	0.15	0.14
L5	Vi Tung Dood	NB	2,800	0.16	0.11	0.25	0.18	0.41	0.37
Lo	Yi Tung Road	SB	2,800	0.14	0.14	0.20	0.26	0.26	0.28
L6	Ving Hai Dand	EB	2,800	0.12	0.12	0.18	0.12	0.29	0.23
LO	Ying Hei Road	WB	2,800	0.14	0.12	0.24	0.19	0.29	0.29
1.7	Vine Tune Dood	NB	920	0.28	0.24	0.60	0.54	0.63	0.54
L7	Ying Tung Road	SB	920	0.34	0.27	0.71	0.54	0.80	0.64
L8	Road L4 (between Road D4 and	NB	920	ı	-	0.13	0.12	0.23	0.25
LO	Road L5)	SB	920	-	-	0.25	0.18	0.38	0.30
L9	Road L3	NB	920	-	-	0.21	0.23	0.71	0.74
L9	Koau Lo	SB	920	-	-	0.11	0.12	0.16	0.22

Remark: (1) Refer to Figure 2.1.

- 5.2.3. The above assessment results show that all identified key road links, except Road L3, will operate within acceptable V/C ratio to accommodate the future traffic flows in the design year with the presence of the Proposed Development.
- 5.2.4. From Table 5.4, Road L3 North Lantau Highway (between Tung Chung Eastern Interchange and Shun Long Road) will be operated with V/C ratio of 0.94 in year 2031. It is still operated within capacity with V/C ratio less than 1.0. It is suggested that relevant authorities should consider to conduct feasibility study on possible mitigation measures for the North Lantau Highway (between Tung Chung East Interchange and Shun Long Road), as well as investigation appropriate improvement measures for the Lantau Link.

6. Summary and Conclusion

6.1. Summary

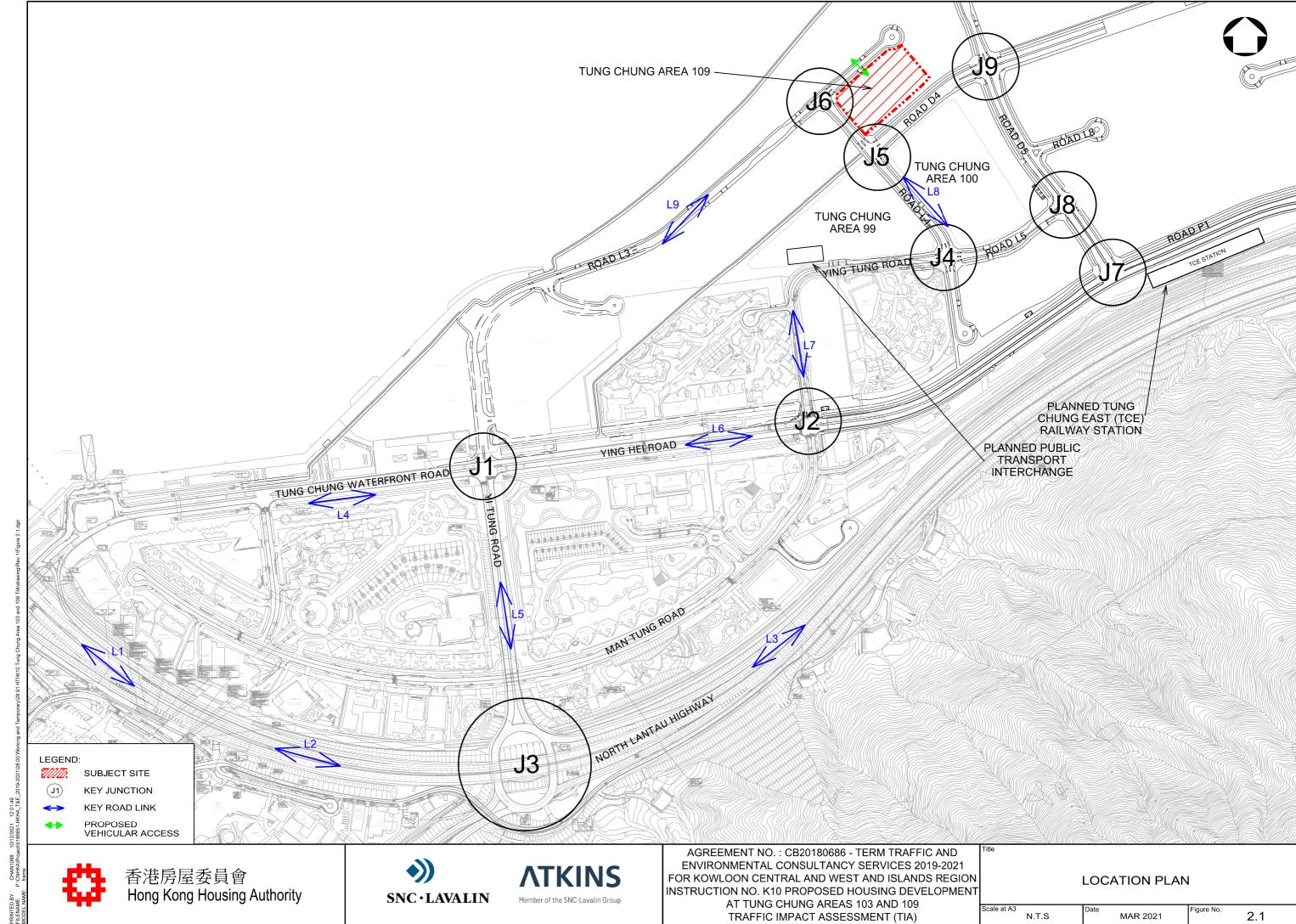
- 6.1.1. Atkins China Limited was commissioned by Hong Kong Housing Authority to conduct a Traffic Impact Assessment (TIA) Study to support the Section 16 application for the intensification of proposed housing developments at Tung Chung Area 109 (hereafter the Proposed Development) in Tung Chung East (TCE) with consideration of the traffic impact of the potential increase of housing provision (i.e from total of 1,607 flats to 1,344 flats) to the surrounding road network.
- 6.1.2. In response to the latest policy on site optimisation and intensification, Civil Engineering and Development Department (CEDD) has carried out a TIA study to review the potential increase of housing provision in TCE under Agreement No. CE69/2015 (CE) "Tung Chung New Town Extension (East) Design and Construction". The CEDD's TIA study (Ref. PI124-02) covered the Case 2 Scenario 2B, which is also known as Scenario L under HKHA's project.
- 6.1.3. Years 2026 and 2031 (five years after population intake) have been adopted as design year for this TIA Study.
- 6.1.4. The comprehensive traffic models developed for the Tung Chung New Town Extension (TCNTE) Project was adopted for this study to present a holistic result. The traffic forecast methodology and assumptions were covered in a separate submission (namely Technical Note on Preliminary Findings of Traffic Impact Assessment for Population Increase and Development Intensity CASE 2 Scenario 1 (Ref. PI11)) conducted by CEDD.
- 6.1.5. Based on the results summarised from CEDD's Project, the junction and road link analysis show that the additional traffic impact due to the proposed public housing development is minor and acceptable in the design years.

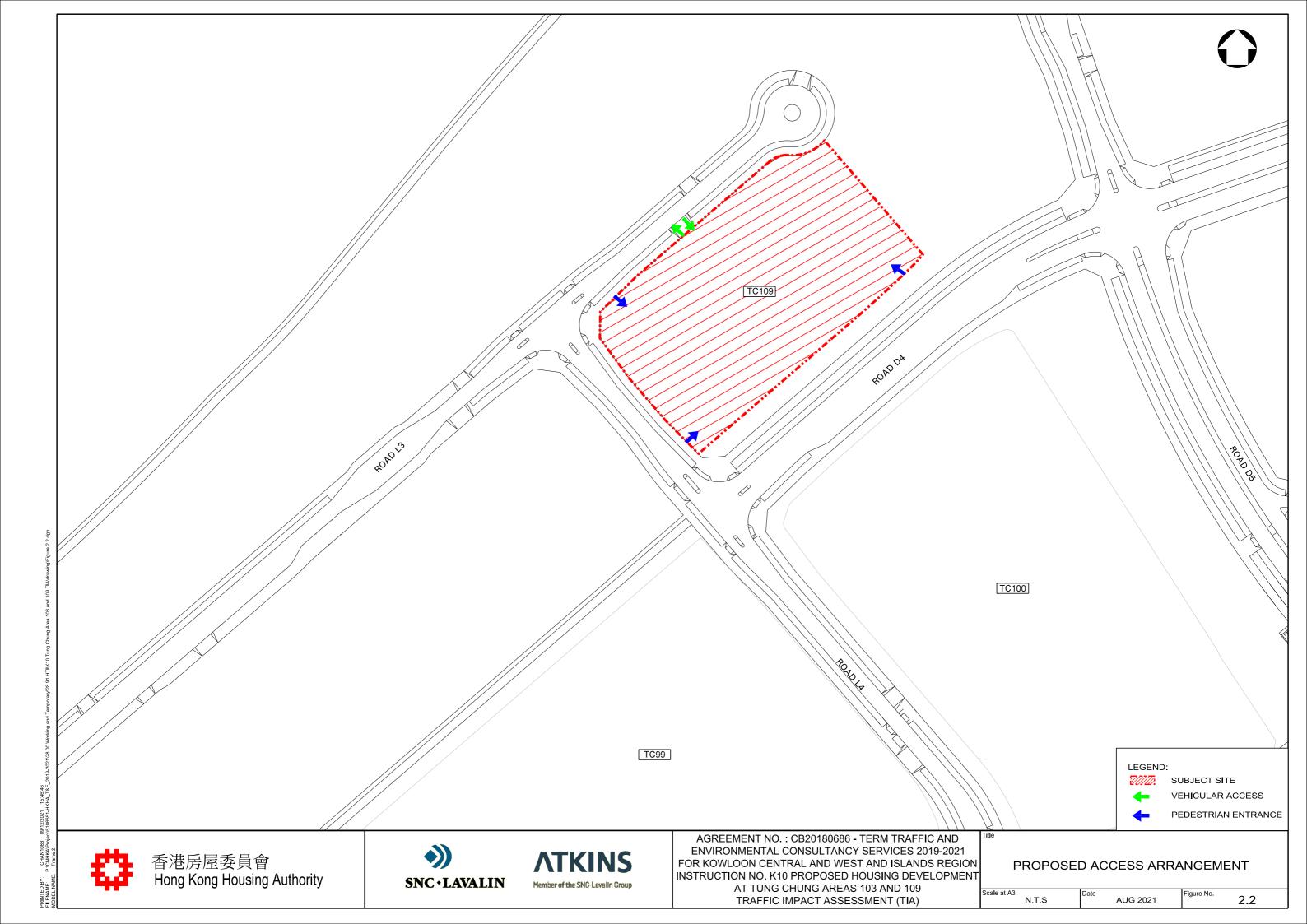
6.2. Conclusion

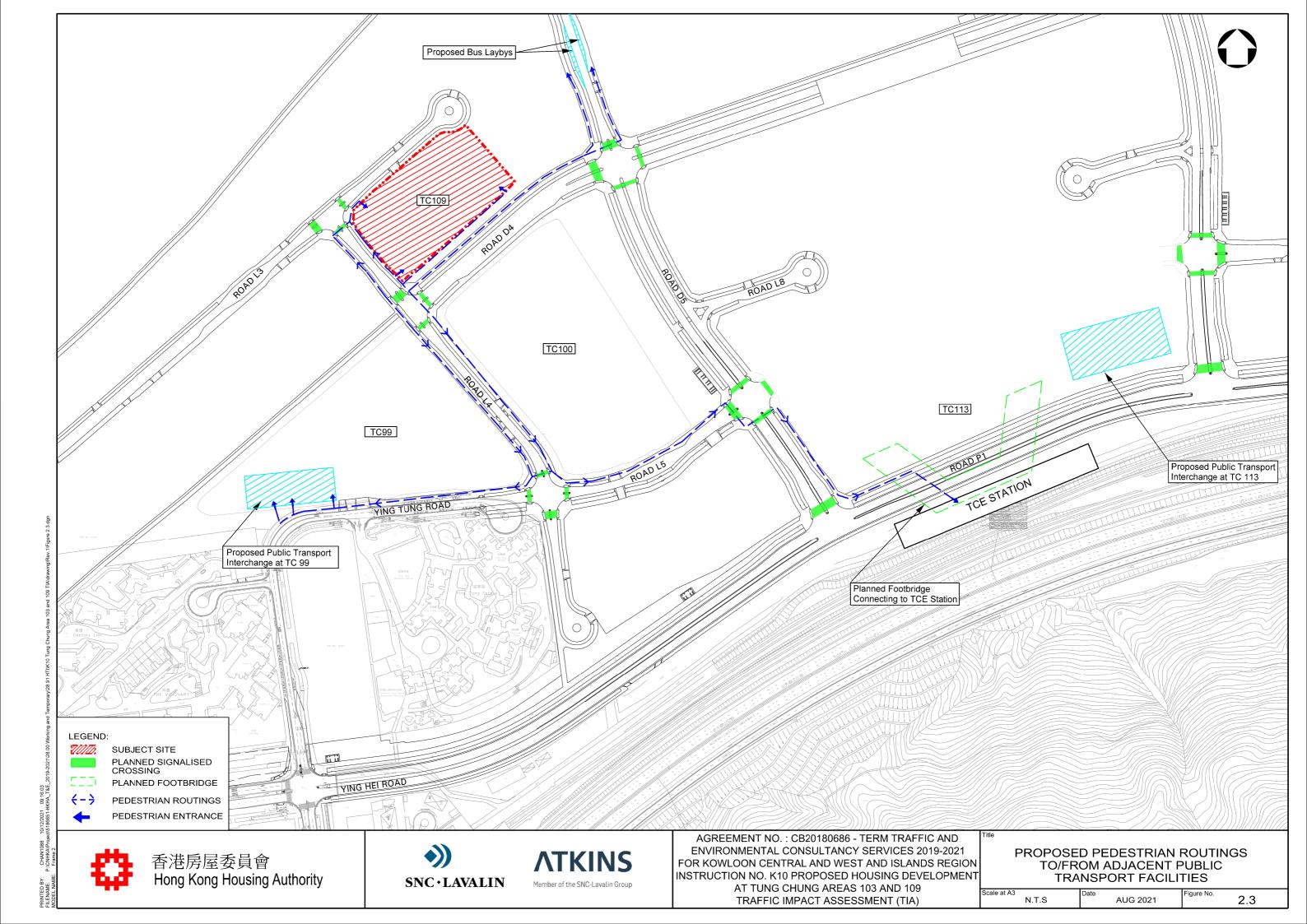
6.2.1. Based on the above discussion, it is concluded that the proposed intensification of housing developments at Tung Chun Area 109 would not induce adverse impact on the surrounding road network upon completion. Therefore, the Proposed Development is considered acceptable from traffic point of view.

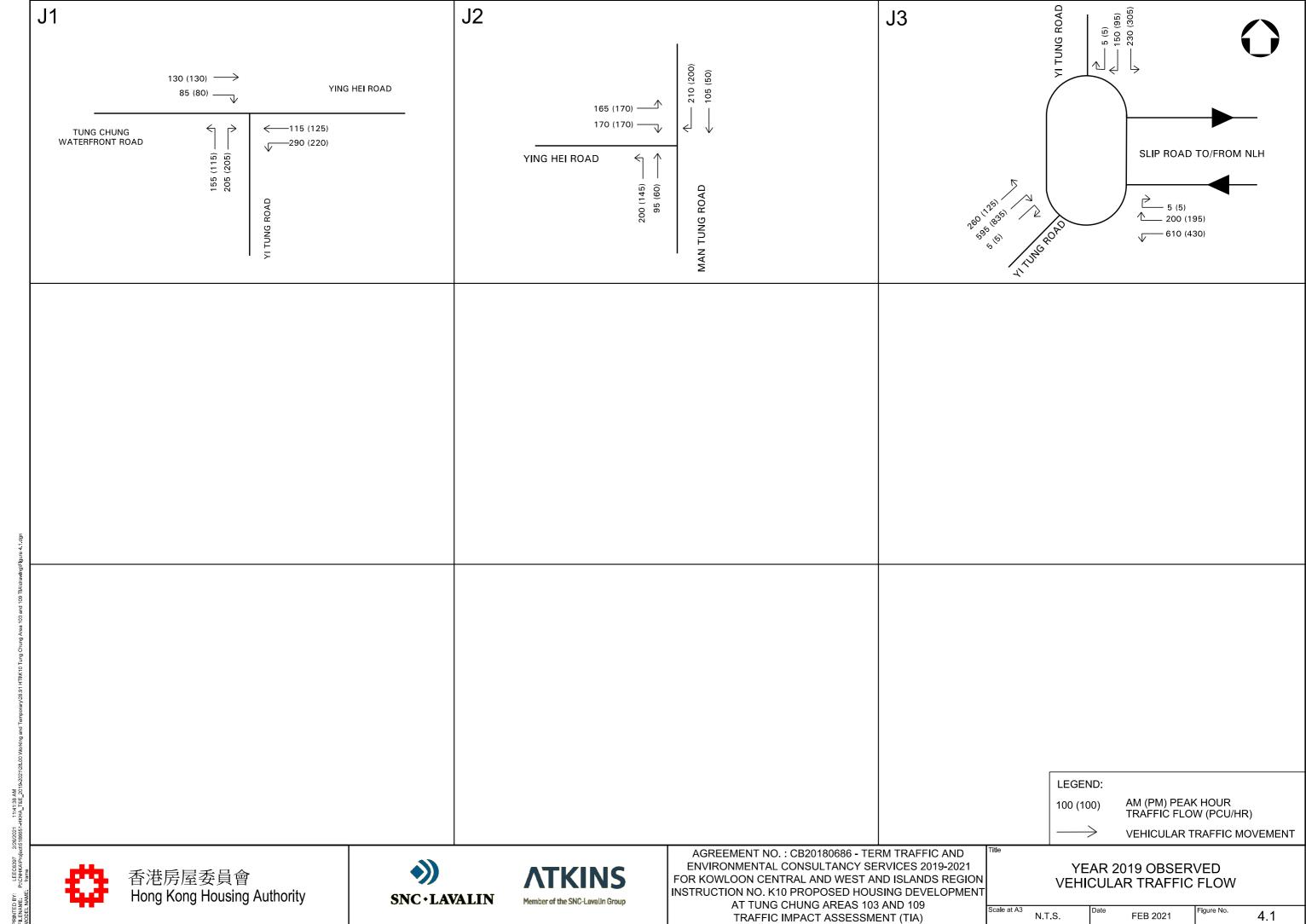
Figures

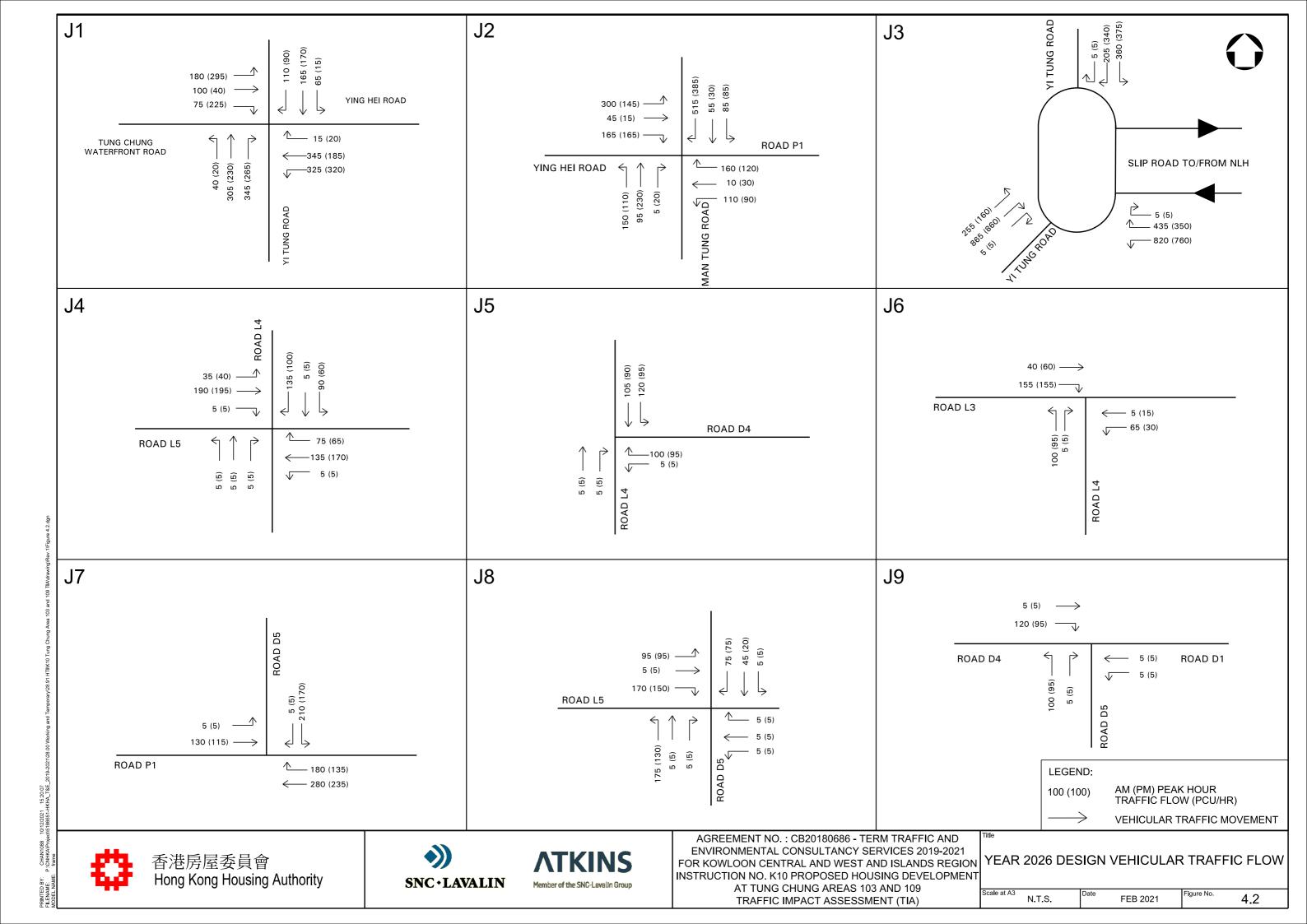


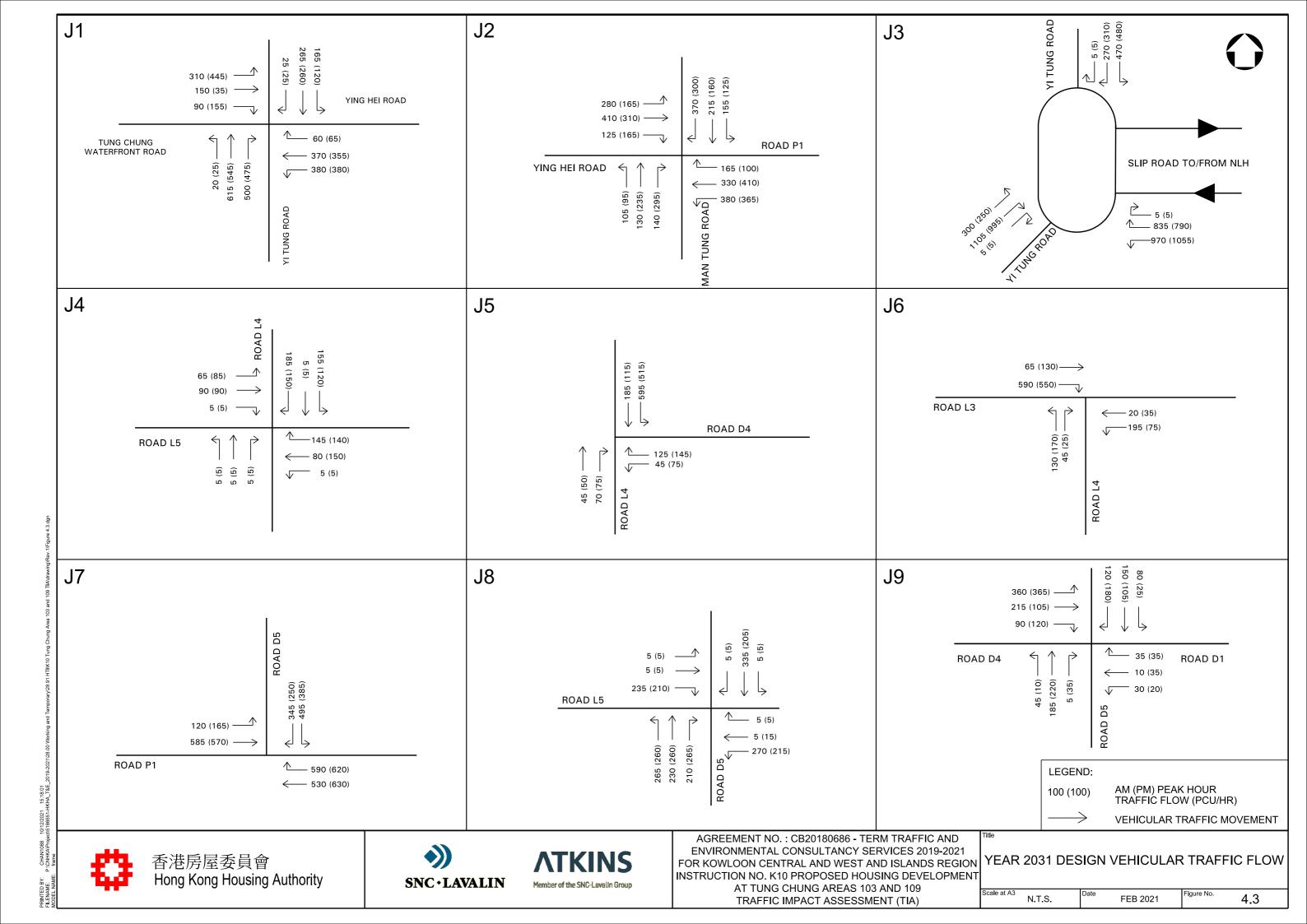








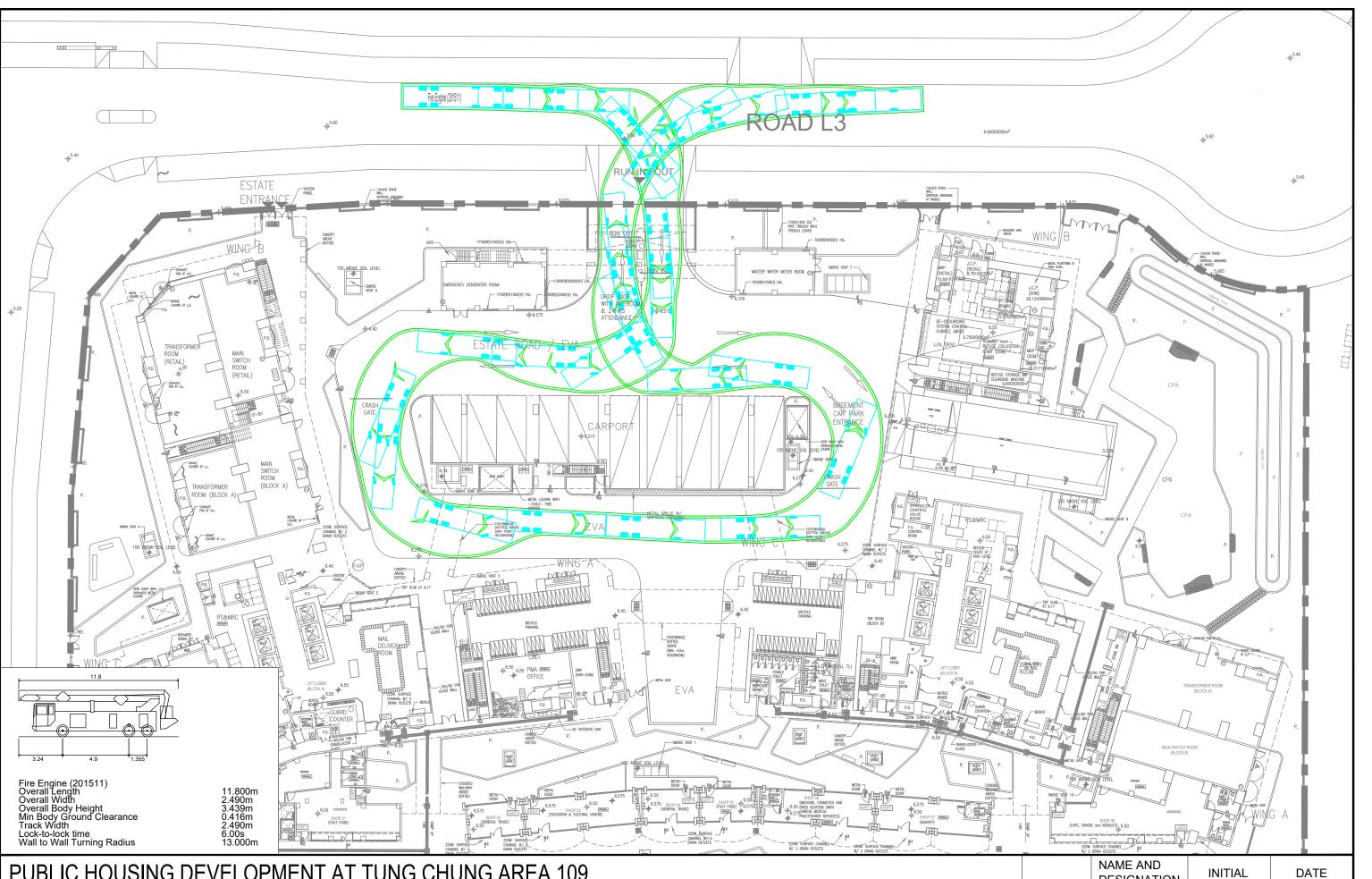




Appendix A

Swept Path Analysis Results for Vehicular Access





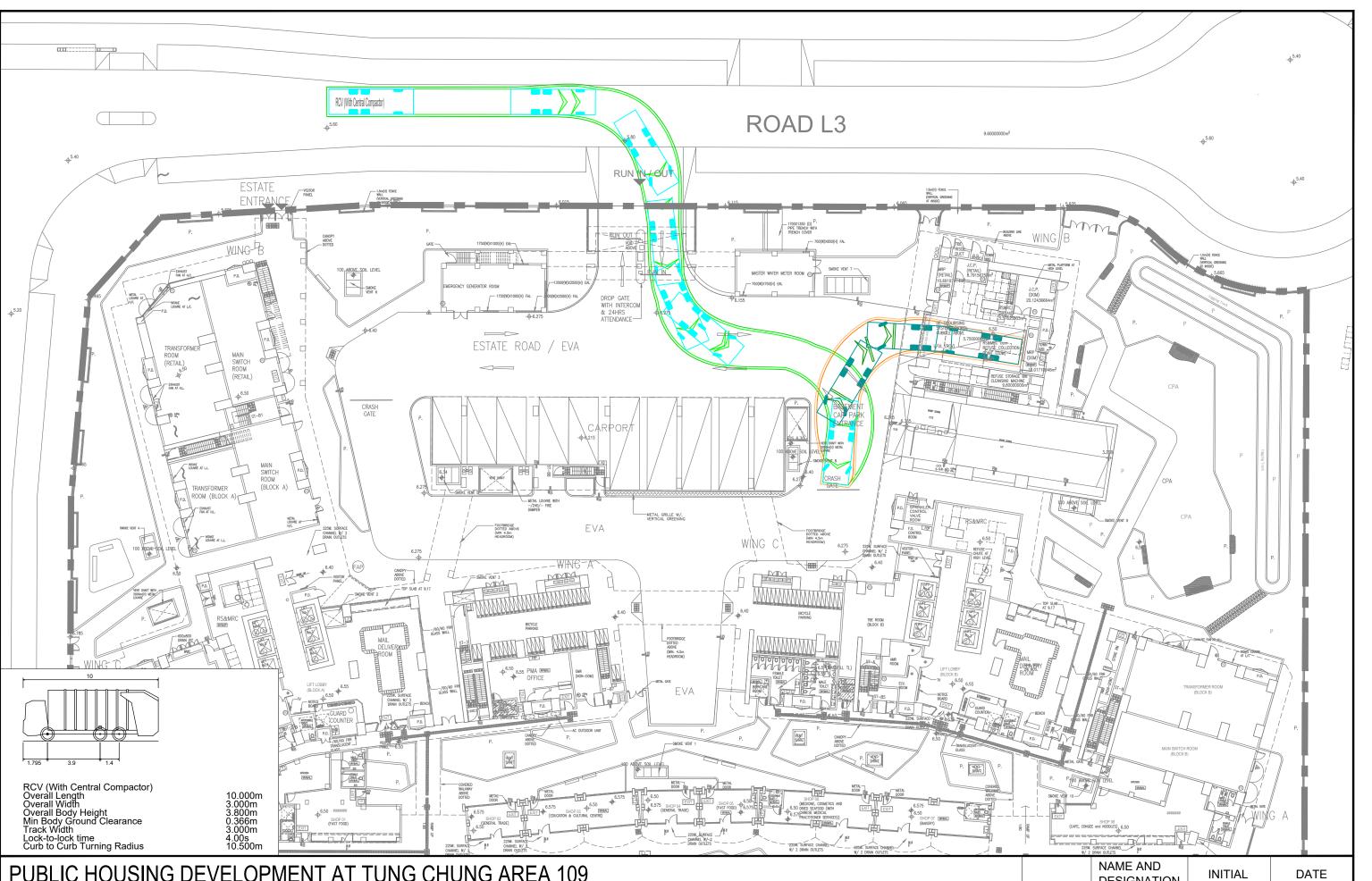
PUBLIC HOUSING DEVELOPMENT AT TUNG CHUNG AREA 109 SWEPT PATH ANALYSIS - G/F - FA - IN & OUT

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SCALE: 1:400 (A3) DATE: 08.11.2021

K.K. WONG STO(C)/14 **ORIGINAL** 08.11.2021 CHECKED SIGNED **ORIGINAL** T.K. LI DRAWN 08.11.2021 TO(C)/33 SIGNED

DESIGNATION



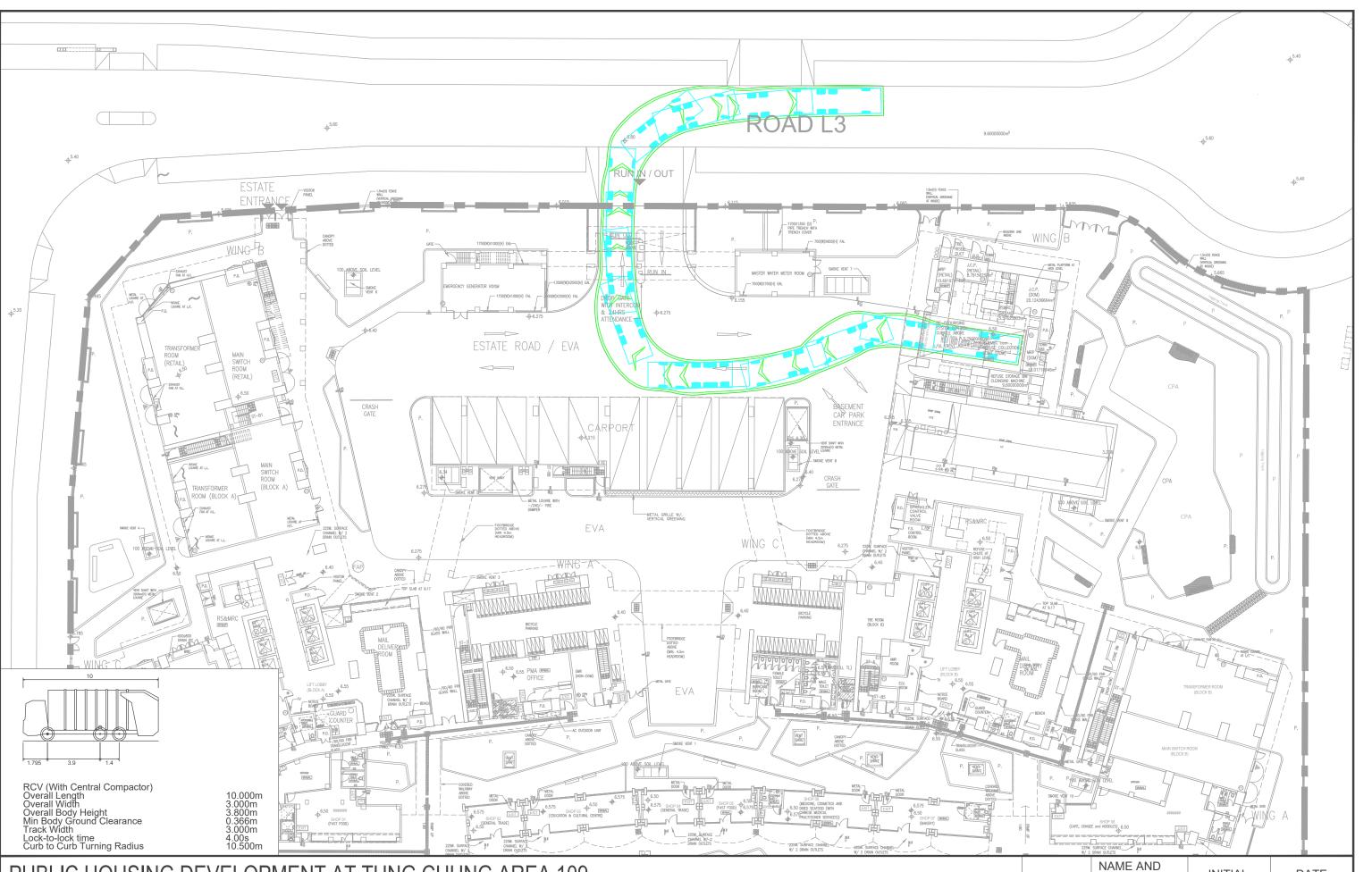
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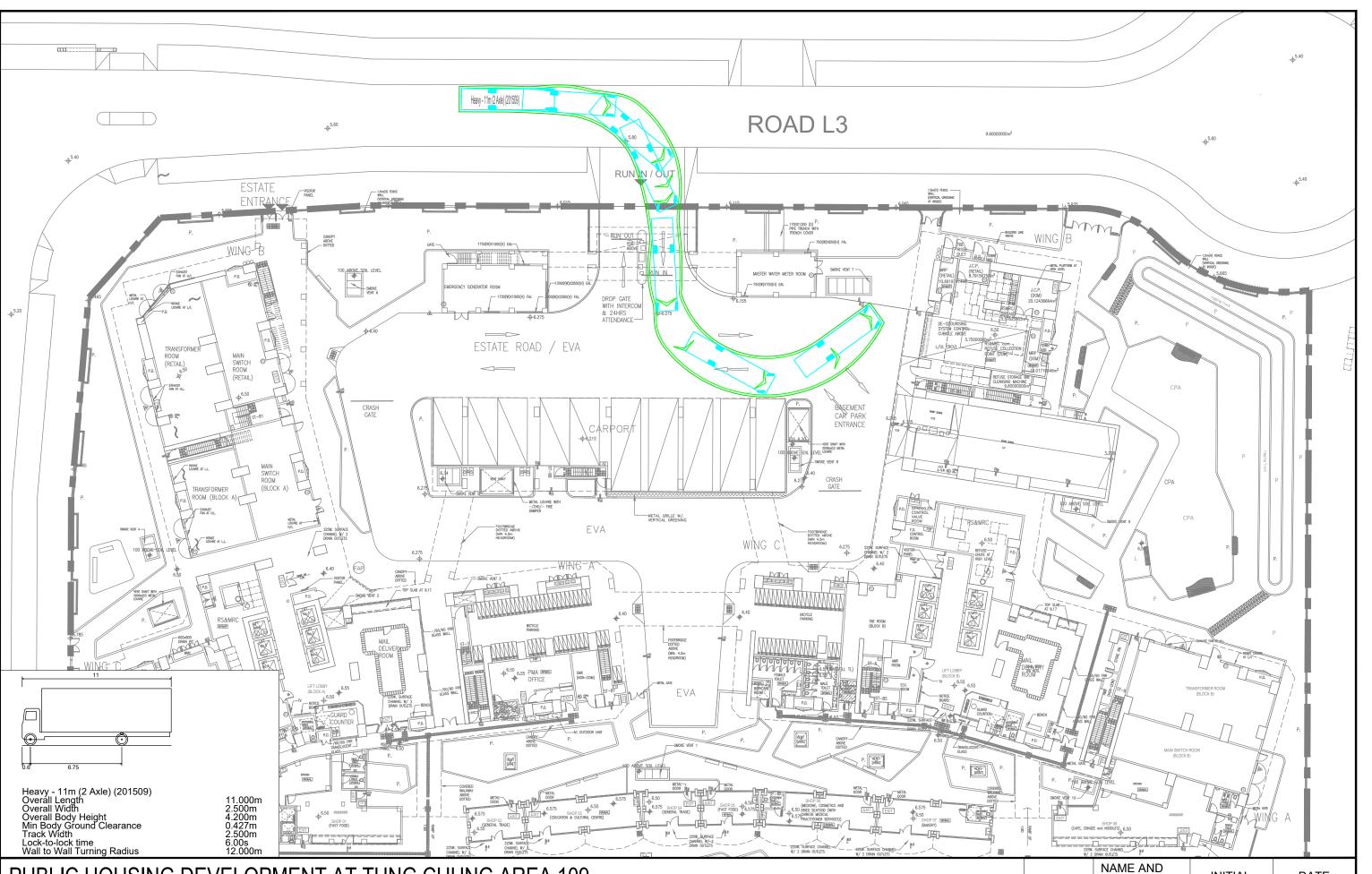


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SCALE: 1:400 (A3) DATE: 08.11.2021

DATE INITIAL **DESIGNATION ORIGINAL** 08.11.2021 **CHECKED** SIGNED **ORIGINAL** DRAWN 08.11.2021 SIGNED

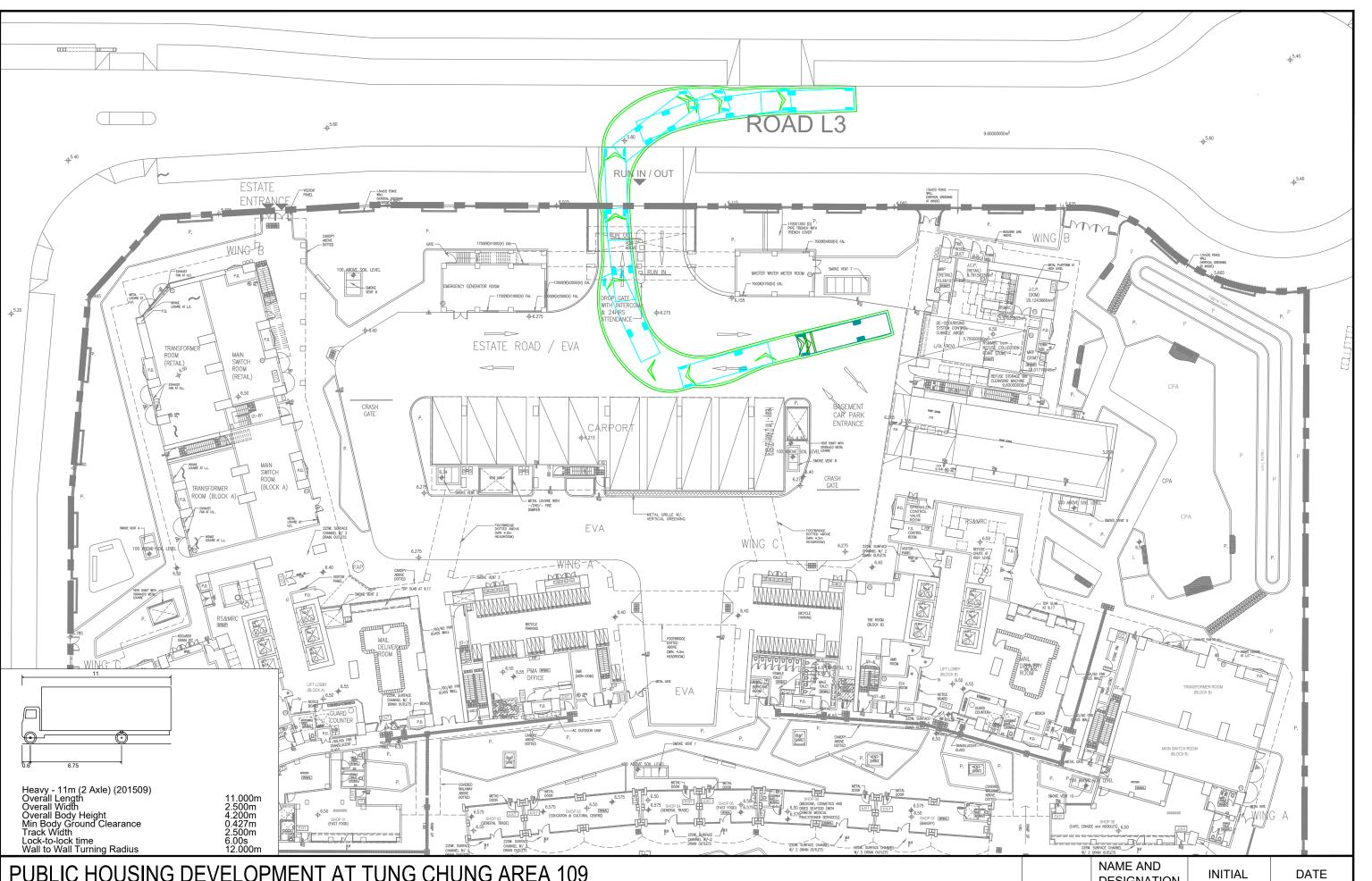


PUBLIC HOUSING DEVELOPMENT AT TUNG CHUNG AREA 109 SWEPT PATH ANALYSIS - G/F - MGV - LUL - IN

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SCALE: 1:400 (A3) DATE: 08.11.2021

INITIAL DATE **DESIGNATION ORIGINAL** 08.11.2021 **CHECKED** SIGNED **ORIGINAL** DRAWN 08.11.2021 SIGNED



PUBLIC HOUSING DEVELOPMENT AT TUNG CHUNG AREA 109 SWEPT PATH ANALYSIS - G/F - MGV - LUL - OUT

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SCALE: 1:400 (A3) DATE: 08.11.2021

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DESIGNATION

Appendix B

Trip Generation of Attraction of Tung Chung East



Table 2.2 – Housing Development Parameters with Increased Intensity

	Preliminary	Included in		Domestic		Non-dom	estic GFA	(m²)	Total GFA
Development	Intake Year	Design Year(s)	Development Type	GFA (m²)	Retail	Office	Welfare / GIC	Kindergarten	(m²)
Area 57	2025	2026, 2031, 2036	Commercial	-	35,334	82,447	3 4	ne ne	117,781
Area 114	2029	2031, 2036	Public Housing – PRH	103,064	5,700	-	5,470	642	114,876
Area 117	2029	2031, 2036	Public Housing – PRH	108,381	6,028	-	5,753	642	120,804
Area 119	2029	2031, 2036	Public Housing – HOS	79,019	5,747	->	4,238	i.e.	89,004
Area 122	2029	2031, 2036	Public Housing – HOS	78,293	5,052	15/2	4,199	642	88,186
Area 133A	2029	2031, 2036	Public Housing – PRH	272,681	20,334	554	14,683	642	308,340
Area 133B	2029	2031, 2036	Public Housing – HOS	120,848	7,437	=	6,414	Æ	134,699
Area 133C	2029	2031, 2036	Public Housing – PRH	117,630	7,239	1201	6,243	(E)	131,112
Total	[발	7 <u>2</u> 3	121	879,916	92,871	82,447	47,000	2,568	1,104,802

Note: *The actual intake year may be adjusted subject to the construction progress.

2.4 Trip Rates

2.4.1 The traffic generation and attraction rates for domestic and non-domestic developments as stipulated in the Transport Planning & Design Manual (TPDM) and Data Record No. 439 (DR 439) published by Transport Department, which are also shown in **Table 2.3** will be adopted in the estimation of trip generation and attraction.

Table 2.3 - Trip Rates

	11					
Dov	olonment Type	Data	A	PM		
Dev	Development Type		Generation	Attraction	Generation	Attraction
Domestic (PCU/Hr/Flat)	Public Rental Housing (PRH) (Average Flat Size 30m²)	TPDM	0.0242	0.0226	0.0177	0.0201
	Public Rental Housing (PRH) (Average Flat Size 40m²)	TPDM	0.0325	0.0213	0.0196	0.0263
	Home Ownership Scheme (HOS) Housing (Average Flat Size 50m ²)	TPDM	0.0483	0.0279	0.0244	0.0351
	Retail / Shopping Complex (PCU/Hr/100m ² GFA)	TPDM	0.1285	0.1525	0.2360	0.2622
Non-domestic	Office (PCU/Hr/100m ² GFA)	TPDM	0.1045	0.1646	0.1217	0.0840
	GIC (PCU/Hr/100m ² GFA)	DR 439	0.0300	0.0070	0.0410	0.0510
	Kindergarten (PCU/Hr/School)	DR 439	14	14	1	1

2.5 Trip Generation / Attraction

2.5.1 Based on the development parameters and trip rates shown in **Table 2.2** and **Table 2.3** respectively, the estimated trip generation and attraction are shown in **Table 2.4**.

Table 2.4 – Trip Generation and Attraction (PCU/Hr)

Development	A	М	P	М
Development	Generation	Attraction	Generation	Attraction
Area 57	132	190	184	162
Area 114	107	78	67	87
Area 117	112	81	71	91
Area 119	90	56	56	76
Area 122	102	68	55	75
Area 133A	266	191	189	241
Area 133B	136	84	83	113
Area 133C	107	74	77	100
Total	1,052	822	782	945

2.6 Construction Traffic Demand for TCE Development

2.6.1 Delivery of construction material for the TCE development will be mainly by marine access, according to the latest estimation from the construction site, the peak construction traffic demand will be 40 truck/day/direction, or 17 PCU/hr/direction. Since full population intake of TCE has been assumed in year 2030, the above construction traffic demand will only apply to the design year of 2026.

- 7 -

Table 2.2 – Housing Development Parameters with Increased Intensity

Development	Preliminary Intake Year*	Intensification Policy and for Area Intensification Policy and for all other				CASE 2 Scenario 2A Increase development intensity for Areas 99, 103, 109, 133A, 133B and 133C by both HD's Site Optimisation and ExCo Intensification Policy and for all other public housing sites at TCE by HD's Site Optimisation								
		Housing Type	Domestic Flat No.	Non- domestic GFA (m²)	Average Flat Size (m²)	Housing Type	Domestic Flat No.	Non- domestic GFA (m ²)	Average Flat Size (m²)	Housing Type	Domestic Flat No.	Non- domestic GFA (m²)	Average Flat Size (m²)	
Area 99	2024	2024	PRH	3,564	6,400	30	PRH	3,564	6,400	30	PRH	3,564	6,400	30
Alea 99	2024	FKII	1,236	0,400	40	FKH	1,236	6,400	40	EKH	1,236	0,400	40	
Area 100	2024	PRH	4,000	14 160	30	PRH	4,000	14 160	30	PRH	4,000	14 160	30	
Area 100	2024	PKH	1,200	14,160	40	PKH	1,200	14,160	40	PKH	1,200	14,160	40	
Area 103	2026	HOS	1,607	6,427	50	HOS	1,843	6,930	50	HOS	2,066	6,930	50	
Area 109	2026	HOS	1,102	4,406	50	HOS	1,277	4,810	50	HOS	1,344	3,602	50	

Note: *The actual intake year may be adjusted subject to the construction progress.

2.4 Trip Rates

2.4.1 The traffic generation and attraction rates for domestic and non-domestic developments as stipulated in the Transport Planning & Design Manual (TPDM), which are also shown in **Table 2.3** will be adopted in the estimation of trip generation and attraction.

Table 2.3 - Trip Rates

Development Type		Α	М	PM		
	Development Type		Attraction	Generation	Attraction	
	Public Rental Housing (PRH) (Average Flat Size 30m²)	0.0242	0.0226	0.0177	0.0201	
Domestic	Public Rental Housing (PRH) (Average Flat Size 40m²)	0.0325	0.0213	0.0196	0.0263	
(PCU/Hr/Flat)	Home Ownership Scheme (HOS) Housing (Average Flat Size 50m²)	0.0483	0.0279	0.0244	0.0351	
	Private Housing (Average Flat Size 60m²)	0.0415	0.0141	0.0157	0.0276	

- 6 -

Dr	evelopment Type	Α	М	P	М
Development Type		Generation	Attraction	Generation	Attraction
	Private Housing (Average Flat Size 90m²)	0.1155*	0.0485*	0.0449*	0.0678*
	Retail / Shopping Complex (PCU/Hr/100m ² GFA)	0.1285	0.1525	0.2360	0.2622
Non-domestic	Office (PCU/Hr/100m ² GFA)	0.1045	0.1646	0.1217	0.0840
	Hotel (PCU/Hr/Guest Room)	0.0843	0.0832	0.0883	0.0908

Note: *Interpolated trip rates are derived for private housing of average flat size 90m² by the trip rates for private housing of average flat size 80m² and 100m².

2.5 Trip Generation / Attraction of Subsidized Housing Development of Tung Chung East

2.5.1 Based on the housing development parameters and trip rates shown in **Table 2.2** and **Table 2.3** respectively, the estimated trip generation and attraction are shown in **Table 2.4**.

Table 2.4 – Trip Generation and Attraction (PCU/Hr)

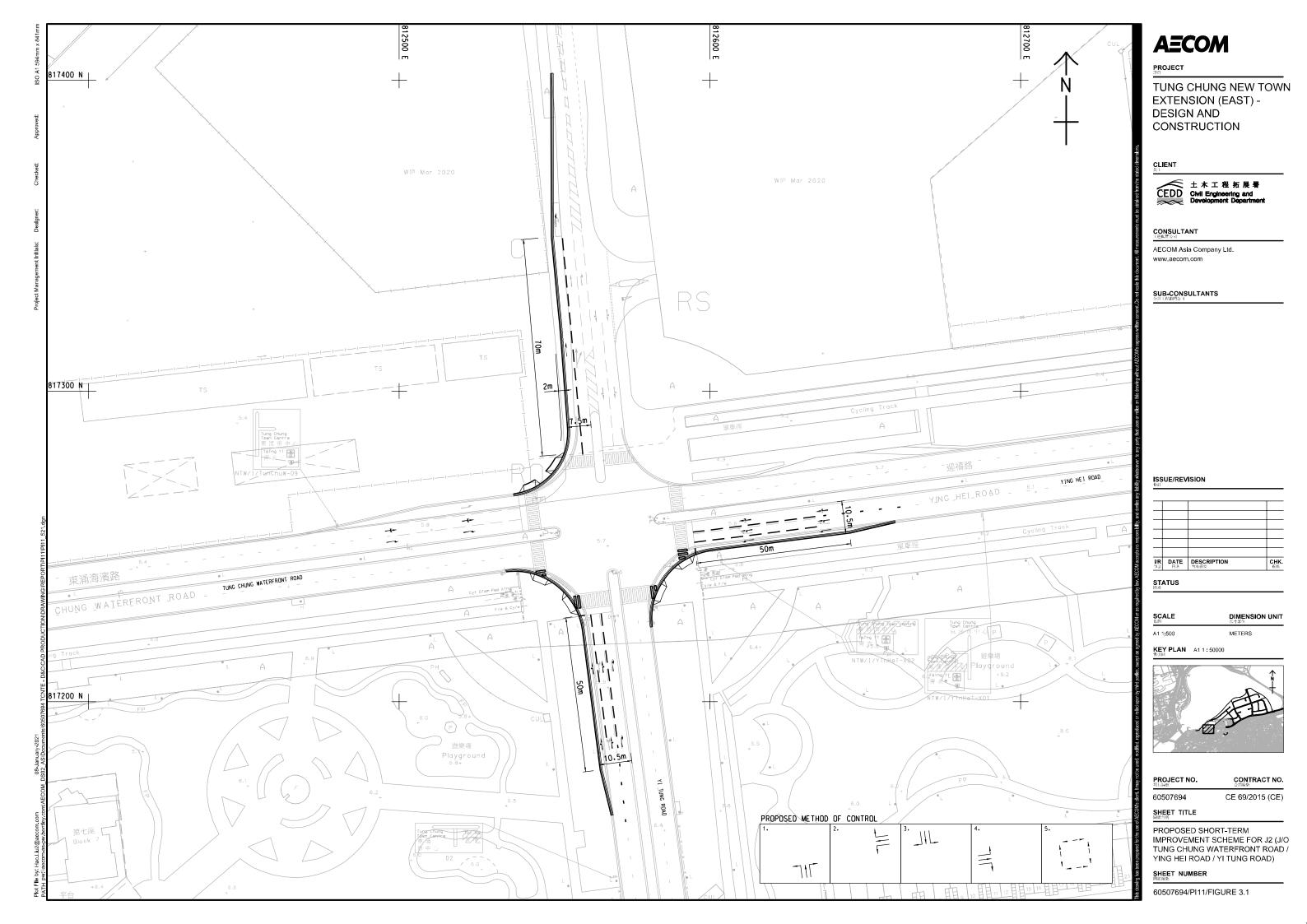
	CASE 1						CA	SE 2 Scer	nario 1		CASE 2 Scenario 2A					
Development	both HI Intensif	both HD's Site Optimisation and ExCo					D's Site Op fication Po	otimisation licy and fo	sity for Are and ExCo r all other p o's Site Opt	oublic	103, 10 Site Op Policy	ncrease development intensity for Areas 99, 103, 109, 133A, 133B and 133C by both HD's Site Optimisation and ExCo Intensification Policy and for all other public housing sites at ICE by HD's Site Optimisation				
	Housing	А	М	Р	М	Housing		М	Р	М	Housing	A	М	Р	м	
	Туре	Generation	Attraction	Generation	Attraction	Туре	Generation	Attraction	Generation	Attraction	Туре	Generation	Attraction	Generation	Attraction	
Area 99	PRH	147	130	102	120	PRH	147	130	102	120	PRH	147	130	102	120	
Area 100	PRH	167	151	127	148	PRH	167	151	127	148	PRH	167	151	127	148	
Area 103	HOS	86	55	54	73	HOS	98	62	61	83	HOS	109	68	67	91	
Area 109	HOS	59	37	37	50	HOS	68	43	43	57	HOS	70	43	41	57	

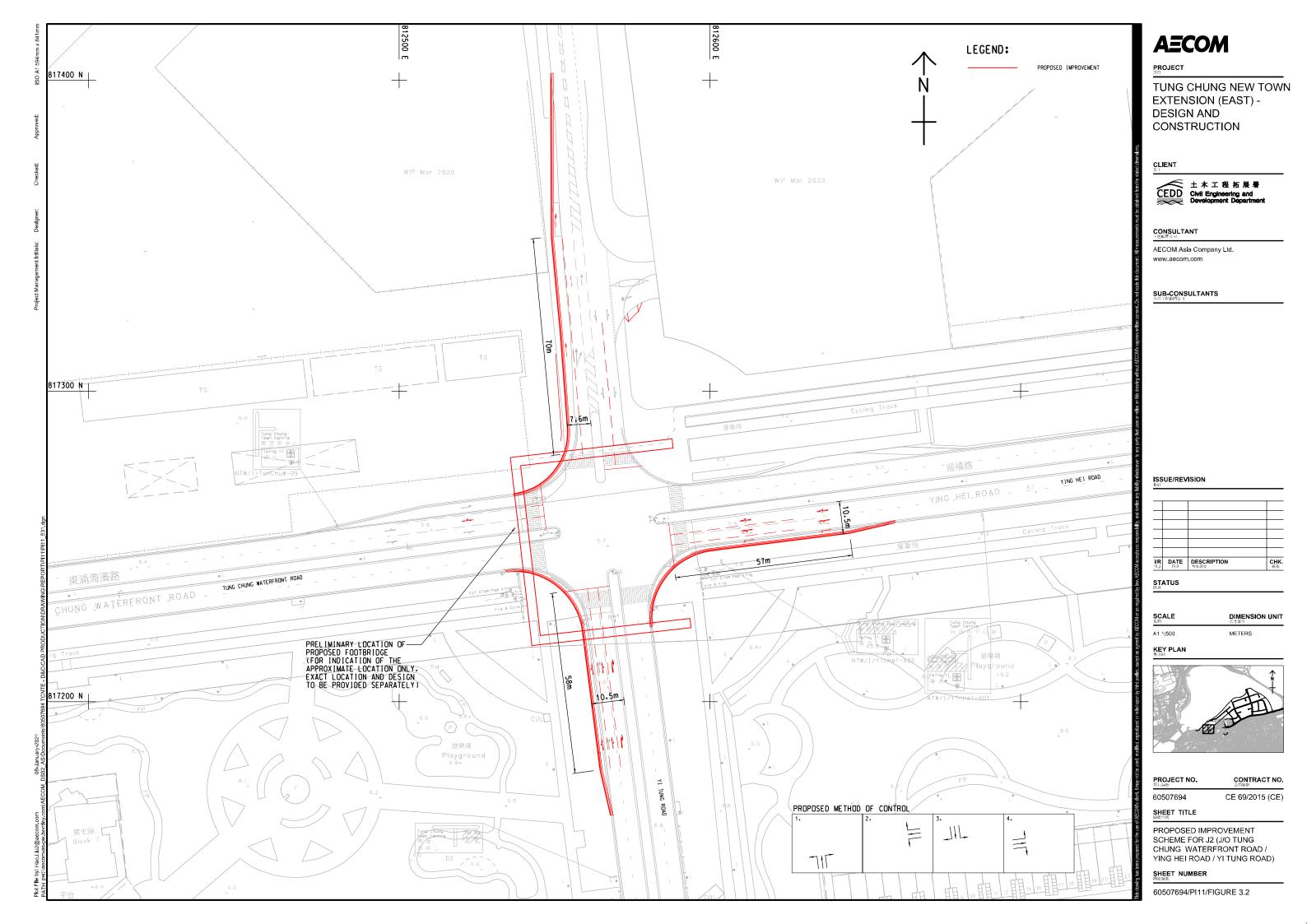
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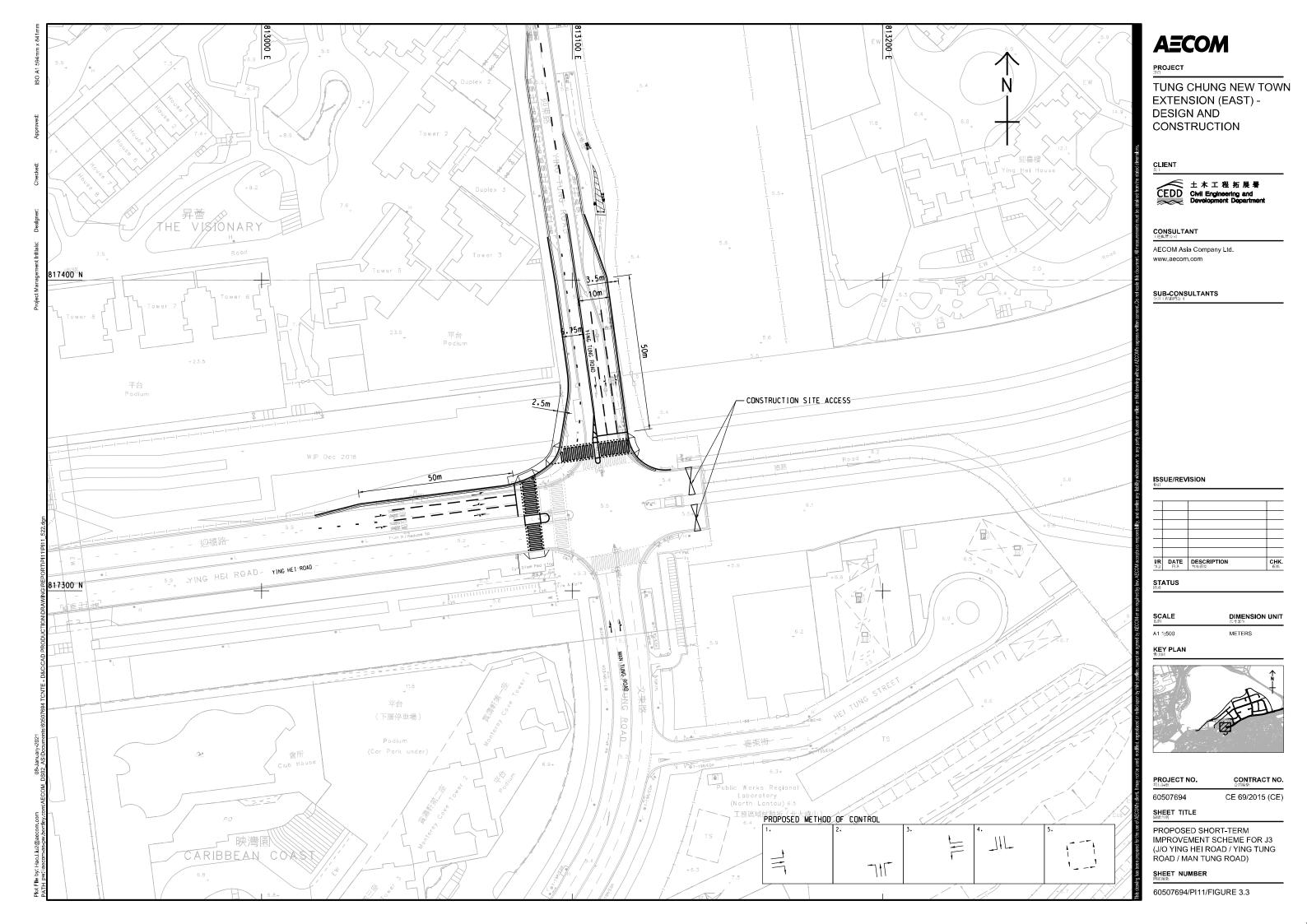
Appendix C

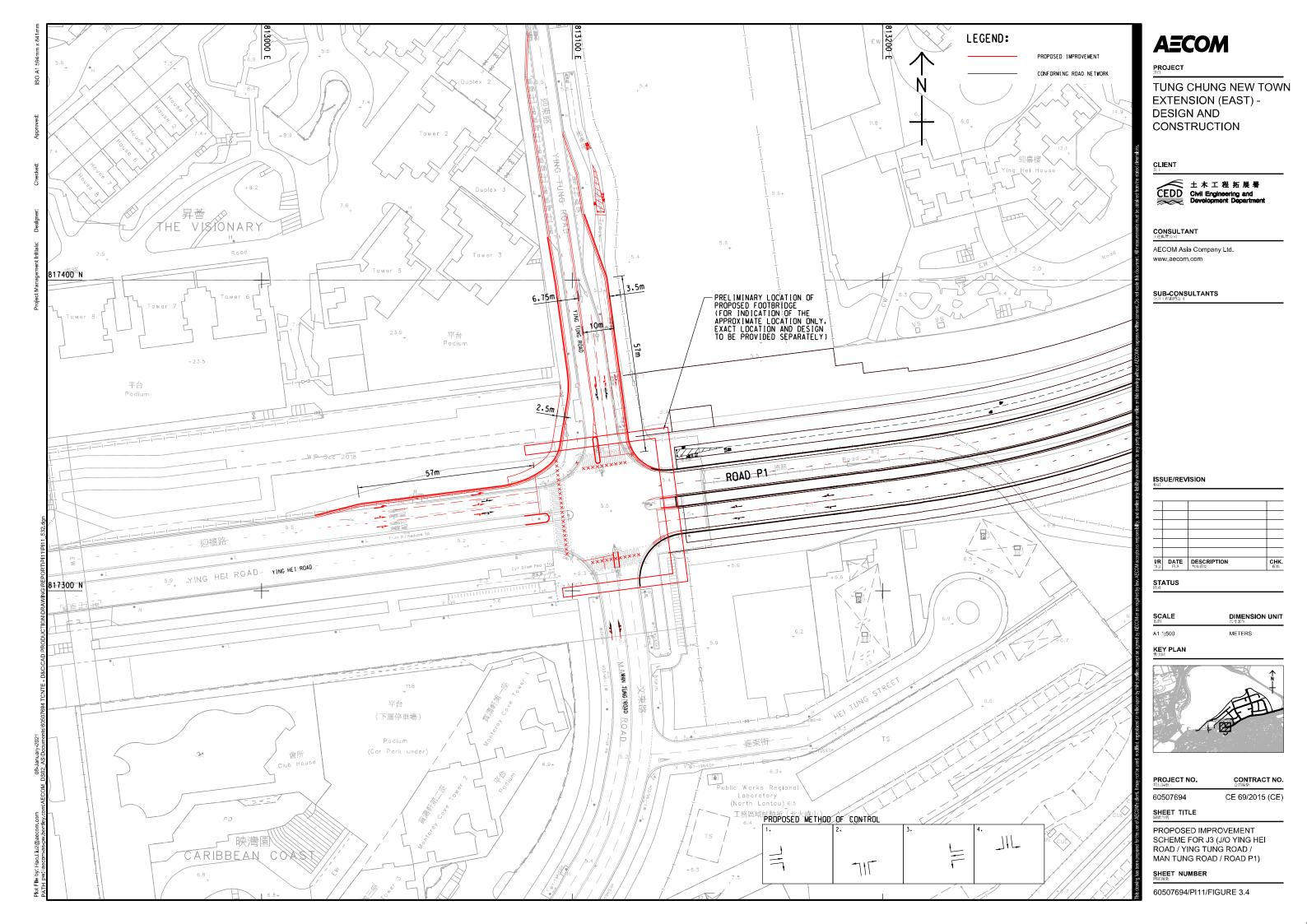
Proposed Junction Improvement Measures under TCNTE (East)
Contract

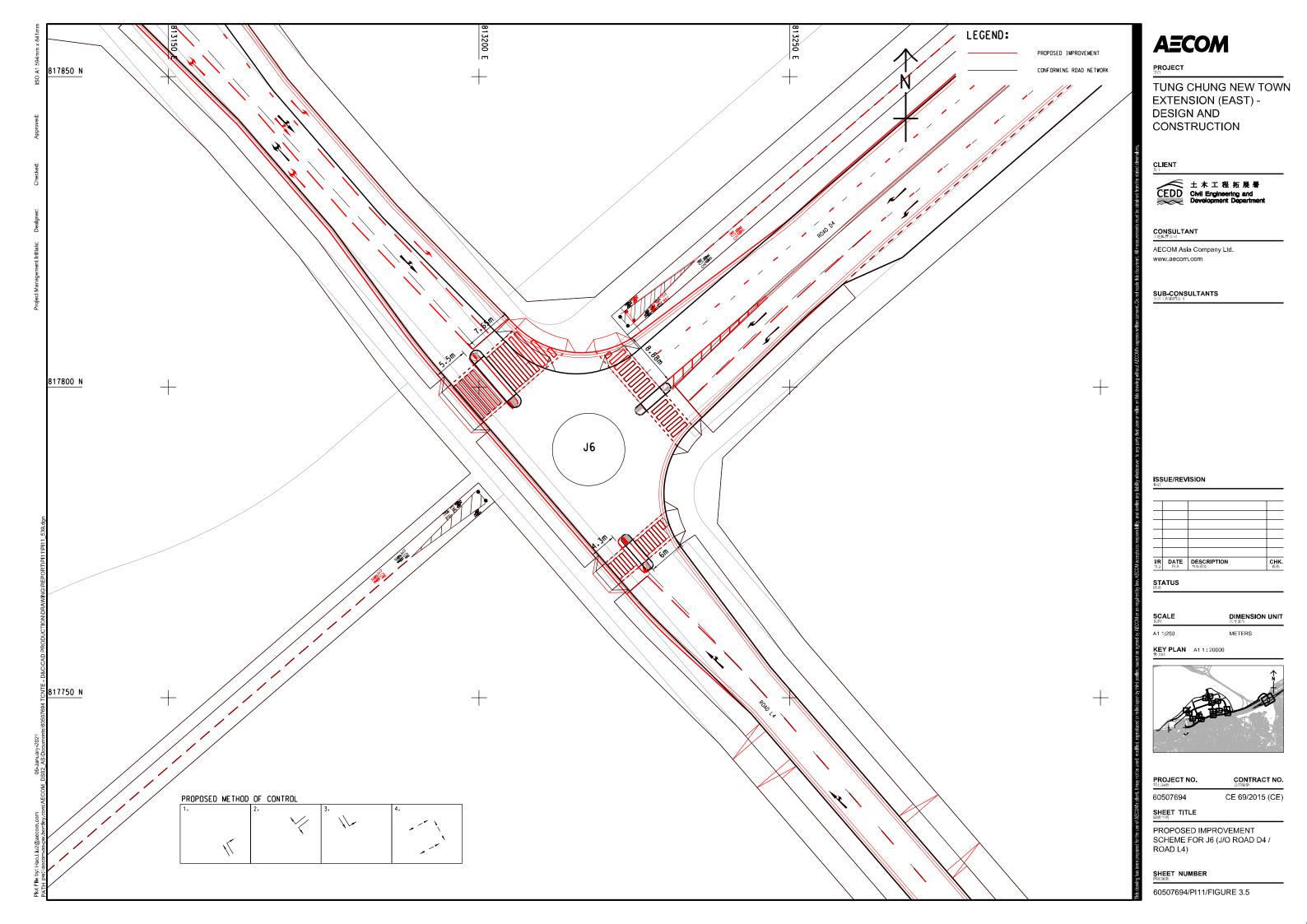


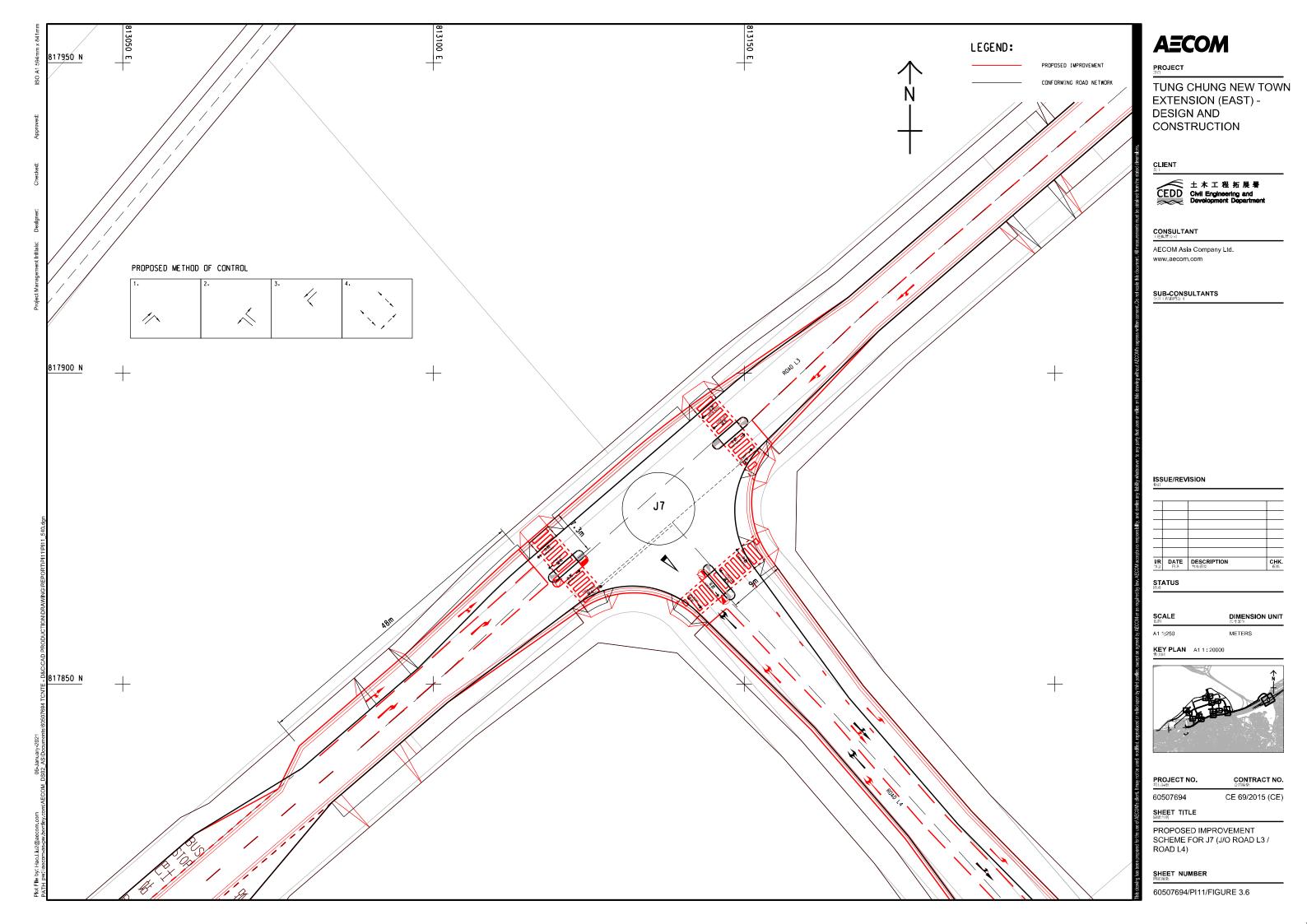


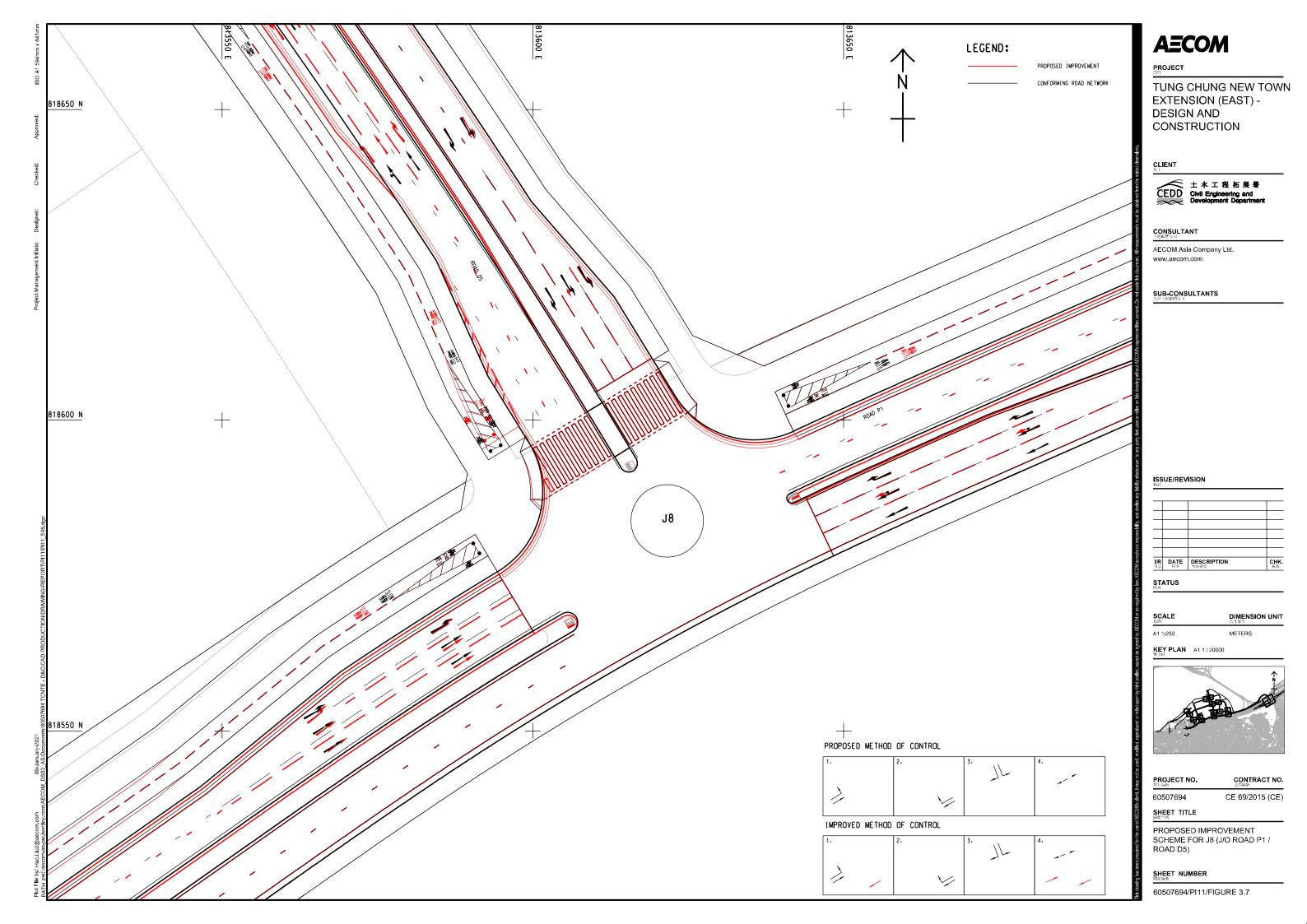


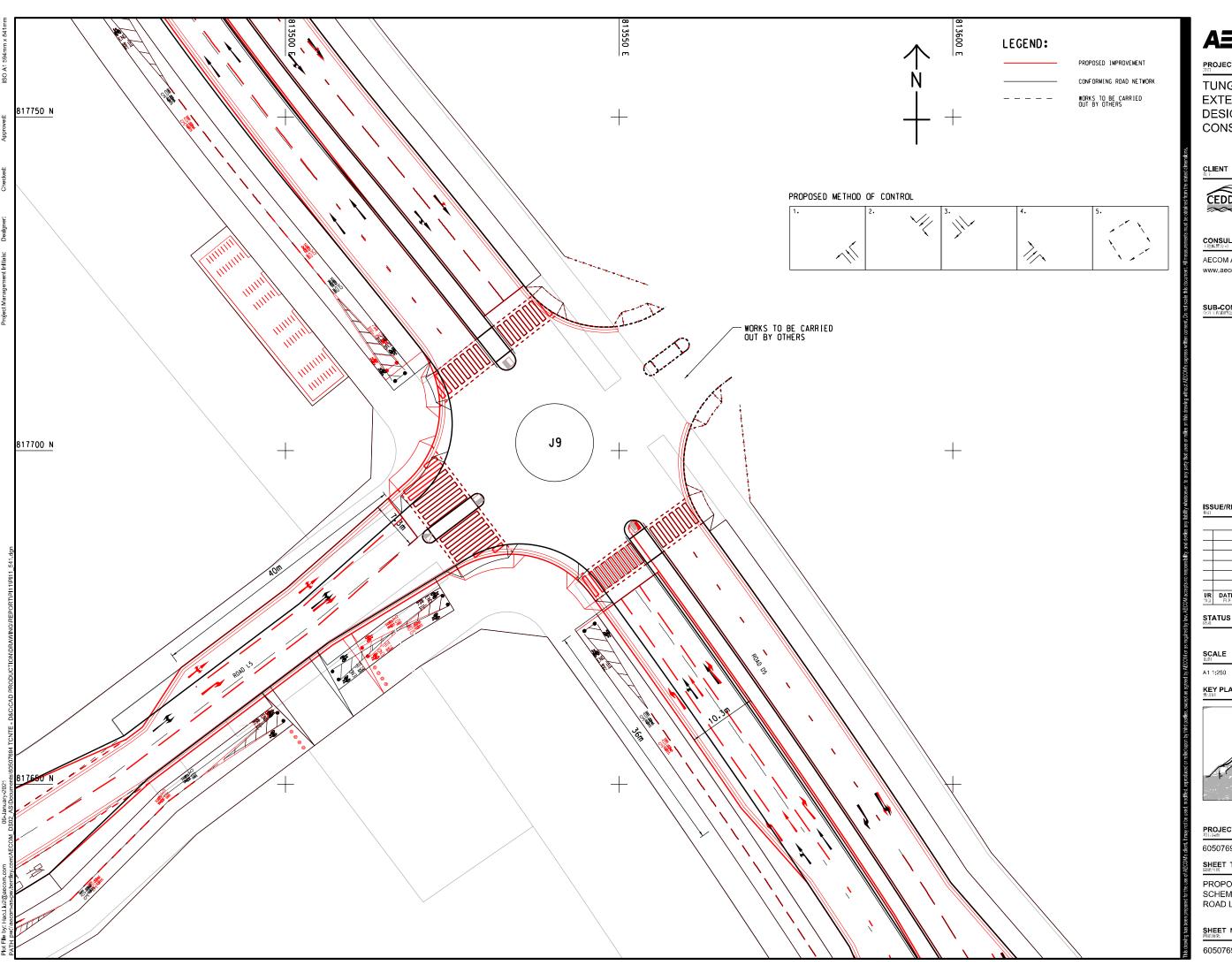












AECOM

PROJECT

TUNG CHUNG NEW TOWN EXTENSION (EAST) -DESIGN AND CONSTRUCTION



土木工程拓展署 CEDD Civil Engineering and Development Department

CONSULTANT

AECOM Asia Company Ltd.

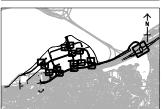
SUB-CONSULTANTS

ISSUE/REVISION

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I/R ∕≱⊞	DATE ⊟⊯	DESCRIPTION 为率消费	CHK.

STATUS

KEY PLAN A1 1:20000



PROJECT NO.

CE 69/2015 (CE)

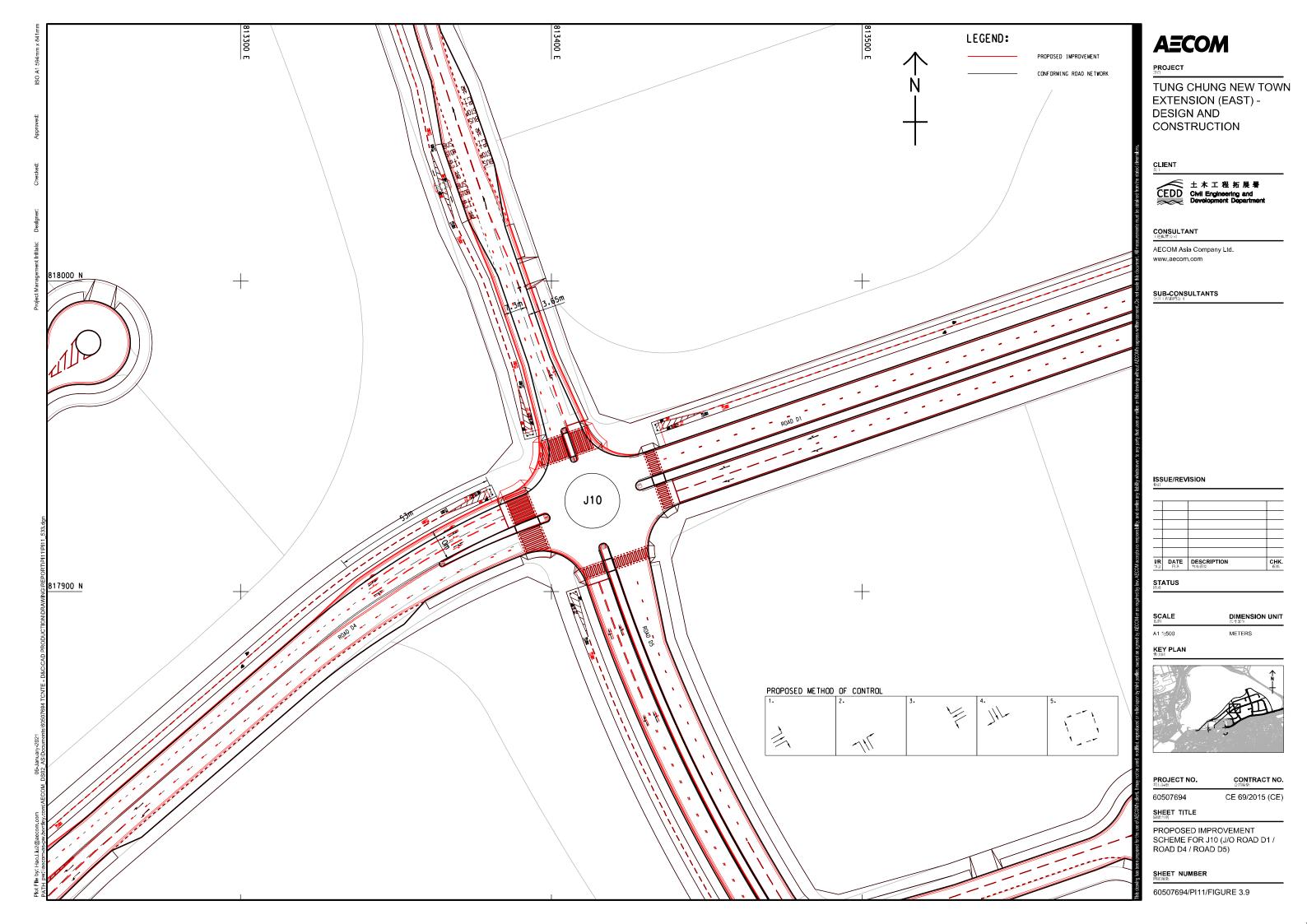
CONTRACT NO.

SHEET TITLE

PROPOSED IMPROVEMENT SCHEME FOR J9 (J/O ROAD D5 / ROAD L5)

SHEET NUMBER

60507694/PI11/FIGURE 3.8



Atkins China Limited 13th Floor Wharf T&T Centre Harbour City, Tsim Sha Tsui Kowloon, Hong Kong

info.hk@atkinsglobal.com (852) 2972 1000 **General Email:**

Telephone Fax (852) 2890 6343

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COMMENTS	RESPONSES
From: Miss Fanny HUI, of Engr/Islands 2/TD (Email date	d 21 December 2021)
Island Section We have no further comments on the TIA. As CEDD is fine-tuning the improvement measure at J9 J/O at Road D1, D4 and D5, please be reminded that HD shall update the TIA accordingly.	Noted.
From: Miss Fanny HUI, of Engr/Islands 2/TD (Email date	d 17 December 2021)
Island Section Please advise the proposed bus routes observing the bus laybys concerned for our assessment.	Please refer "Appendix C1-TCE Bus Development plant" proposed under CEDD's TIA Case 2 Scenario 2A (Final) for bus routes at the captioned area. Relevant document have been linked below for easy reference: https://drive.google.com/file/d/1JmhSg1p5Hv5MIgyD7NG4Cf4LJdlBeG5v/view?usp=sharing
From: Miss Fanny HUI, of Engr/Islands 2/TD (Email date	d 16 December 2021)
Para. 1.1.3 – Please clarify if there is any typo for the sentence "i.e. from total of 1,607 flats to 1,344 flats."	Please be clarified that there is a typo. Para. 1.1.3 has been revised as "i.e. from total of 1,102 flats to 1,344 flats".
Table 2.2 – please revise the title of the summary table to "Proposed Parking and Loading/ Unloading Facilities Provision in Area 109.	Table 2.2 has been revised accordingly.
3. R-to-C item 2, Table 2.2 – please advise the GFA for 'Retail and Commercial' and 'District Maintenance Office' for Area 109.	Total GFA for "Retail and Commercial" and "District Maintenance Office" for Area 109 is 550 sqm and 400 sqm respectively. Table 2.2 has been revised to include the GFA for the concerned facilities.

	COMMENTS		RES	SPONSES			
4	R-to-C item 3(a) – please note that the response to our comments "According to TPDM, the maximum operating cycle time should be limited to 90 seconds when designing the new junctions. Please update the performance of new junctions (J4 to J9) using 90	Junction performance for Junctions J4 to J8 adopting 90 seconds cycle times under year 2036 Case 2 Scenario 2B are extracted from CEDD's TIA and summarized in Table 1 : Table 1 – Junction Performance					
	seconds as the cycle time." Is not acceptable. Please include assessment on performance of new junctions	Index	Junctions	Year 2036 Case	e 2 Scenario 2B (2)		
	(J4 to J9) adopting 90s into the TIA.	(1)		AM	PM		
		J4	Road L4 / Road L5	33%	26%		
		J5	Road D4 / Road L4	63%	52%		
		J6	Road L3 / Road L4	28%	28%		
		J7	Road P1 / Road D5	40%	37%		
		J8	Road D5 / Road L5	25%	38%		
		accep CEDD for Ju	(2) Refer to Annex own in Table 1 , Junctable performance a still reviewing the nction J9. It is expondesign which full	1. ctions J4 to J8 o dopting 90 seco design and jund pected that CEI	onds cycle time. ction performance DD will provide a		

 R-to-C item 7 – Please note that the response to our comments "Figure 2.3 – please provide LOS of the footpath along the pedestrian routings" is not acceptable. Please provide assessment on the LOS along pedestrian routeing in TIA. With reference to CEDD's report (Ref. PI24-02), the estimated morning peak hour passenger demand for Area 109 and adjacent development as summarized in below **Table 2**:

Table 2 - Estimated Passenger Demand

Area	109	110	106C		
Population	4,113	1,707	1,372		
Daily Person Trips	6,989	2,901	2,331		
Morning Peak Hour to Daily Total Trip Rates (1)	12%				
Morning Peak Hour Person Trips (2)	839	348	280		
Modal Split for Rail (3)	54%				
Modal Split for Bus / GMB (3)	25%				
Morning Peak Hour Person Trips for Rail (4)	457	190	152		
Morning Peak Hour Person Trips for Bus / GMB ⁽⁵⁾	208	86	69		

Remarks: (1) Refer to CEDD's report (Ref. PI24-02) Para. 4.2.2.

- (2) Morning Peak Hour Person Trips = Daily Person Trips x Moring Peak Hour to Daily Total Trip Rates.
- (3) Refer to CEDD's report (Ref. PI24-02) Table 4.2.
- (4) Morning Peak Hour Person Trips for Rail = Morning Peak Hour Person Trips x Modal Split for Rail.
- (4) Morning Peak Hour Person Trips for Bus / GMB = Morning Peak Hour Person Trips x Modal Split for Bus / GMB

Considering the anticipated pedestrian routings for the rail and bus / GMB trips of Areas 109, 110 and 106C, the walkway assessments for the footpaths on the north and west of Area 109 are shown in below **Table 3**:

Table 3 – Walkway Assessments

	<u> </u>		
Footpath	Road L3 Southern	Road L4 Eastern	
Clear Width (m)	4.0	4.0	
Effective Width (m) (1)	3.0	3.0	
Morning Peak Hour Flows (pph)	940 (2)	1,162 (3)	
Flow Rate (ppm/m) (4)	6.3	7.7	
LOS	А	А	

Remarks: (1) Effective Width = Clear With – Dead Width (0.5m at each side of walkway).

- (2) Include peak hour trips for rail and bus / GMB for Areas 109 and 110.
- (3) Include peak hour trips for rail and bus / GMB for Areas 109, 110 and 106C.
- (4) Flow Rate = Morning Peak Hour Flows / 60min x 1.2 (Peak Factor) / Effective Width.

As shown in **Table 3**, the footpaths adjacent to Area 109 could operate with LOS A.

COMMENTS		RESPONSES	
Fro	om: Miss Fanny HUI, of Engr/Islands 2/TD (Email date	d 1 December 2021)	
Island Section Appendix 5			
1. Since there is traffic assessment for Case 2 Scenario 2B on Tung Chung East developments being conducted by CEDD, the TIA shall also include assessment adopting traffic data of Case 2 Scenario 2B for consideration.		the assessment.	
2.	Table 2.3 – (a) Car parking spaces shall be provided in ratio 1 per 11 flats as agreed in the planning brief. Please review the number of parking space in TC 103. Besides, the scenarios for housing developments in Tung Chung have not been confirmed yet. Parking provision shall be calculated based on scenario with larger number of flats.	as agreed in the planning brief. The parking provision fo TC 103 will be addressed in separate TIA study and furthe liaised with TD.	
	(b) Please provide the retail GFA for consideration on the provision of car parking space (R&C) and L/UL bay (R&C) for TC103 and TC109.	The total retail GFA is approx. 899 sqm. The adopted parking requirements have been included in Table 2.3.	
	(c) Please provide justification on provision of 3nr motorcycle parking spaces only in TC109.	Total 12 nos. motorcycle parking are proposed for TC 109.	
3.	Table 5.2 – (a) According to TPDM, the maximum operating cycle time should be limited to 90 seconds when designing the new junctions. Please update the performance of new junctions (J4 to J9) using 90 seconds as the cycle time.	Noted. The designs of the new junctions (J4 to J9) are proposed by CEDD. This requirement will be conveyed to CEDD for their consideration.	
	(b) Please revise the sentence in the remarks to "Provision in accordance with the updated Hong Kong Planning Standards and Guidelines (HKPSG) flat mix."	The remarks have been revised accordingly.	
It is noted that the improvement measures to be conducted by CEDD have been incorporated in the TIA. Please ensure the TIA has been circulated to CEDD for comment.		Noted.	
5.	Para. 5.2.4 – please beef up the paragraph.	Para. 5.2.4. has been further elaborated.	
6.	Figure 2.2 – (a) Please advise the location of car park for Area 109.	The car park of TC 109 will be located within TC 109 on basement floor.	
(b) Please include swept path at the vehicular access in the TIA report.		Swept path analysis results for vehicular access has been included in Appendix A.	

COMMENTS		RESPONSES	
7.	Figure 2.3 – please provide LOS of the footpath along the pedestrian routings.	With reference to the design proposed by CEDD, the footpath widths in Tung Chung East are ranging from 3.25m to 4.0m. These footpaths could accommodate approx. 3,105pph to 4,455pph while operate with LOS C.	
8.	Appendix A- please ensure the drawings are updated and tally with CEDD's proposals.	Noted.	
	nsport Operation (NT) Division pendix 5		
9.	Please advise the estimated walking distance from Area 103 and 109 to the PTI in Area 99.	The walking distance from TC 109 to the PTI in Area 99 is approx. 270m.	
10.	Please advise whether there are planned bus laubys near Area 103 and 109.	There are planned bus laybys at Road D5. The location is shown in Figure 2.3.	
Fro	om: Miss Fanny HUI, of Engr/Islands 2/TD (Email date	d 16 June 2021)	
I refer to your captioned letter dated 26 March 2021. Please find our comment as follows:			
Isla	and Section		
1.	Please provide layout plan for the future vehicular and pedestrian access of the developments at Area 103 and Area 109 for review.	Noted. Please refer to the Figure 2.2.	
2.	Please assess the LOS for the footpath connecting to the developments.	Please note a footpath network of sufficient width (mostly of 4.0m or above) has been provided in the adjacent road network design. The width will achieve level of service C or above. CEDD is reviewing with the walkability team of TD on the opportunity of further enhancing the pedestrian network.	
3.	Please provide the pedestrian routeing of the developments to the public transport facilities in the vicinity.	Noted. Please refer to the Figure 2.3.	
4.	Table 2.2 - The parameters of the developments shall be consistent with the parameters in TIA for Case 2 Scenario 2A under TCNTE(TCE). Please review the parameters in the table.	The parameters of the developments of Scenario L under this submission are the most updated parameters to suit HKHA's housing development and are slightly different from that of Case 2 Scenario 2A under TCNTE(TCE). Nevertheless, the latest parameters under this submission will be slightly less than that of the TIA of TCNTE(TCE). The associated traffic impact should be reduced and therefore the assessment results of CEDD's TIA is considered more conservative and still valid to be adopted in this submission.	

COMMENTS		RESPONSES	
5.	Table 4,2 - Parameters in Table 4.2 shall tally with the parameters in Table 2.2.	This report is to summarize the results of the TIA for Case 2 Scenario 2A under CEDD project to support the Section 16 application of TC 103 and 109. The results of the traffic and transport impact assessment under this submission were summarized from the TIA for Case 2 Scenario 2A under TCNTE(TCE). Since the latest parameters of Area 103 (i.e. 2,014 flats) under this submission is less than the TIA under TCNTE(TCE) (i.e. 2,060), there will be no adverse impact on the traffic assessment and the results under Chapter 5 of this report summarized from the TIA under TCNTE(TCE) are considered valid.	
6.	Table 5.2 - The calculation for assessment of junction performance shall be provided for review. Please note that cycle time for performance assessment at the new junction shall be 90s.	This submission summarized the assessment result of the Case 2 Scenario 2A under CEDD's project to support the Section 16. For details, please refer to CEDD's TIA Report (Ref. PI18-04 of Agreement no. CE69/2015(CE)). The adoption of 90s cycle time for performance assessment at new junction has been considered in CEDD's TIA Report.	
7.	Table 5.4 ~ In general, v/c ratio of road link < J= 0.85 is considered to be acceptable with sufficient capacity to cope with the volume of vehicular traffic under consideration. Please therefore advise the mitigation measures to be taken at L3 North Lantau Highway (between Tung Chung East Interchange and Shun Long Road) WB due to the adverse traffic impact arising from the development.	As advised by CEDD, although the V/C for the westbound of L3 North Lantau Highway in the morning peak in year 2031 will likely be exceeding the desirable V/C of 0.85, based on the recently released guideline from TD (Departmental Circular No. 3/2020 – Supplementary notes to Guidelines and Requirements of Traffic Impact Assessment), the road will still operate within its design capacity (i.e. V/C < 1.0). More importantly, the concerned road sections are located at a distance away from the Tung Chung East development and these road sections are strategic road links where improvement measures on this strategic road link is suggested to be conducted by other relevant authorities.	
8.	Para. 6.1.1 - The number of flats provided under intensification of proposed housing development at Areas 103 and 109 shall tally with the number of flats in the TIA for Case 2 Scenario 2A under TCNTE(TCE).	The parameters of the developments under this submission are the most updated parameters and therefore may not tally with that of the TIA for Case 2 Scenario 2A under TCNTE(TCE). Moreover, the latest parameters under this submission will be slightly less than that of the CEDD's TIA study. The associated traffic impact should be reduced and therefore the assessment results of CEDD's TIA is considered valid and is adopted in this submission.	
9.	Please provide details of the proposed parking provision including number of parking spaces for vehicles and bicycles, location and access of carparks and details of loading/unloading bays for review.	Please refer to Table 2.3.	

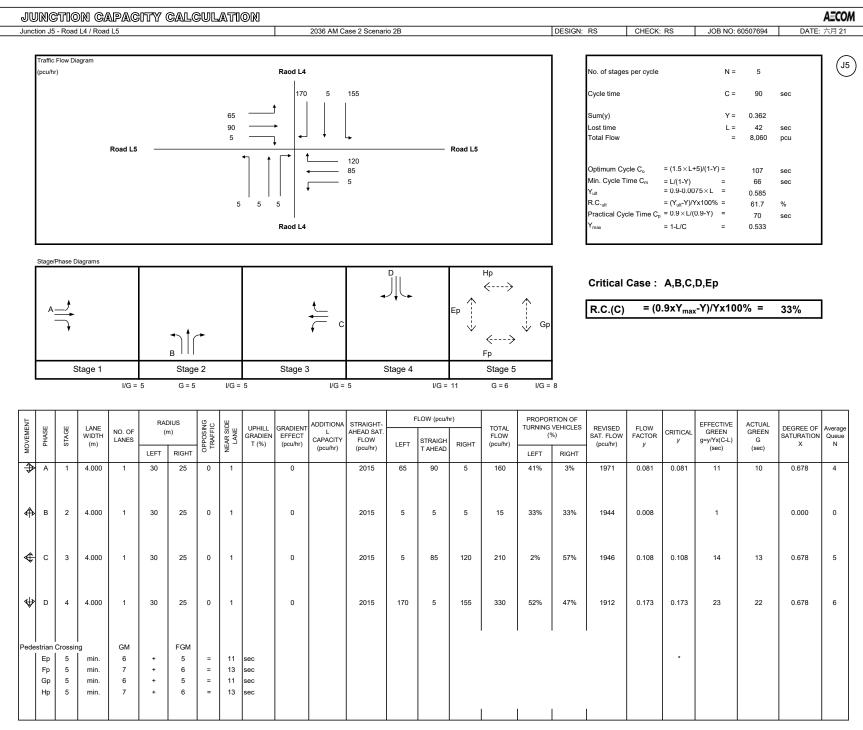
COMMENTS	RESPONSES	
10. Please confirm any road improvement works were identified in the TIA but were not included under TCNTE projects by CEDD. HD shall liaise with CEDD for carrying out of the road improvement works identified or else the road improvement works identified shall be carried out by HD before intake of population of subject developments,	Please note that the road improvement works under CEDD project have accommodated the site optimization scheme of Case 2 Scenario 2A and also the proposed Scheme (Scenario L) of this submission. Please note that there will not be any further road improvement works to be carried out by HD.	
Major Projects Division		
11. Please advise the assessment and details of pedestrian connectivity between the proposed development and TCE railway station taking into account the impact due to the intensification of development.	Please note a footpath network of sufficient width (mostly of 4.0m or above) has been provided in the adjacent road network design. The width will achieve level of service C or above. CEDD is reviewing with the walkability team of TD on the opportunity of further enhancing the pedestrian network.	
12. Please review the traffic and transport facilities (e.g. layby, cycle parking area, picking up / dropping off) in the vicinity of the TCE railway station to support the intensification of development.	As advised by CEDD, the facilities in TCE railway station will support the intensification scheme and the design of the facilities relating to the railway station shall be addressed by MTR separately.	
Traffic Control Division		
Detail RC calculation should be supplemented for vetting,	This report is to summarize the results of the TIA for Case 2 Scenario 2A under CEDD project to support the Section 16 application of TC 103 and 109. There is no change/update on the RC calculation by this study. For detailed RC calculation, please refer to their RC calculation sheets (Ref. PI18-04 of Agreement no. CE69/2015(CE)).	
14. Due to substantial changes in the development and traffic condition in the vicinity, a more updated traffic flow data should be surveyed and established. It may not be appropriate to adopt the "Year 2019 Observed Vehicular Traffic Flow" for the purpose of TIA.	This report is to summarize the results of the TIA for Case 2 Scenario 2A under CEDD project to support the Section 16 application of TC 103 and 109. CEDD advised that the year 2019 observed traffic flow is the best available information for the purpose of TIA. Firstly, due to the impact of COVID-19, traffic survey at the present time will not be representing the normal traffic situation. In addition, for the consistency with other Tung Chung traffic studies including Tung Chung West, the use of the Year 2019 observed traffic flow is considered appropriate.	
15. It is anticipated that the population intake year for Area 109 and 103 will be 2025 and 2026 respectively according to Para 2.3. Please check against the programme of the "Proposed Junction Improvement Measures under TCNTE (East) Contract".	As advised by CEDD, the completion of roads in the vicinity of Areas 103 and 109 are in July 2023, which is consistent with their occupation permit and population intake (excluding EOT).	
Transport Planning Division		

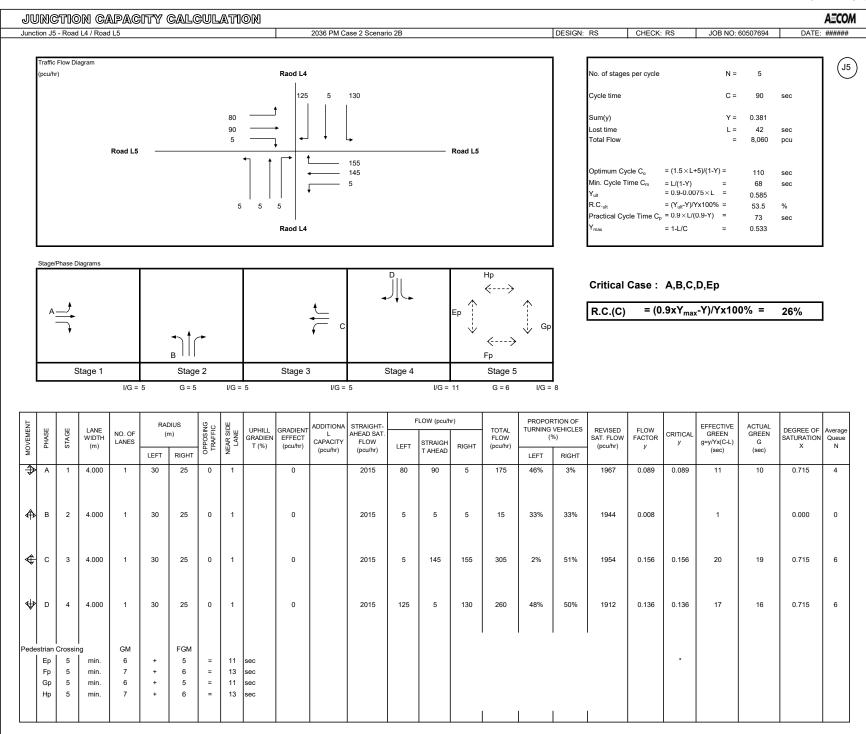
COMMENTS		RESPONSES	
16.	Para. 1.1.3 and Table 2.2 - The total domestic flat no. and non-domestic GFA of Area 103 and 109 in Case 2 Scenario 2A under Agreement No. CE 69/2015(CE) are inconsistent with this submission. Please clarify.	The parameters of the developments of Scenario L under this submission are the most updated parameters to suit HKHA's housing development and are slightly different from that of Case 2 Scenario 2A under TCNTE(TCE). Nevertheless, the latest parameters under this submission will be slightly less than that of the TIA of TCNTE(TCE). The associated traffic impact should be reduced and therefore the assessment results of CEDD's TIA is considered more conservative and still valid to be adopted in this submission.	
17.	Para. 4.3.1 - Please provide the details of trip generation from other development sites within TCE and clarify if those sites especially Area 99 under the previous Section 16 application are considered in the traffic assessment,	This report is to summarize the results of the TIA for Case 2 Scenario 2A under CEDD project to support the Section 16 application of TC 103 and 109. For details of assumption, please refer to Table 2.4 of CEDD's TIA for Case 2 Scenario 2A (Ref. PI18-04). CEDD has confirmed that the traffic generation for Area 99 has been considered in the traffic assessment.	
18.	Tables 5.2, 5.3 and 5,4 - Please include the reference case without the proposed housing developments at Areas 103 and 109.	This report is to summarize the results of the TIA for Case 2 Scenario 2A under CEDD project to support the Section 16 application of TC 103 and 109. Since reference case is not available in their assessment, the reference case is not available in this summary.	
	nsport Operations (NT) Division and Bus and Railway		
19.	Para. 3.2- a) Please advise what is the basis of the suggestions on public transport services as mentioned in para. 3.2.3. Please advise the proposed new bus routes as stated in para. 3.2.3 refers to franchised bus routes. Apart from bus, please also advise any suggestions on other transport modes.	This report is to summarize the results of the TIA for Case 2 Scenario 2A under CEDD project to support the Section 16 application of TC 103 and 109. For detailed public transport service proposals in Tung Chung East, please refer to Section 4 of CEDD's TIA study (Ref. PI18-04). The para. 3.2.3 has been removed to avoid confusion.	
	b) Please be advised that TD will review the franchised bus network and service level in Tung Chung under Route Planning Programme each year. Subject to the public transport network closer to the population in-take, TD will review the franchised bus network of these areas and formulate suitable measures/ arrangement as appropriate in order to suit passengers' travelling pattern and address passenger demand in due course,	Noted. The comment on the planning of public transport at TCNTE has been forwarded to CEDD and CEDD's consultant for their information and consideration. It is understood that CEDD would review the public transport planning at TCNTE holistically.	

COMMENTS	RESPONSES		
c) Please be advised that the existing and proposed franchised buses arrangement to Tung Chung Station, North West New Territories (NWNT)and Hung Hom as follows:			
I. It is proposed to introduce a special departure NLB route 37A to Operate between Area 54 and Tung Chung Station in the morning peak on Monday to Fridays (except public holiday) and extend NLB route 37M onto road L3 to serve the population in Area 54 except during the morning peak on Monday to Fridays (except public holiday) under the Route Planning Programme;	Ditto.		
II. It is proposed to introduce LW route E36A between Tung Chung (Yat Tung Estate) and Yuen Long (Tak Yip Street) via Tung Chung North, Tuen Mun, Tin Shui Wai under the Tuen Mun-Chek Lap Kok Tunnel bus route diversion arrangement. Please note that there will be a bus-bus interchange stop to facilitate passengers interchanging to/from NWNT; and	Ditto.		
III. Currently, CTB route E21X operates a franchised bus route between Hung Horn Station and Tung Chung (Mun Tung Estate) via Tung Chung North.	Ditto.		
In view of the new and existing franchised bus routes above, please review and update the proposals as appropriate. If service improvement is required, please advise the proposed headway and estimated patronage.	Ditto.		
d) Please advise of the commuting needs of passengers between TCE and Sky City development/ Siu Ho Wan have been taken into account.	This report is to summarize the results of the TIA for Case 2 Scenario 2A under CEDD project to support the Section 16 application of TC 103 and 109. For detailed public transport service proposals in Tung Chung East, please refer to Section 4 of CEDD's TIA study (Ref. PI18-04).		

COMMENTS	RESPONSES	
20. Chapter 4 & 5 - Please advise if the existing and projected number of trips operated by franchised buses have been incorporated into the traffic forecasts and the traffic and transport impact assessment. If not, please also include the number of existing number of bus trips and the projected number of bus trips in future along with the growth of the passenger demand/population in-take.	CEDD confirmed HA that existing and projected number of trips operated by franchised buses have been considered in the assessment.	
21. Appendix A - Please make sure the roads, junctions, laybys under study are able to facilitate the maneuvering of franchised buses which are 12.8-metre in length.	The design of roads, junctions and laybys are under the design of CEDD and relevant swept path analysis for 12.8m double deck bus are presented in the CEDD's TIA study (Ref. PI18-04).	
We reserve our further comments upon submission of a full TIA for the proposed housing development at Tung Chung Areas 103 and 109. Please ensure that comments have been sought from all relevant departments.	Noted.	
This is a coordinated reply from Transport Department.		
From: Mr. Timothy KAU, Town Plnr/Islands 7 of Planning	g Department (Email dated 9 April 2021)	
Please find below SKIs DPO's comment on the captioned report.		
 Para. 2.1.1 - Site Location The second sentence should be read as 'The Proposed Development is surrounded by planned residential developments—zone (Tung Chung Areas 99, 100 and 110, etc.)'. 	Noted and has been revised.	
Para. 3.1.2 - Road Network The second sentence should be read as 'It will serve as the major linkage between Tung Chung Town Centre and TCE'.	Noted and has been revised.	
 Para. 4.3.1 - Other Planned Development Please clarify whether the proposed school sites in Area 89 have been taken into account, as they are not covered in the three items as mentioned in the paragraph. 	Please be clarified that proposed school sites in Area 89 has been taken into account as shown in Diagram 4.1.	

COMMENTS	RESPONSES
Table 4.2 - Traffic Generation of the Proposed Development As mentioned in Table 2.2, the no. of SSF flats in Area 103 is 2,020. However, 2,066 SSF flat is adopted as assumption for traffic generation calculation. Please explain such discrepancy.	This report is to summarize the results of the TIA for Case 2 Scenario 2A under CEDD project to support the Section 16 application of TC 103 and 109. The results of the traffic and transport impact assessment under this submission were summarized from the TIA for Case 2 Scenario 2A under TCNTE(TCE). Since the latest parameters of Area 103 (i.e. 2,014 flats) under this submission is less than the TIA under TCNTE(TCE) (i.e. 2,060), there will be no adverse impact on the traffic assessment and the results under Chapter 5 of this report summarized from the TIA under TCNTE(TCE) are considered valid.
Para. 5.1.2 and Appendix A - Junction Improvement Scheme It is noted that Transport Department is undertaking a review and formulating measures to enhance walkability in Tung Chung East, which may have interface issue with the proposed improvement scheme by CEDD. Please closely liaise with TD and CEDD on the latest proposed improvement measures and update the assessment if necessary.	Noted. Please be clarified that the junction improvement scheme mentioned in Para 5.1.2 and Appendix A will be carried out by CEDD. No further improvement measure is required by HA.





(J6

JUNCTION CAPACITY CALCULATION

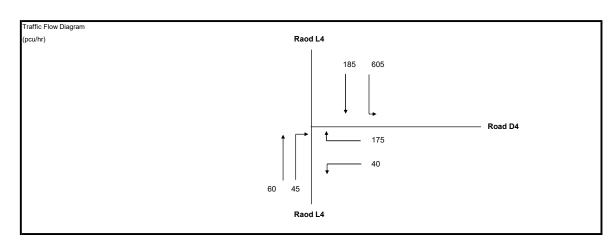
2036 AM Case 2 Scenario 2B (Improvement)

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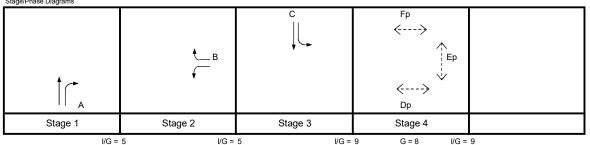
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No. of stages per cycle		N =	4	
Cycle time		C =	90	sec
Sum(y)		Y =	0.349	
Lost time		L =	33	sec
Total Flow		=	10,165	pcu
Optimum Cycle C _o	= (1.5×L+5)/(1-Y) =	84	sec
Min. Cycle Time C _m	= L/(1-Y)	=	51	sec
Y _{ult}	$= 0.9 - 0.0075 \times L$	=	0.653	
R.C. _{ult}	$= (Y_{ult}-Y)/Yx100\%$	=	86.8	%
Practical Cycle Time C _p	$= 0.9 \times L/(0.9-Y)$	=	54	sec
Y _{max}	= 1-L/C	=	0.633	

Stage/Phase Diagrams

Junction J6 - Road D4 / Road L4



$$R.C.(C) = (0.9xY_{max}-Y)/Yx100\% = 63\%$$

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	VEMENT	PHASE	STAGE	WIDTH	NO. OF LANES	(1	m)	OPPOSING TRAFFIC	AR SIDE -ANE	GRADIEN	EFFECT	L CAPACITY	AHEAD SAT. FLOW		STRAIGH		FLOW		%)	SAT. FLOW	FACTOR	CRITICAL	GREEN g=y/Yx(C-L)	GREEN G	SATURATION	Queue
	Ď	<u>-</u>	σ	(m)		LEFT	RIGHT	OPI T	NEAR: LAN	T (%)	(pcu/hr)	(pcu/hr)	(pcu/hr)	LEFT	T AHEAD		(pcu/hr)	LEFT	RIGHT	(pcu/hr)	У		(sec)	(sec)	X	N
-	₽	Α	1	4.200	1		25	0	1		0		2035		60	45	105		43%	1984	0.053	0.053	9	8	0.552	3
		В	2	3.300	1		25	0	0		0		2085			175	175		100%	1967	0.089	0.089	15	14	0.552	4
	4	В	2	3.300	1	15			1		0		1945	40			40	100%		1768	0.023		4	14	0.140	1
	∢	С	3	3.650	1	15			1		0		1980	373			373	100%		1800	0.207	0.207	34	33	0.552	6
<		С	3	3.650	1	15			0		0		2120	232	185		417	56%		2008	0.207		34	33	0.552	6
) odaot	rian C	rossing	-	GM		FGM																			
_		Dp	ا _{لا}	min.	8	+	6	=	14	sec												*				
	- 1	Ep	4	min.	8	+	6	=		sec																
	- 1	Fp	4	min.	9	+	7	=		sec																
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JUNCTION CAPACITY CALCULATION

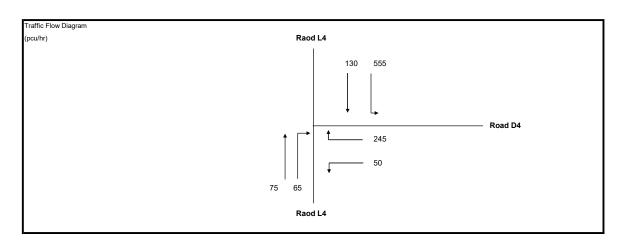
2036 PM Case 2 Scenario 2B (Improvement)

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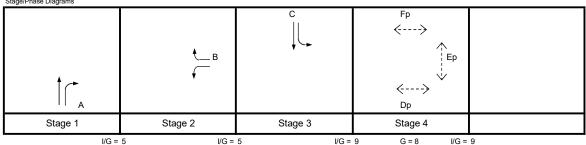
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No. of stages per cycle		N =	4	
Cycle time		C =	90	sec
Sum(y)		Y =	0.376	
Lost time		L =	33	sec
Total Flow		=	10,165	pcu
Optimum Cycle C _o	= (1.5×L+5)/(1-Y) =	87	sec
Min. Cycle Time C _m	= L/(1-Y)	=	53	sec
Y _{ult}	= $0.9 - 0.0075 \times L$	=	0.653	
R.C. _{ult}	= $(Y_{ult}-Y)/Yx100\%$	=	73.6	%
Practical Cycle Time C _p	$= 0.9 \times L/(0.9-Y)$	=	57	sec
Y _{max}	= 1-L/C	=	0.633	

Stage/Phase Diagrams

Junction J6 - Road D4 / Road L4



R.C.(C) =
$$(0.9xY_{max}-Y)/Yx100\%$$
 = 52%

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VEMENT	PHASE	STAGE	WIDTH (m)	NO. OF LANES	(1	m)	OPPOSING TRAFFIC	NEAR SIDE LANE	GRADIEN T (%)	EFFECT (pcu/hr)	L CAPACITY (pcu/hr)	AHEAD SAT. FLOW	LEFT	STRAIGH	RIGHT	FLOW (pcu/hr)		%)	SAT. FLOW (pcu/hr)	FACTOR	CRITICAL y	GREEN g=y/Yx(C-L)	GREEN G	SATURATION	
MO		"	(111)		LEFT	RIGHT	OP	N H	1 (70)	(pcu/iii)	(pcu/iii)	(pcu/hr)	LEFI	T AHEAD	RIGHT	(pcu/iii)	LEFT	RIGHT	(pcu/iii)	y		(sec)	(sec)	^	N
^}>	Α	1	4.200	1		25	0	1		0		2035		75	65	140		46%	1980	0.071	0.071	11	10	0.593	3
4	В	2	3.300	1		25	0	0		0		2085			245	245		100%	1967	0.125	0.125	19	18	0.593	5
4	В	2	3.300	1	15			1		0		1945	50			50	100%		1768	0.028		4	18	0.135	1
< 1	С	3	3.650	1	15			1		0		1980	325			325	100%		1800	0.181	0.181	27	26	0.593	6
≪↑	С	3	3.650	1	15			0		0		2120	230	130		360	64%		1993	0.181		27	26	0.593	6
Pedes		Crossing	•	GM		FGM															l .				
	Dp	4	min.	8	+	6	=	14	sec												*			1	
	Ep	4	min.	8	+	6	=	14	sec															1	
	Fp	4	min.	9	+	7	=	16	sec																
		- 1		-																					

J7

JUNCTION CAPACITY CALCULATION

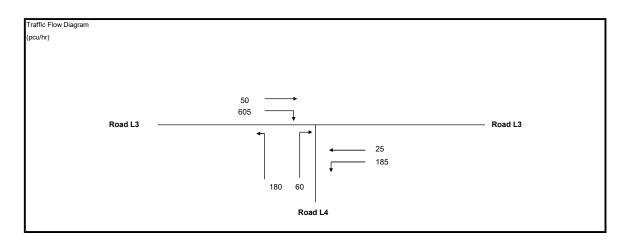
2036 AM Case 2 Scenario 2B (Improvement)

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DESIGN: RS

JOB NO: 60507694

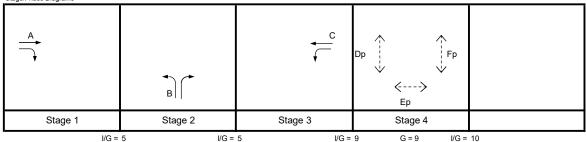
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No. of stages per cycle		N =	4	
Cycle time		C =	90	sec
Sum(y)		Y =	0.431	
Lost time		L=	35	sec
Total Flow		=	7,860	pcu
Optimum Cycle C _o	= (1.5×L+5)/(1-Y) =	101	sec
Min. Cycle Time C _m	= L/(1-Y)	=	62	sec
Y _{ult}	= $0.9 - 0.0075 \times L$	=	0.638	
R.C. _{ult}	= $(Y_{ult}-Y)/Yx100\%$	=	47.9	%
Practical Cycle Time C _p	$= 0.9 \times L/(0.9-Y)$	=	67	sec
Y _{max}	= 1-L/C	=	0.611	

Stage/Phase Diagrams

Junction J7 - Road L3 / Road L4



Critical Case: A,B,C,Dp

 $R.C.(C) = (0.9xY_{max}-Y)/Yx100\% = 28\%$

Ę				LANE			DIUS	ပ္ ပ	DE	UPHILL	CRADIENT	ADDITIONA	STRAIGHT-	F	LOW (pcu/h	ır)	TOTAL	PROPOR	TION OF VEHICLES	REVISED	FLOW		EFFECTIVE	ACTUAL	DEGREE OF	Average
FNEWEYOR		PHASE	STAGE	WIDTH (m)	NO. OF LANES	1)	m)	OPPOSING TRAFFIC	EAR SI LANE	GRADIEN T (%)	EFFECT (pcu/hr)	L CAPACITY (pcu/hr)	FLOW	LEFT	STRAIGH		FLOW (pcu/hr)	(%		SAT. FLOW (pcu/hr)	FACTOR	CRITICAL y	GREEN g=y/Yx(C-L)	GREEN G	SATURATION X	
				. ,		LEFT	RIGHT	ō F	ž	, ,	. ,	. ,	(pcu/hr)		T AHEAD		" ,	LEFT	RIGHT	. ,	,		(sec)	(sec)		
	\	Α	1	3.300	1		20	0	1		0		1945		50	279	329		85%	1829	0.180	0.180	23	22	0.705	6
1	≯	Α	1	3.300	1		10	0	0		0		2085			326	326		100%	1813	0.180		23	22	0.705	6
4	₩	В	2	3.000	1	20	25	0	1		0		1915	180		60	240	75%	25%	1788	0.134	0.134	17	16	0.705	5
ą.	ŶŢ	С	3	3.000	1	20			1		0		1915	185	25		210	88%		1796	0.117	0.117	15	14	0.705	5
Pe	 desti	l rian C	ا rossinç	3	GM		FGM																			
	- [-	Dp	4	min.	9	+	7	=	16	sec												*				i l
	- -	Ep	4	min.	9	+	7	=	16	sec																i l
		Fp	4	min.	7	+	5	=	12	sec																

J7

JUNCTION CAPACITY CALCULATION

2036 PM Case 2 Scenario 2B (Improvement)

DESIGN: RS

CHECK: RS JOB NO: 60507694

DATE: ######

Traffic Flow Diagram (pcu/hr)

Road L3

Road L3

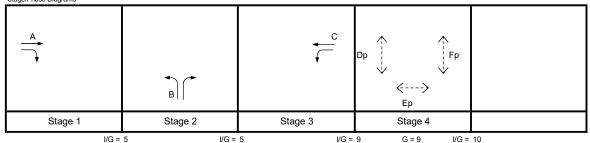
Road L3

Road L3

No. of stages per cycle		N =	4	
Cycle time		C =	90	sec
Sum(y)		Y =	0.428	
Lost time		L =	35	sec
Total Flow		=	7,860	pcu
Optimum Cycle C _o	= (1.5×L+5)/(1-Y) =	101	sec
Min. Cycle Time C _m	= L/(1-Y)	=	61	sec
Y _{ult}	$= 0.9 - 0.0075 \times L$	=	0.638	
R.C. _{ult}	$= (Y_{uit}-Y)/Yx100\%$	=	48.8	%
Practical Cycle Time C _p	$= 0.9 \times L/(0.9-Y)$	=	67	sec
Y _{max}	= 1-L/C	=	0.611	

Stage/Phase Diagrams

Junction J7 - Road L3 / Road L4



Road L4

$$R.C.(C) = (0.9xY_{max}-Y)/Yx100\% = 28\%$$

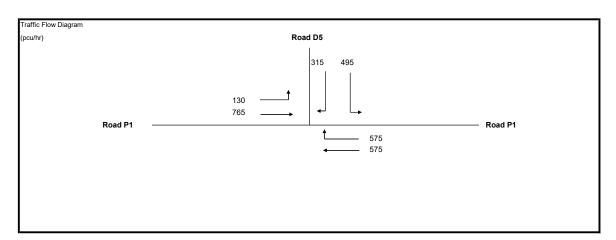
Ę	l		LANE		RAI	DIUS	S C	DE	UPHILL	CDADIENT	ADDITIONA	STRAIGHT-	F	LOW (pcu/h	r)	TOTAL	PROPOR	TION OF VEHICLES	REVISED	FLOW		EFFECTIVE	ACTUAL	DEGREE OF	A
MOVEMENT	PHASE	STAGE	WIDTH (m)	NO. OF LANES	(1	m)	OPPOSING TRAFFIC	NEAR SIDE LANE	GRADIEN T (%)	EFFECT (pcu/hr)	L CAPACITY (pcu/hr)	AHEAD SAT. FLOW	LEFT	STRAIGH	RIGHT	FLOW (pcu/hr)		%)	SAT. FLOW (pcu/hr)	FACTOR	CRITICAL y	GREEN g=y/Yx(C-L)	GREEN G	SATURATION X	
Ø	"	0,	()		LEFT	RIGHT	OP	Ä	1 (70)	(pcu/iii)	(реали)	(pcu/hr)	LEFI	T AHEAD	RIGHT	(pcu/iii)	LEFT	RIGHT	(pcu/iii)	y		(sec)	(sec)	^	
4	A (1	3.300	1		20	0	1		0		1945		85	268	353		76%	1840	0.192	0.192	25	24	0.701	7
[≯ A	1	3.300	1		10	0	0		0		2085			347	347		100%	1813	0.192		25	24	0.701	6
4	р≯В	2	3.000	1	20	25	0	1		0		1915	250		65	315	79%	21%	1787	0.176	0.176	23	22	0.701	6
4	J C	3	3.000	1	20			1		0		1915	75	35		110	68%		1822	0.060	0.060	8	7	0.701	3
Pe	I destrian	I Crossin	l Ig	GM		FGM																			
	Dp	4	min.	9	+	7	=	16	sec												*				
	Ep	4	min.	9	+	7	=	16	sec																
	Fp	4	min.	7	+	5	=	12	sec																

JUNCTION CAPACITY CALCULATION

AECOM

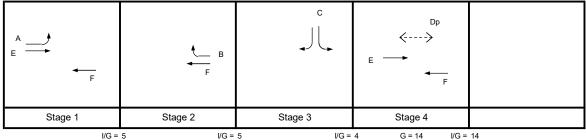
(J8)

Junction J8 - Road P1/ Road D5 2036 AM Case 2 Scenario 2B (Improvement) DESIGN: RS CHECK: RS JOB NO: 60507694 DATE: #####



No. of stages per cycle		N =	4	
Cycle time		C =	90	sec
Sum(y)		Y =	0.363	
Lost time		L=	39	sec
Total Flow		=	18,295	pcu
Optimum Cycle C _o	= (1.5×L+5)/(1-Y) =	100	sec
Min. Cycle Time C _m	= L/(1-Y)	=	61	sec
Y _{ult}	= $0.9 - 0.0075 \times L$	=	0.608	
R.C. _{ult}	$= (Y_{ult}-Y)/Yx100\%$	=	67.2	%
Practical Cycle Time C _p	$= 0.9 \times L/(0.9-Y)$	=	65	sec
Y _{max}	= 1-L/C	=	0.567	





R.C.(C)	$= (0.9xY_{max}-Y)/Yx100\% =$	40%
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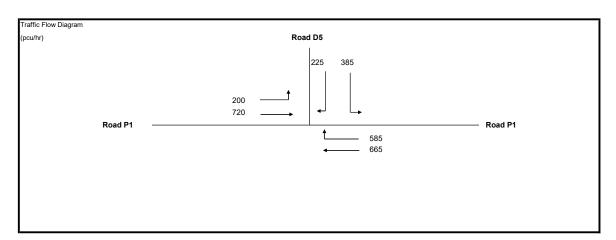
Ę			LANE			DIUS	S S	DE	UPHILL	GRADIENT	ADDITIONA	STRAIGHT-	F	LOW (pcu/h	nr)	TOTAL	PROPOR TURNING		REVISED	FLOW		EFFECTIVE	ACTUAL	DEGREE OF	Average
TNEMENOM	PHASE	STAGE	WIDTH (m)	NO. OF LANES	1)	m)	POSING	NEAR SIDE LANE	GRADIEN T (%)		L CAPACITY (pcu/hr)	AHEAD SAT. FLOW	LEFT	STRAIGH		FLOW (pcu/hr)	(%		SAT. FLOW (pcu/hr)	FACTOR	CRITICAL y	GREEN g=y/Yx(C-L)	GREEN G	SATURATION	
			, ,		LEFT	RIGHT	JO L	ž	, ,	,	. ,	(pcu/hr)		T AHEAD		,	LEFT	RIGHT	,	,		(sec)	(sec)		
_	Α	1	3.200	1	15			1		0		1935	130			130	100%		1759	0.074	0.074	10	9	0.641	3
-	E	1,4	3.200	2				0		0		4150		765		765			4150	0.184		26		0.000	9
<		1,2,4	3.500	1				1		0		1965		575		575			1965	0.293		41		0.000	0
4	В	2	3.500	2		25	0	1		0		4070			575	575		100%	3840	0.150	0.150	21	20	0.641	0
L	C	3	3.500	1	20			1		0		1965	255			255	100%		1828	0.140	0.140	20	19	0.641	0
<	→ C	3	3.500	1	25	30	0			0		2105	240		38	278	86%	14%	1988	0.140		20	19	0.641	0
	₹ C	3	3.500	1		25	0	0		0		2105			277	277		100%	1986	0.140		20	19	0.641	0
Pe	। destrian	Crossin	g	GM		FGM																			1 1
	Dp	4	min.	14	+	12	=	26	sec												*				

JUNCTION CAPACITY CALCULATION

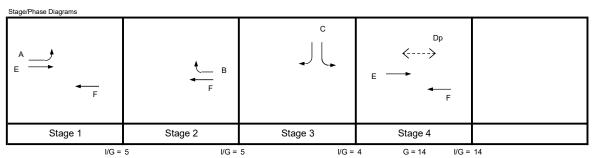
AECOM

(J8)

Junction J8 - Road P1/ Road D5 2036 PM Case 2 Scenario 2B (Improvement) DESIGN: IW CHECK: IW JOB NO: 60507694 DATE: #####



No. of stages per cycle		N =	4	
Cycle time		C =	90	sec
Sum(y)		Y =	0.371	
Lost time		L =	39	sec
Total Flow		=	18,295	pcu
Optimum Cycle C _o	= (1.5×L+5)/(1-Y)) =	101	sec
Min. Cycle Time C _m	= L/(1-Y)	=	62	sec
Y _{ult}	$= 0.9 - 0.0075 \times L$	=	0.608	
R.C. _{ult}	= $(Y_{ult}-Y)/Yx100\%$	=	63.7	%
Practical Cycle Time C _p	$= 0.9 \times L/(0.9-Y)$	=	66	sec
Y _{max}	= 1-L/C	=	0.567	



R.C.(C)	$= (0.9xY_{max}-Y)/Yx100\% =$	37%
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F		l	LANE			DIUS	ပ္ ပ	DE	UPHILL	CDADIENT	ADDITIONA	STRAIGHT-	F	LOW (pcu/h	nr)	TOTAL	PROPOR	TION OF VEHICLES	REVISED	FLOW		EFFECTIVE	ACTUAL	DEGREE OF	Average
TIMEMENT	PHASE	STAGE	WIDTH (m)	NO. OF LANES	(r	m)	PPOSING TRAFFIC	NEAR SIDE LANE	GRADIEN T (%)		L CAPACITY (pcu/hr)	AHEAD SAT. FLOW	LEFT	STRAIGH	RIGHT	FLOW (pcu/hr)	(%		SAT. FLOW (pcu/hr)	FACTOR	CRITICAL y	GREEN g=y/Yx(C-L)	GREEN G	SATURATION	
			, ,		LEFT	RIGHT	P E	ž	, ,	,	,	(pcu/hr)		T AHEAD		u · ,	LEFT	RIGHT	u . ,	,		(sec)	(sec)		
_	A A	1	3.200	1	15			1		0		1935	200			200	100%		1759	0.114	0.114	16	15	0.655	4
-	→ E	1,4	3.200	2				0		0		4150		720		720			4150	0.173		24		0.000	9
	€ F	1,2,4	3.500	1				1		0		1965		665		665			1965	0.338		46		0.000	0
1	₽ B	2	3.500	2		25	0	1		0		4070			585	585		100%	3840	0.152	0.152	21	20	0.655	0
l	→ c	3	3.500	1	20			1		0		1965	192			192	100%		1828	0.105	0.105	14	13	0.655	0
4	c k	3	3.500	1	25	30	0			0		2105	193		16	209	92%	8%	1987	0.105		14	13	0.655	0
	← c	3	3.500	1		25	0	0		0		2105			209	209		100%	1986	0.105		14	13	0.655	0
Pe	I destrian	I Crossin	l Ig	GM		FGM																			
	Dp	4	min.	14	+	12	=	26	sec												*				

JUNCTION CAPACITY CALCULATION DATE: ###### Junction J9 - Road D5 / Road L5 2036 AM Case 2 Scenario 2B (Improvement) DESIGN: RS CHECK: RS JOB NO: 60507694 Traffic Flow Diagram (J9) (pcu/hr) Raod D5 No. of stages per cycle 315 5 Cycle time 90 Sum(y) 0.351 5 Lost time L= 46 sec Total Flow 18,385 pcu Road I 5 Access road Optimum Cycle Co = (1.5×L+5)/(1-Y) = 114 Min. Cycle Time C_m = L/(1-Y) 71 = 0.9-0.0075×L = 0.555 R.C._{ult} 240 255 $= (Y_{ult}-Y)/Yx100\% =$ 58.0 205 % Practical Cycle Time $C_n = 0.9 \times L/(0.9-Y) =$ 75 Raod D5 = 1-L/C 0.489 Stage/Phase Diagrams Gp Critical Case: A,B,C,D,Ep <---> R.C.(C) $= (0.9xY_{max}-Y)/Yx100\% =$ 25% <---> Еp Stage 1 Stage 2 Stage 3 Stage 4 Stage 5 I/G = 5I/G = 5I/G = 12 G = 11 I/G = 12 NEAR SIDE LANE FLOW (pcu/hr) PROPORTION OF RADIUS STRAIGHT-EFFECTIVE ACTUAL TURNING VEHICLES UPHILL GRADIENT ADDITIONA PHASE STAGE LANE TOTAL REVISED FI OW DEGREE OF Average NO. OF AHEAD SAT. CRITICAL GREEN (%) SATURATION WIDTH GRADIEN FFFFCT I CAPACITY FLOW SAT. FLOW FACTOR Queue LANES FLOW g=y/Yx(C-L) STRAIGH (pcu/hr) (pcu/hr) LEFT RIGHT (m) T (%) (pcu/hr) (pcu/hr) T AHEAD (sec) LEFT RIGHT RIGHT 3.300 15 1945 240 240 100% 1768 0.136 0.136 17 16 0.719 5 0 ↑ |} Α 1 3.300 0 2085 15 0 2085 255 255 0.122 16 0.648 5 3.300 25 0 0 0 2085 205 205 100% 1967 0.104 13 16 0.552 4 4 2 1965 0.074 9 0.719 В 3.500 15 0 132 132 100% 1786 4 8 \$ В 2 3.500 15 25 0 0 0 133 5 143 4% 1922 0.074 0.074 8 0.719 4 2105 5 93% 9 **₩** С 3 0 1980 152 1974 4 3 650 15 5 157 3% 0.080 0.080 10 9 0.719 С 3 3.650 15 0 0 0 2120 163 168 3% 2114 0.080 10 9 0.719 4 \$ D 4 3 650 25 0 Ω 1980 5 116 4% 91% 1872 0.062 0.719 3 25 5 106 8 D 4 3.650 25 0 0 2120 124 124 100% 2000 0.062 0.062 0.719 3 Pedestrian Crossing GM FGM Ep 11 20 sec = 18 Fp 5 min. 10 8 sec Gp 5 min. 10 8 18 sec Нр 5 min. 10 8 18 sec

Annex 1 - J8 JUNCTION CAPACITY CALCULATION DATE: ###### Junction J9 - Road D5 / Road L5 2036 PM Case 2 Scenario 2B (Improvement) DESIGN: RS CHECK: RS JOB NO: 60507694 Traffic Flow Diagram (J9) (pcu/hr) Raod D5 No. of stages per cycle 175 5 Cycle time 90 Sum(y) 0.318 5 Lost time L= 46 sec 220 Total Flow 18,385 pcu Road I 5 Access road Optimum Cycle Co = (1.5×L+5)/(1-Y) = 108 Min. Cycle Time C_m = L/(1-Y) = 0.9-0.0075×L = 0.555 R.C._{ult} 265 255 265 $= (Y_{ult}-Y)/Yx100\% =$ 74.7 % Practical Cycle Time $C_n = 0.9 \times L/(0.9-Y) =$ 71 Raod D5 = 1-L/C 0.489 Stage/Phase Diagrams Gp Critical Case: A,B,C,D,Ep <---> R.C.(C) $= (0.9xY_{max}-Y)/Yx100\% =$ 38% <---> Еp Stage 1 Stage 2 Stage 3 Stage 4 Stage 5 I/G = 5I/G = 5I/G = 12 G = 11 I/G = 12 NEAR SIDE LANE FLOW (pcu/hr) PROPORTION OF RADIUS STRAIGHT-EFFECTIVE ACTUAL TURNING VEHICLES PHASE STAGE LANE UPHILL GRADIENT ADDITIONA TOTAL REVISED FI OW DEGREE OF Average NO. OF AHEAD SAT. CRITICAL GREEN (%) SATURATION WIDTH GRADIEN FFFFCT I CAPACITY FLOW SAT. FLOW FACTOR Queue LANES FLOW g=y/Yx(C-L) STRAIGH (pcu/hr) (pcu/hr) LEFT RIGHT (m) T (%) (pcu/hr) (pcu/hr) T AHEAD (sec) LEFT RIGHT RIGHT 3.300 15 1945 265 265 100% 1768 0.150 0.150 21 20 0.650 5 0 ↑ |} Α 1 3.300 0 2085 20 0 2085 255 255 0.122 17 0.530 5 3.300 25 0 0 0 2085 265 265 100% 1967 0.135 19 20 0.584 5 4 2 1965 9 В 3.500 0 113 113 100% 1786 0.063 0.650 3 8 \$ В 2 3.500 15 25 0 0 0 102 15 122 4% 1938 0.063 8 0.650 3 2105 5 84% 0.063 9 **₩** С 3 0 1980 2 3 650 15 5 84 89 6% 1969 0.045 0.045 6 5 0.650 С 3 3.650 15 0 0 0 2120 91 96 5% 2109 0.045 6 5 0.650 3 \$ D 4 3 650 25 0 Ω 1980 5 101 111 4% 91% 1873 0.059 0.059 0.650 3 25 5 8 D 4 3.650 25 0 0 2120 119 119 100% 2000 0.059 0.650 3 Pedestrian Crossing GM FGM Ep 11 20 = 18 Fp 5 min. 10 8 sec

Gp 5

Нр 5 min.

min.

10

10

8

8

18 sec

18 sec

Appendix 6

Technical Assessments - Part 4

(Environmental Assessment Study)







Agreement No. CB20180686 Term Traffic and Environmental Consultancy Services 2019 – 2021 for Kowloon Central and West and Islands Region

Instruction No. K04
Proposed Public Housing Development at
Tung Chung Area 109
Environmental Assessment Study (EAS)

Draft Report (Revision 3)

Hong Kong Housing Authority

19 November 2021







Notice

This document and its contents have been prepared and are intended solely as information for Hong Kong Housing Authority and use in relation to this project.this project.

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2	Incorporated EPD's Comments	Various	RL	WW	JY	27 Aug 21
3	Incorporated EPD's Comments	Various	RL	WW	JY	19 Nov 21

Client signoff

Guern eignen				
Client	Hong Kong Housing Authority			
Project	Agreement No. CB20180686 Term Traffic and Environmental Consultancy Services 2019 – 2021 for Kowloon Central and West and Islands Region			
	Instruction No. K04			
	Proposed Public Housing Development at Tung Chung Area 109 Environmental Assessment Study (EAS)			
Document title	Draft Report (Revision 3)			
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Executive Summary

An Environmental Assessment Study (EAS) has been carried out to evaluate the environmental feasibility for the Proposed Public Housing Development at Tung Chung Area 109 (the Development), with respect to Chapter 9 of the Hong Kong Planning Standards and Guidelines (HKPSG).

The Development is located at the newly reclaimed area of Tung Chung New Town Extension at Tung Chung East. It consists of two public housing blocks with retail shops and Estate Management Office (EMO). It is surrounded by planned residential zone (Tung Chung Areas 99, 100, 103, 106, 110) and planned Roads L3, L4 and D4 with a strip of open space adjacent to its south-eastern boundary. Road traffic noise impact is the key environmental issue to be addressed for the Development.

Road traffic noise assessment results for public housing blocks indicated that the Base-case scenario would achieve a noise compliance rate of 94 % with a total of 76 out of 1344 flats exposed to traffic noise levels exceeding $L_{10(1hour)}$ 70 dB(A) criterion. The maximum predicted peak hourly L_{10} noise level is 74 dB(A). All practicable noise mitigation measures have been considered and recommended, including the fixed windows and acoustic windows to mitigate the road traffic noise impact. With the implementation of these mitigation measures, the overall compliance rate for the public housing blocks is 100% and the maximum predicted peak hourly L_{10} noise level is 70 dB(A).

Fixed type noise sources including sewage pumping station in Area 104, ventilation fans installed in the proposed Public Vehicle Parking/Public Transport Interchange Complex at Area 99, the proposed District Cooling System at Area 120 and the planned ventilation fans installed in the Development have been reviewed in this study. The cumulative fixed plant noise levels at all representative NSRs compile with the relevant fixed noise criteria. Therefore, adverse fixed type noise impacts on the Development are not anticipated.

The Development is located outside the Noise Exposure Forecast (NEF) 25 of the Hong Kong International Airport at Chek Lap Kok. No adverse aircraft noise impact is anticipated at the Development.

Vehicular emissions impact on the Development has been assessed. All air sensitive uses are located at distance in compliance with the HKPSG recommended buffer distance from roads. This EAS is based on the latest layout plan, new population and development intensity of the report "Review for Population Increase and Development Intensity" (the Review Report). The Review Report is still under review and has not been completed yet. Therefore, the EAS for Area 109 may be reviewed according to the findings of the Review Report if and when necessary.







行政摘要

香港房屋委員會就東涌第 109 區的擬建公營房屋發展項目的環境可行性,根據《香港規劃標準 與準則》第九章進行了是次環境評估研究。

擬建發展項目位於東涌新市鎮擴展的東涌東新填海區。主要包括兩座住宅大廈、零售商店及屋村辦事處。毗鄰為住宅區,包括規劃中的東涌第99、100、103、106、110區及規劃中的L4、L3、D4 道路,在東南邊界設有一帶休憩用地。道路交通噪音為擬建發展項目的主要環境問題。

道路交通噪音評估結果顯示,在基本方案下,有94%的單位會符合噪音標準,即1344個單位中有76個單位會受到交通噪音超過標準70分貝(A)標準的影響。預測最高的噪音聲級為74分貝(A)。在實施緩解措施後的情況下,包括提供固定窗及減音窗,100%的住宅單位會符合噪音標準及預測最高的噪音聲級為70分貝(A)。

是次環境評估研究檢視了位於東涌第 104 區的污水泵水站、第 99 區公共車輛泊車/交通交匯處的通風扇、第 104 區的污水泵水站區域供冷系統及在擬建發展項目的通風扇所發出的固定噪音。預計噪音影響於所有已識別噪音敏感受體均符合相關的固定噪音標準。因此,預期固定噪音源對擬建發展項目不會引致不良的噪音影響。

擬建發展項目位於赤鱲角香港國際機場飛機噪音預測等量線 25 外,因此預計不會受到飛機噪音的負面影響。

環境評估研究亦審查了來自車輛廢氣排放對擬建發展項目的影響,發現所有易受空氣污染影響的地方與毗鄰道路分隔的距離均符合《香港規劃標準與準則》的規定。是次環境評估研究基於最新的佈局計劃,新的人口和發展密度,即"人口增長和發展密度審查"報告(審查報告)。由於該審查報告仍在審查中,尚未完成。因此,如有必要,可以根據審查報告的結果對第109區的環境評估研究進行審查。







1. Introduction

1.1. Project Background

- 1.1.1. Tung Chung Area 109 of the Tung Chung New Town Extension is intended to be developed as public housing development (the Development). The proposed housing type of the Development will be Subsidised Sale Flats (SSFs)**. The completion year of the Development is scheduled to be in 2025/26.
- 1.1.2. Atkins China Limited was commissioned by Hong Kong Housing Authority (HKHA) to undertake an Environmental Assessment Study (EAS) for the Development.
- 1.1.3. The site of the Development, with a gross site area of about 1.20 hectare (ha), is located in Tung Chung New Town Extension (East) (TCNTE(E)). The site has been handed over to HKHA for construction of the Development in February 2021. This EAS would study one layout scheme of the Development, namely 'Detail Design Review Panel (DDRP) Scheme' with two public housing blocks located on a podium.
- 1.1.4. This EAS has been undertaken with reference to the guidance for environmental considerations provided in Chapter 9 "Environment" of the Hong Kong Planning Standards and Guidelines (HKPSG).
- 1.1.5. This updated EAS is based on the latest layout plan, new population and development intensity-Scenario L (Case 2 Scenario 2A) of the report "Review for Population Increase and Development Intensity" (the Review Report). The Review Report is still under review and has not been completed yet. Therefore, the EAS for Area 109 may be reviewed according to the findings of the Review Report if and when necessary.

1.2. Scope

1.2.1. The scope of this EAS is outlined as follow:

- Assess the road traffic noise impacts upon the Development with reference to the HKPSG;
- Assess the potential noise impacts of other fixed type noise sources upon the Development with reference to HKPSG;
- Review the potential aircraft noise impacts on the Development due to the operation of Hong Kong International Airport (HKIA) at Chek Lap Kok with reference to the HKPSG;
- Assess the potential air quality impacts due to vehicular emissions from the surroundings road network upon the Development with reference to HKPSG; and
- Recommend appropriate environmental mitigation measures as required.

-

^{**} Flexibility would be allowed to change the housing type to cater for demand change between Public Rental Housing (PRH)/ Green Form Subsidised Home Ownership Scheme (GSH) and Other Subsidised Sale Flats (SSFs) subject to pro-rata adjustments of provision of ancillary facilities in accordance with the HKPSG







1.3. Site Location and Scale

- 1.3.1. The Development site, with a gross site area of about 1.2 ha, is located in the north-eastern part of Tung Chung and is located at a newly reclaimed area (currently under construction by CEDD) of the Tung Chung New Town Extension at Tung Chung East with formation level +5.5mPD. The Development is surrounded by residential zone (Tung Chung Areas 99, 100, 103, 106, 110) with a strip of open space adjacent to its south-eastern boundary. It is bounded by planned Roads L3, L4 and D4 at the north-western, south-western and south-eastern sides, respectively. North Lantau Highway (NLH) is located at 510m to the south of the Development and Mass Transit Railway (MTR) including Tung Chung Line (TCL) and Airport Express Line (AEL) are located at 490m to the south of the Development. The site location plan is given in Figure 1.1.
- 1.3.2. The Development site is zoned "Residential (Group A) 5" ("R(A)5") on the approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2 (OZP). As stipulated in the OZP, the site is intended primarily for high-density residential development and subject to a maximum building height of +95mPD and maximum plot ratio of 5.4. HKHA's proposal on increasing overall PR to 5.8 (domestic PR of 5.5 and non-domestic PR of 0.3) will be submitted to Town Planning Board for approval on minor relaxation of development restriction.

1.4. Development Layout Details

1.4.1. The Development layout scheme under this EAS is namely "DDRP(1) Scheme", which includes two public housing blocks, namely Block A and Block B. Retail shops and Estate Management Office (EMO)/District Maintenance Office (DMO) are provided on the ground floor and the first floor of the Development. The layout and block sectional plans of the Development are given in **Figure 1.2** to **Figure 1.5**. The key development parameters of DDRP (1) Scheme are given in **Table 1.1**.

Table 1.1 Key Development Parameters of the Development (DDRP(1) Scheme)

		<u> </u>		
Parameters	Block A ⁽¹⁾	Block B		
Domestic Floor	2/F to 29/F	2/F to 29/F		
No. of Domestic Storeys	28	28		
Flats per Floor	24	24		
Floor to Floor Height (m)	2.75	2.75		
First Domestic Floor Level (mPD)	17.89	17.89		
No. of Flats	672	672		
Canopy Level (mPD)	17.3	17.3		
Podium Level (mPD)	11.73			
Total No. of Flats	1344			
Proposed Project Completion Date	2025/26			
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Note: (1) Estate Management Office (EMO) and District Maintenance Office (DMO) located on 1/F of Block B at 11.7 mPD.

1.5. Site Surroundings

1.5.1. The site is currently under foundation construction. Opposite to the south-east of the planned Road D4, there are proposed public housing developments in Areas 99 and 100, which are zoned as "Residential (Group A) 3" ("R(A)3") and "Residential (Group A) 1" ("R(A)1"). To the west is a proposed public housing development in Area 103 and is zoned as "Residential (Group A) 5" ("R(A)5"). To the north of the Development are Areas 106 and 110, which are zoned as "Residential (Group B) 3" ("R(B)3") and "Residential (Group B) 1" ("R(B)1"), respectively. A strip of open space zone is located adjacent to the southern boundary of the site.







1.5.2. The corresponding locations of the surrounding Areas shown on OZP No. S/I-TCE/2 are displayed in **Plate 1-1**.









2. Road Traffic Noise Impact Assessment

2.1. Assessment Criteria

- 2.1.1. According to the HKPSG, the road traffic noise criterion L_{10 (peak hour)} of 70 dB(A) is applicable to the proposed residential dwellings within the Development. This criterion applies to noise sensitivities uses which rely on opened window for ventilation.
- 2.1.2. Estate Management Office (EMO) and District Maintenance Office (DMO) located on 1/F of Block B, is proposed to adopt a close window environment with air conditioning based on HKHA's DDRP Scheme design. EMO and DMO will not rely on opened window for ventilation. Therefore, the HKPSG noise criterion is not applicable.

2.2. Assessment Methodology

- 2.2.1. Road traffic noise level prediction has been carried out using the NoiseMap model, which is a computerized model developed on the basis of the UK Department of Transport's Calculation of Road Traffic Noise (CRTN) procedures, which is a method accepted by EPD for use in Hong Kong.
- 2.2.2. Existing roads and the planned roads within the Tung Chung New Town Extension based on information given by CEDD¹ within 300m from the site of the Development have been included in the assessment.
- 2.2.3. All openable windows for ventilation in all noise sensitive rooms on domestic floors of the Development are considered as Noise Sensitive Receivers (NSRs) and are assigned with noise assessment points for the noise impact assessment. The noise assessment points were taken at 1.2m above each floor level and 1m from the façades of the windows. All noise assessment points, building structures with noise screening effects, topographical features and road segments with traffic flow data have been input into the NoiseMap model in predicting the potential traffic noise impacts.
- 2.2.4. The planned population intake of Area 109 will be in Year 2025/26. Whilst the assessment year normally follows the CRTN methodology, i.e., 15 years after the population intake year which is expected to have the highest traffic flow within a 15 years period, this EAS has taken into account a separate study currently being undertaken by CEDD which is a study for enhancement of the public housing development (PHD) intensity of the entire Tung Chung New Town Extension (East) (TCNTE(E)). Under CEDD's study the ultimate completion year of the entire TCNTE(E) PHD will be in Year 2030 and the assessment year of their road traffic noise impact assessment is Year 2045, i.e., 15 years plus ultimate completion year of TCNTE(E) PHD in Year 2030. To this end, HKHA proposes to adopt the same assessment year as in the CEDD study, i.e., Year 2045 for the traffic noise impact assessment of Area 109 in this EAS. EPD have been consulted and they have no adverse comments on adopting Year 2045 for the road traffic noise impact assessment for Area 109. The traffic forecast data of Year 2045, including traffic flow, percentage of heavy vehicles, road type and speeds, are provided in **Appendix A**. The plot ratio relaxation in Area 99 and the proposed intensification at various public housing sites in TCNTE(E)² have been considered in the forecast traffic data at Year 2045. The forecast traffic data has been prepared following strictly the methodology endorsed by Transport Department

¹ The latest road layout including the proposed road improvement works in Tung Chung East is made reference to the report Agreement No. CE 69/2015 (CE) Tung Chung New Town Extension (East) Design and Construction - Technical Note on Preliminary Findings of Traffic Impact Assessment for Population Increase and Development Intensity – CASE 2 Scenario 1 (Draft).

² As advised by HKHA, the traffic forecast for the intensified scenario – Scenario L is adopted in this assessment. The traffic forecast assumption for the intensified scenario – Scenario L is equivalent to CASE 2 Scenario 2A in Agreement No. CE 69/2015(CE) Tung Chung New Town Extension (East) – Design and Construction – Review for Population Increase and Development Intensity.







2.2.5. Other features that would have screening effect such as roadside planter walls along planned roads have made reference to the gazette plan (PWP ITEM NO. 7786 CL Tung Chung New Town Extension (Tung Chung East and Road P1 Tung Chung East to Tai Ho Section) Road Work)) and was included in the traffic noise model. The dimensions of planter walls are based on Highway Department (HyD)'s standard drawing. The relevant information is given in Appendix B. According to the Section 16 planning application for Tung Chung (application No. A/I-TCE/1) and Civil Engineering and Development Department (CEDD)'s intensification study, CEDD/HyD have been agreed to apply the low noise road surfacing materials on Road L4, Road D4 and Ying Tung Road and it will be completed in Year 2024. The relevant information is given in Appendix C.

2.3. Design Consideration for the Base-case Scenario

2.3.1. The design of the given DDRP(1) Scheme layout studied in this EAS has implemented the following design consideration in order to minimize the road traffic noise impact as much as practicable and with an aim to achieve a high compliance rate.

Further Setback

2.3.2. Further setback is considered not feasible for the Development given the limited site area. With current layout scheme, the site is butting nearby roads and buildings.

Provision of Podium

2.3.3. The two housing blocks located on the top of a podium at a level of +11.73mPD for Block A and Block B have been adopted as building feature for the public housing blocks. The provision of such building feature is to reduce the noise impact to the lower floor levels. The extent of the podium is given in **Figure 1.2**.

Provision of Canopy

2.3.4. Canopy at the level of +17.3mPD has been adopted as building feature for the public housing blocks. The provision of such building feature is able to reduce the noise impact to the lower floor level. The extent of canopy for each block is given in **Figure 1.2.**

Building Block Design

2.3.5. Building blocks are arranged such that angles of view to traffic noise sources are minimised as far as possible. Due to site constrained by limited site area, the block layout is unavoidable to design with flats having a view to the planned Road L3 and L4.

2.4. Assessment Results

Predicted Road Traffic Noise Impacts under Base-case Scenario

Public Housing Blocks

2.4.1. The predicted peak hourly road traffic noise levels at the Development (Base-case scenario) are detailed in Appendix D. The predicted hourly road traffic noise levels of the proposed residential flats at Area 109 exceeding L_{10 (peak hour)} 70dB(A) noise criterion are summarized in Table 2.1. The noise assessment points are shown in Figure 2.1 to Figure 2.2. The predicted road traffic noise exceedance levels of the Development are given in Figure 2.3 and Figure 2.4.

Table 2.1 Summary of Predicted Peak Hourly Road Traffic Noise Results for the Public Housing Blocks (Base-case Scenario)

Block No.	No. of Flats	Predicted Maximum L _{10 (peak hour)} dB(A)	Noise Criterion L _{10 (peak hour)} dB(A)		Compliance Rate
Α	672	74		71	89%
В	672	71	70	5	99%
Overall	1344	74		76	94%







2.4.2. As seen from **Table 2.1**, for the base-case scenario, there are 76 residential flats predicted to have road traffic noise levels exceeding the $L_{10~(peak~hour)}$ 70 dB(A) noise criterion. The predicted maximum $L_{10~(peak~hour)}$ noise level is 74 dB(A) and the compliance rate is 94%.

Predicted Road Traffic Noise Impacts under Mitigated Scenario

2.4.3. Mitigation measure, such as the provision of fixed glazing at some specific location has been considered. Predicted traffic noise results under mitigated scenario are presented in the following sections.

Mitigation Measures at the Public Housing Blocks

Change of Openable Window to Fixed Glazing (with the maintenance window if necessary)

2.4.4. Side windows for some of the flats are directly facing the dominant traffic noise source (e.g. the junction of Road L3 and Road L4). To mitigate the potential road traffic noise impact, fixed glazing window with 6mm thick of window pane (normally closed) is proposed to be installed at these locations to reduce the road traffic noise entering the flat. Future occupants will be notified that these fixed panes should be normally closed and need not be opened for ventilation. The fixed windows are only for cleaning and maintenance purpose only. The information about fixed glazing windows would be incorporated in the Deed of Mutual Covenant (DMC) and sales brochure to make future occupants well aware of the above. For the purpose of cleaning, the fixed window can be opened only with a special Allen key. Fixed windows would be adopted in Block A are summarized in Table 2.2.

Table 2.2 Summary of Proposed Fixed Window for Main Window

Block No.	Fixed Window location	Implemented Floor
Α	BA_19e	2/F – 9/F
A	BA_20e	2/F – 6/F

2.4.5. Having considered the provision of fixed glazing at specific location, 70 flats of the Development will still be exposing to traffic noise levels exceeding relevant noise criterion, i.e. 70 dB(A) (list in **Table 2.3**). In order to alleviate the traffic noise impact at the affected flats, the acoustic window design will be adopted at window in the affected flats.

Table 2.3 Summary of Predicted Peak Hourly Road Traffic Noise Levels exceeding 70dB(A) Noise Criterion (Mitigation with the provision of fixed glazing)

Block No.	No. of Flats	Predicted Maximum L _{10 (peak hour)} dB(A)	Noise Criterion L _{10 (peak hour)} dB(A)		Compliance Rate
Α	672	74		58	91%
В	672	71	70	5	99%
Overall	1344	74		70	95%

Provision of Acoustic Windows

- 2.4.6. Acoustic windows are proposed to be installed at flats that are still subject to noise exceedances. Schematic features of acoustic window included:
 - Outer layer of the window system consists of fixed glazing and side-hung openable gasketted window; and
 - Inner layer consists of one sliding window.

The schematic plan view of proposed acoustic window as indicated in Plate 2-1.







Schematic Plan View of Acoustic Window

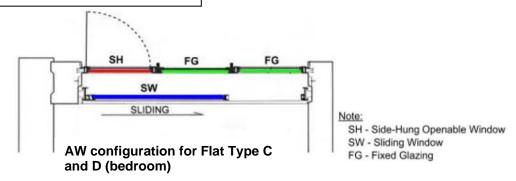
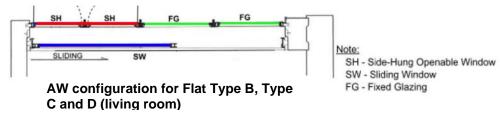


Plate 2-1 Typical Configuration of Acoustic Window



- 2.4.7. For fixed glazing window equipped with side-hung openable window, the provision of special window opening device like Allen Key should be provided in order to keep the side-hung window normally closed. However, as advised by the final report of Acoustic Design and Performance Evaluation of Acoustic Window (ADPEAW), the future resident shall be advised of the caution that such window should be closed to achieve the intended sound attenuation and that opening of the windows for purpose of other operation, maintenance or additional ventilation would compromise the indoor noise level in the flat.
- 2.4.8. The design of the proposed acoustic window meets the relevant natural ventilation requirement under the Building (Planning) Regulations. The inner sliding glass panel need to be slid behind the opened outer window for creating an air gap for the supply of fresh air with noise mitigation effect. According to the Practice Note on Lighting and Ventilation Requirements Performance-based Approach (APP-130) issued by Buildings Department, for optimum performance with the inner sliding glass panel in a closed position, the air gap should have a length of not less than 100mm and a width between 100mm and 175mm. The length and width of the air gap of the proposed acoustic window also meet these conditions.
- 2.4.9. The noise reduction performance of the proposed acoustic window is made reference to the Housing Department's Technical Note on "Noise Attenuation for Modular Flat Design (MFD) with Acoustic Window" (Technical Note). Modular flat Type C and Type D referenced from the Technical Note have been proposed in the Development. Sound attenuation performance and configurations of the acoustic window for public housing are detailed in **Appendix E** and **Table 2.4**.





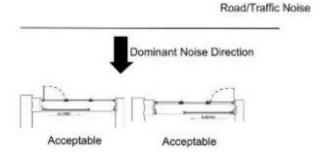


Table 2.4 Summary of Acoustic Window Configurations (Retrieved from HD's Technical Note on "Noise Attenuation for Modular Flat Design (MFD) with Acoustic Windows")

	Inner Window Opening	Outer Window Opening	Window Overlapping Length	Window Pane Separation	Flat Area, m ²	Window Pane Thickness	Noise Reduction Performance dB(A)	
Flat Type							Without Sound Absorptive Lining	With Sound Absorptive Lining
Type B-5	Х	1383mm (H) x 1010mm (W)	200mm	175mm	19.4- 21.9	6mm	5.5	6.6
Type C & D – Living Room	'	1383mm (H) x 1060mm (W)	140mm	175mm	23.1-	6mm	E A	6.9
Type C & D – Bedroom 1	1383mm (H) x 575mm (W)	1383mm (H) x 550mm (W)	525mm	175mm	23.4	6mm	5.4	6.9
Type D – Bedroom 2	1383mm (H) x 550mm (W)	1383mm (H) x 550mm (W)	500mm	175mm	7.6	6mm	2.7	3.9

Acoustic Window Settings

- 2.4.10. For achieving the sound attenuation assessed in the study, the acoustic window should be set at the intended orientation as described in the Final Report of ADPEAW. The setting and orientation are summarized and described below:
 - In case a flat is fronting a major noisy road running in parallel with the façade, the left or right settings of the openings of its acoustic window are only mutual images; both of which could achieve the intended sound attenuation.



Window in parallel with traffic noise source

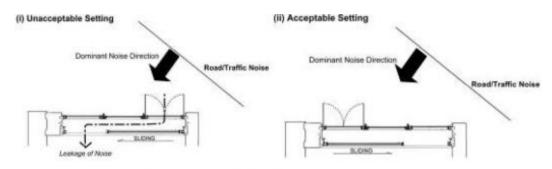
Plate 2-2 Acoustic Window in Parallel with Traffic Noise Source

• In case the road is located at one side of the flat, the traffic noise would propagate to the façade more from the side of the road rather than right in front of it. The staggered openings of the acoustic window should be set to intercept direct propagation of noise through the openings and the gap between outer and inner panes. In general, the opening of the outer layer of window should be sited further away from the road, as illustrated below:









Window NOT in parallel with traffic noise source

Plate 2-3 Acoustic Window not in Parallel with Traffic Noise Source







Advice to Future Residents for the Use of Acoustic Window

- 2.4.11. The sound attenuation achieved by the acoustic window refers to the designated setting of window. Hence the future residents in the flats equipped with acoustic windows should be advised of such settings stated in **Section 2.4.7** to **2.4.10** for achieving the intended attenuation. Deviation from the recommended setting might affect the noise level in the flat.
- 2.4.12. The noise reduction purpose of the acoustic window and its setting to achieve the noise reduction effect would be incorporated in the DMC and sale brochure to inform the future occupants.
- 2.4.13. The flats proposed to be installed with acoustic windows are summarized in Table 2.5. The relevant locations are shown in Figure 2.5 and Figure 2.6.

Table 2.5 Summary of Proposed Acoustic Window for Main Window

	Table 2.5 Summary of Proposed Acoustic Window for Main Window					
Block No.	Flat Type	Room Type	Acoustic Windows Locations	Implemented Floor		
Α	Type C	Living Room and Bedroom 1	BA_11b & c	2/F – 5/F (Without Absorption Lining)		
Α	Type D	Living Room and Bedroom 1	BA_12b & c	2/F – 9/F (Without Absorption Lining)		
Α	Type D	Bedroom 2	BA_12d	2/F – 9/F (Without Absorption Lining)		
Α	Type C	Living Room and Bedroom 1	BA_13b & c	3/F – 7/F (Without Absorption Lining)		
Α	Type B	Living Room and Bedroom 1	BA_15 b	3/F – 4/F (Without Absorption Lining)		
Α	Type C	Living Room and Bedroom 1	BA_16 b & c	3/F – 7/F (Without Absorption Lining)		
Α	Type C	Living Room and Bedroom 1	BA_17 b & c	2/F – 10/F (Without Absorption Lining)		
Α	Type C	Living Room and Bedroom 1	BA_18 b & c	2/F – 12/F (Without Absorption Lining)		
Α	Type D	Living Room and Bedroom 1	BA_19 b & c	2/F – 14/F (Without Absorption Lining)		
Α	Type D	Bedroom 2	BA_19d	3/F – 5/F (With Absorption Lining) 6/F – 15/F (Without Absorption Lining)		
В	Type D	Living Room and Bedroom 1	BB_5 b & c	2/F – 6/F (Without Absorption Lining)		

2.4.14. With all recommended noise mitigation in place, overall noise compliance rate for the public housing blocks of the Development is 100%. The predicted mitigated road traffic noise results are summarized in **Table 2.6** and the detailed result is given in **Appendix F.**

Table 2.6 Summary of Predicted Peak Hourly Road Traffic Noise Results for the Public Housing Blocks(Mitigated Scenario)

Block	No. of Flats	Predicted Maximum	Noise Criterion	No. of Flat with	Compliance
No.		L _{10 (peak hour)} dB(A)	L _{10 (peak hour)} dB(A)	Noise Exceedance	Rate
Α	672	70		0	100%
В	672	70	70	0	100%
Overall	1344	70		0	100%

2.5. Summary

2.5.1. This EAS has considered all possible noise mitigation measures and all practicable measures have been proposed for the proposed Development. With the implementation of acoustic windows and the fixed glazing, the overall noise compliance rates for the Development will be 100%.







3. Fixed Plant Noise Assessment

3.1. Assessment Criteria

3.1.1. According to Chapter 9 of the HKPSG, noise assessments for fixed noise sources would normally be conducted in accordance with the Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places Or Construction Sites (IND-TM), published under the Noise Control Ordinance (NCO). The IND-TM lays down statutory Acceptable Noise Levels (ANL). The ANLs for fixed noise sources as stipulated in the IND-TM are provided in **Table 3.1** below:

Table 3.1 Acceptable Noise Level in IND-TM

Time Device	Acceptable Noise Level, Leq 30 min, dB(A)			
Time Period	ASR "A"	ASR "B"	ASR "C"	
Day-time (0700 – 1900 hours)	60	G.E.	70	
Evening (1900 – 2300 hours)	60	65		
Night-time (2300 – 0700 hours)	50	55	60	

Notes: ASR = Area Sensitivity Rating

- 3.1.2. The Acceptable Noise Levels (ANLs) are dependent on the Area Sensitivity Rating (ASR) defined and the time period of the day. The ASR of the NSR is determined by the type of area containing it and the presence of any influencing factors (IF) such as industrial areas, major roads, etc.
- 3.1.3. The Development is located in the north-eastern part of Tung Chung and is located at a newly reclaimed area of the Tung Chung New Town Extension at Tung Chung East. It is surrounded by residential zone (Tung Chung Areas 99, 100, 103, 106, 110) with a strip of open space adjacent to its south-eastern boundary and is bounded by planned Roads L3, L4 and D4 at the north-western, south-western and south-eastern sides, respectively. The background noise of the Development is dominated by the local noise such as the community noise, aircraft noise from HKIA, and traffic noise arising from Road L3, Road L4 and Road D4. The NSRs at the Development are in high density housing developments and open space but excluding industrial activities, major trade or commercial activities. The Development is not classified as rural area, low density residential area and urban area. Therefore, the type of area of the Development is categorized as "Area other than those above". The NSRs in the Development are located at 510m from North Lantau Highway (NLH) and at 490m from TCL and AEL which are screened by the nearby buildings. As the Development is classified as "Area other than those above" and no influencing factor (IF) affects the NSRs, the ASR of the Development is classified as "B".
- 3.1.4. In order to plan for a better environment, for individual planned noise sources, with reference to the HKPSG, noise emissions from any fixed plant shall be designed to be 5 dB(A) below the appropriate ANLs as stipulated in IND-TM, or the prevailing background noise levels (for quiet areas with level 5 dB(A) below the ANL). In view of the major traffic noise sources (e.g. Road L3, Road L4 and Road D4) adjacent to the Development, the planning standard of ANL-5, i.e., 60 dB(A) and 50 dB(A) are adopted for daytime/evening and night-time for ASR "B". The cumulative levels of existing and planned fixed noise sources shall comply the appropriate ANLs.







3.2. The Fixed Plant Noise Impacts on the Development

- 3.2.1. Potential fixed noise sources within 300m from the Development were identified and shown in Figure 3.1. According to the latest OZP (No. S/I-TCE/2), the Development is mainly surrounded by residential developments, no industrial area is situated in the vicinity of the Development. Based on the approved Tung Chung New Town Extension Environmental Impact Assessment Report (Register No: AEIAR-196/2016) (hereafter referred to as "TCNTE EIA report"), the information provided by HKHA and Island District Council Meeting Document, the identified fixed noise sources within 300m from the Development include sewage pumping station (S1), the ventilation fans installed at Public Vehicle Park/Public Transport Interchange Complex at Area 99 (S2 and S3), and the planned District Cooling System (DCS) in Tung Chung Area 120 (S4). The identified noise sources were summarized in Table 3.2.
- 3.2.2. The planned District Cooling System (DCS) in Tung Chung Area 120 (S4) is located at about 189 m to the north-eastern of the Development. Given that there is no detailed information on the planned DSC, the further details on noise impact assessment to the Development from the DSC would be considered under separate study conducted by the project proponent (e.g, EMSD). The planned DSC shall be designed to be 5dB(A) below the appropriate ANLs as stipulated in IND-TM and the relevant noise planning standard recommended in the HKPSG. The potential noise impact at the planned and existing NSRs due to the operation of DSC would be expected to be minimized.
- 3.2.3. With considering of the large separation distance, screening from its surrounding and the SWLs of S1, S2 and S3 would be designed to be 5 dB(A) below the appropriate ANL or to meet the maximum allowable SWL listed in the approved TCNTE EIA report. As such, adverse noise impacts due to the fixed plant sources including S1, S2 and S3 are not expected to occur.

Table 3.2 Identified Fixed Plant Noise Sources within 300m from the Development

	Identified Fixed	d Plant Sources	
Source ID	Location	Approximate Horizontal Separation Distance to the Nearest NSR at the Development	Remarks
S1	Planned Sewage Pumping Station at Area 104	289 m	The noise emission from the fixed plant is properly designed to meet the maximum allowable SWL based on the approved TCNTE EIA report.
S2	Ventilation Fans (S2 & S3) in Public Vehicle Park / Public Transport	253 m ⁽¹⁾	As advised by HKHA, the Sound Power Levels of the fixed plant sources have been designed to be
S3	Interchange Complex at Area 99	195 m ⁽¹⁾	ANL- 5 dB(A) and the noise planning standards recommended in HKPSG.
S4	District Cooling System at Area 120	187 m ⁽²⁾	It is understood that the future proponent shall carry out a separate study to assess the potential noise impact and provide the appropriate mitigation measures, if necessary.

Note:

The proposed locations of ventilation fans (S2 and S3) are based on the information provided by HKHA.

The location of District Cooling System in Area 120 is made reference to Islands District Council Meeting Document (IDC Paper No. 121/2020). The location plan of the planned DSC is given in **Appendix G**.







3.3. The Fixed Plant Noise Impacts Caused by the Development

3.3.1. The proposed carpark is to be located at underground basement structure of the Development. Ventilation systems would be installed for the basement carpark. As advised by HKHA, the ventilation systems in the Development should be designed to fulfil requirements, i.e Chapter 9 of the HKPSG. Noise emission from any fixed plant shall be designed to be 5dB(A) below the appropriate ANLs as stipulated in IND-TM and the relevant noise planning standard recommended in the HKPSG No adverse noise impact arising from the planned ventilation fans is anticipated.

3.4. Other Potential Noise Source

Planned Public Transport Interchange (PTI) at Area 99

- 3.4.1. A planned public transport interchange (PTI) is located at Area 99 and about 200 m to the southwest of the Development. The location is shown in **Figure 3.1**. Noise arising from planned PTI should be considered. The design of the PTI shall follow the recommendation of Section S.4.2.14 of Ch.9 of HKPSG. The following general considerations should be taken during the planning stage of a PTI for minimisation of potential operational noise impact:
 - Locate the facilities so that there is no line-of-sight of the noise sources to the noise sensitive uses; provide screening to the noise sources as far as possible my making use of natural landscape, embankment or noise tolerant buildings;
 - Avoid locating open-form major public transport termini in proximity to noise sensitive uses; and
 - Consider adopting a complete podium decking over noisy facilities.
- 3.4.2. The further details on noise impact assessment to the Development from the planned PTI have been discussed under separately EAS for Area 99 submission. The relevant guidelines of the HKPSG will be considered as far as practicable to alleviate the potential noise impact from the planned PTI. The potential noise impact at the planned and existing NSRs due to the operation of PTI would be expected to be minimized.

3.5. Summary

3.5.1. It is noted that the identified fixed noise sources (i.e. S1, S2 and S3) outside the Development are located over 190m away from the Development .Therefore, adverse fixed plant noise impact on the Development is not anticipated.







4. Aircraft Noise Impact Assessment

4.1. Aircraft Noise

- 4.1.1. Aircraft noise is governed by the Civil Aviation (Aircraft Noise) Ordinance (Cap. 312). With reference to the HKPSG, exposure to aircraft noise is described by Noise Exposure Forecast (NEF) contours. The NEF standards applicable to the Hong Kong International Airport at Chek Lap Kok as stipulated in Table 4.1 of HKPSG Chapter 9, Environment should not be exceeded. The aircraft noise standard for planning noise sensitive uses is summarised below:
 - All domestic premises, including temporary housing accommodation should not be located within 25 NEF contours as described.
- 4.1.2. The predicted NEF25 contours of the Three-Runway System (3RS) has made reference to Figure 4.3d-1, Figure 4.3f-1 and Figure 4.3h-1 of the approved TCNTE EIA report.
- 4.1.3. According to the approved TCNTE EIA report, the predicted NEF noise contours assessment at Year 2021 (commission year of the Three Runway System), Year 2030 (worst operation mode of 3RS³) and Year 2032 (full operation mode) are used for the evaluation taking consideration of the population intake of this Development in Year 2025/26. No encroachment of the Development on NEF 25 contour is anticipated and shown in Figure 4.1- Figure 4.3. The separation distance between the NEF25 noise contours and the site boundary of Area 109 in assessment years are provided in Table 4.1. Therefore, no adverse aircraft noise impacts on the Development are expected to occur when the population intake is expected by 2025/26.

Table 4.1 The Separation Distance between the NEF 25 Noise Contours and the Site Boundary of Area 109

Assessment Year	The Shortest Separation Distance, m
2021	26
2030	780
2032	810

4.2. Summary

4.2.1. Since the Development is located outside the 25 NEF contours, no adverse aircraft noise impacts on the Development are expected to occur.

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³ According to 3RS EIA (AEIAR-185/2014), the worst operation mode of 3RS is defined as the year with the largest total area within the NEF contour. The worst operation mode is represented the maximum noise emission scenario and concluded that Year 2030 represents as the worst operation mode.







5. Air Quality Impact Assessment

5.1. Assessment Criteria

The Hong Kong Planning Standards Guidelines

5.1.1. Chapter 9 of the Hong Kong Planning Standards Guidelines (HKPSG) provides environmental guidance for residential developments on air quality. In general, suitable buffer distance between sensitive uses and air pollution sources should be provided to minimize air quality impact.

5.2. Study Area and Emission Sources

- 5.2.1. The study area of the air quality assessment includes all area within 500 m from the Development site as shown in Figure 5.1. The site is surrounded by residential zone (Tung Chung Areas 99, 100, 103, 106, 110) and open space adjacent to its north-eastern boundary, no industrial area is situated adjacent to the Development. It is bounded by planned Roads L4, L5, D4 and D5 at the south-western, south-eastern, north-western and south-eastern sides, respectively. North Lantau Highway is located at 510m to the south of the Development. Based on the current information, the key emission sources would be the vehicle emissions from the nearby roads only. No other air polluting emissions sources such as industrial chimneys were identified within study area.
- 5.2.2. Initial desktop study was conducted to review the nature of all buildings within the study area based on latest street maps and statutory plans. According to desktop study, no aerial emission source is found within 200m from the site boundary.

5.3. Traffic Emissions

5.3.1. The HKPSG recommends buffer distance between roads and active open spaces. The different type of roads and the respective minimum buffer distance and permitted uses are given in **Table 5.1** below:

Table 5.1 Guidelines on Usage of Open Space Site

Pollution Source	Type of Road	Buffer Distance	Permitted Uses
	Trunk Road and Primary Distributor	>20m	Active and passive recreational uses
		3 - 20m	Passive recreational uses
		<3m	Amenity areas
Road and	District Distributor Local Distributor	>10m	Active and passive recreational uses
Highways		<10m	Passive recreational uses
		>5m	Active and passive recreational uses
		<5m	Passive recreational uses
	Under Flyovers		Passive recreational uses

Note: The buffer distance is the horizontal, shortest distance from the edge of road kerb to the boundary of open space sites.

Assessment Results

5.3.2. The Development site is bounded by planned Road L4 to its south-west, planned Road L3 to the north-west and planned Road D4 to the south-east. In this assessment, new roads L4 and L3 are classified as Local Distributor and new road D4 is classified as District Distributor. The correspondences with Transport Department (TD) and Civil Engineering and Development Department (CEDD) is provided in Appendix I.







5.3.3. The HKPSG buffer distance from roads to "open space" sites have been referred to for evaluation of the potential traffic emissions impacts from the roads nearby. The HKPSG recommends a buffer distance on usage of "open space" site for active and passive recreational uses from district distributor and local distributor are to be more than 10m and 5m, respectively. The minimum setback distances of public housing blocks from the kerb of the roads are summarized in **Table 5.2**. The buffer zone required in general for the Development is illustrated in **Figure 5.1**.

Table 5.2 Separation Distance Between Public Housing Blocks and Road Kerb

Road Source	Type of Road	Buffer Distance Required for Active	The Shortest Horizontal Distance Separation from the Road Kerb to the Public Housing Blocks	
Source		Recreation Uses	Block A	Block B
Road L3	Local Distributor	>5m	12.4 m	10.2 m
Road L4	Local Distributor	>5m	7.7 m	85.3 m
Road D4	District Distributor	>10m	33.9 m	36.0 m

- 5.3.4. The minimum horizontal separation distances from the nearest facades of the building blocks to the road kerbs meet the HKPSG recommended buffer distances and would meet the HKPSG standard with regards to vehicular emissions from open roads. As shown in **Figure 5.1**, there are no air sensitive uses, openable window or fresh air intake would be located within the buffer zones. To this end, no adverse air quality impact on the Development due to vehicular emission is anticipated.
- 5.3.5. For the non-residential facilities including retails, Estate Management Office and District Maintenance Office, no air sensitive uses, openable window or fresh air intake are located within the buffer zones and shown in **Figure 5.2** and **Figure 5.3**. Therefore, no adverse air quality impact on the non-residential facilities is anticipated.

5.4. Summary

5.4.1. No air sensitive uses of the Development are located within the HKPSG recommended buffered area from open roads. No other air polluting sources are identified in the Development vicinity. This EAS is based on the latest layout plan, new population and development intensity of the report "Review for Population Increase and Development Intensity" (the Review Report). The Review Report is still under review and has not been completed yet. Therefore, the EAS for Area 100 may be reviewed according to the findings of the Review Report if and when necessary.







6. Conclusion

6.1. Overall

6.1.1. An Environmental Assessment Study (EAS) has been conducted for the Proposed Public Housing Development at Tung Chung Area 109 comprising two specific blocks. Impacts related to road traffic noise, fixed plant noise, aircraft noise and air quality have been assessed.

6.2. Noise

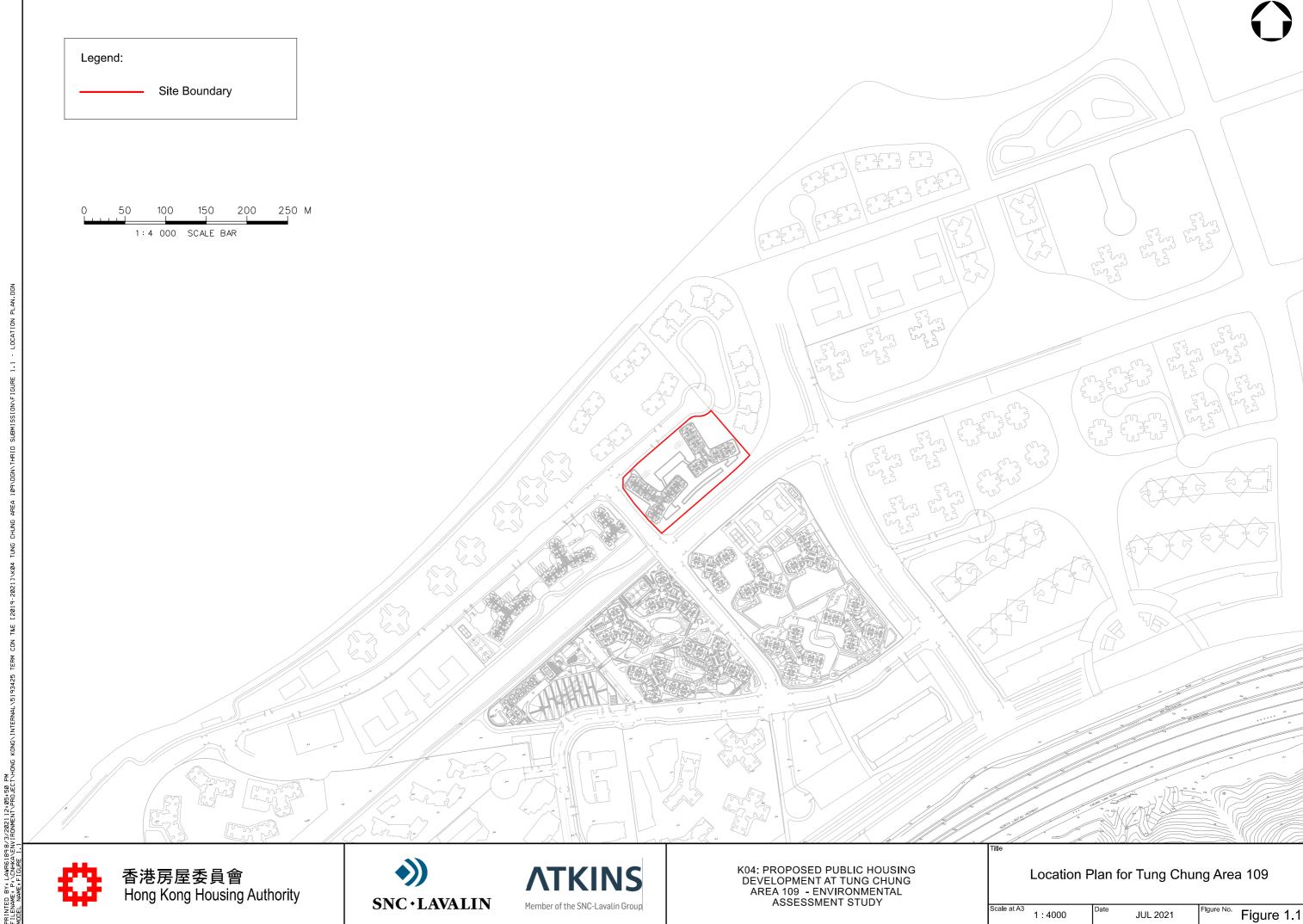
- 6.2.1. Road traffic on planned Road D4, Road L4 and Road L3 is identified as the major noise in the vicinity of the Development.
- 6.2.2. For public housing blocks, the Development has incorporated the design such as provision of roof podium, canopy and building orientation under base-case scenario. To minimize the traffic noise, fixed glazing and acoustic window have been adopted as noise mitigation measures, all residential flats are compliance with the 70 dB(A) noise criterion.
- 6.2.3. The identified fixed plant noise sources will comply with the relevant noise criteria. Therefore, adverse fixed plant noise impact on the Development is not anticipated.
- 6.2.4. The Development is located outside of the NEF 25 contour. No adverse aircraft noise impact on the Development is expected to occur.

6.3. Air Quality

6.3.1. No air sensitive uses of the Development are located within the HKPSG recommended buffered area from open roads. No other air polluting sources are identified in the Development vicinity. This EAS is based on the latest layout plan, new population and development intensity of the report "Review for Population Increase and Development Intensity" (the Review Report). The Review Report is still under review and has not been completed yet. Therefore, the EAS for Area 100 may be reviewed according to the findings of the Review Report if and when necessary.

Figures





香港房屋委員會 Hong Kong Housing Authority



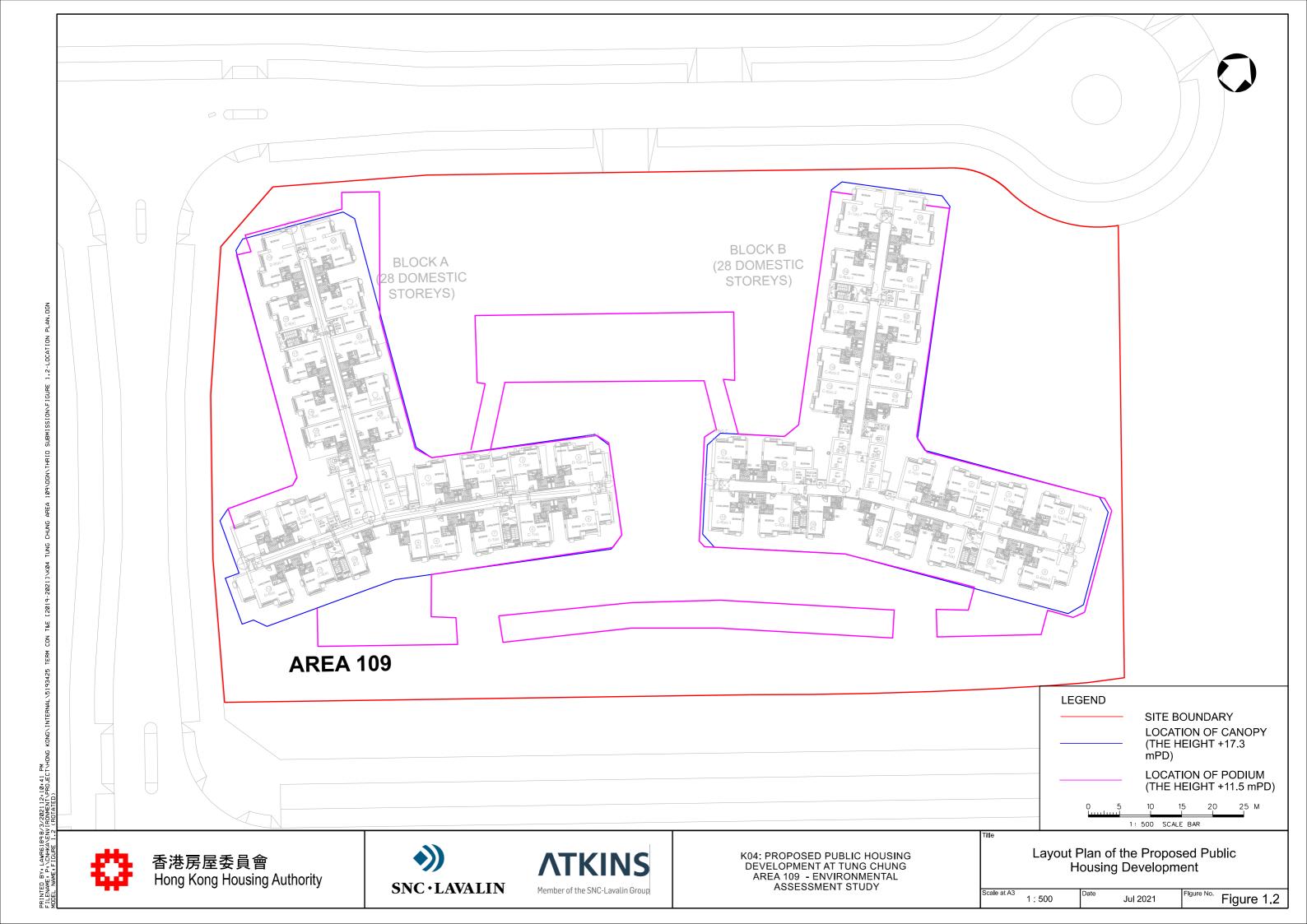
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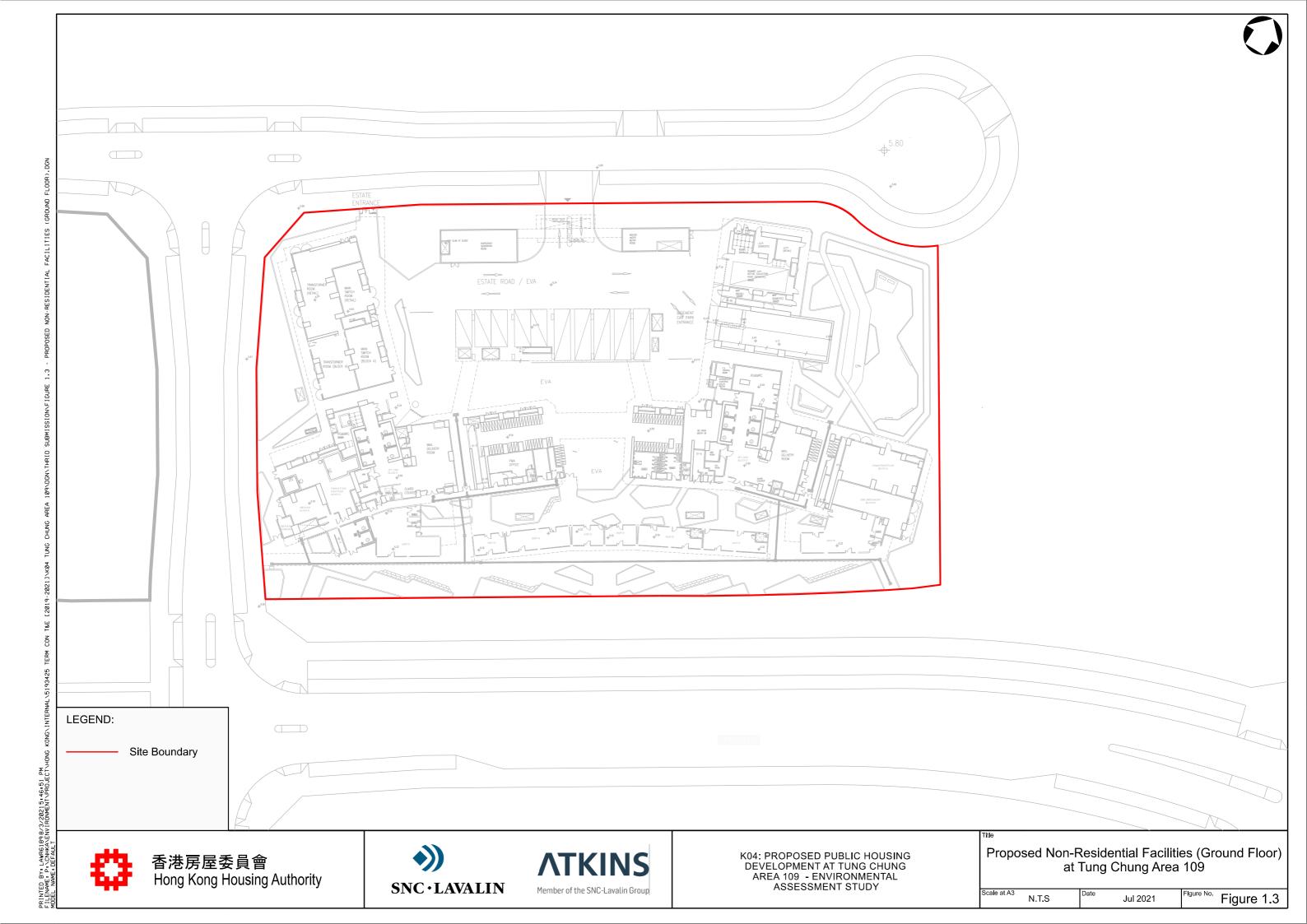
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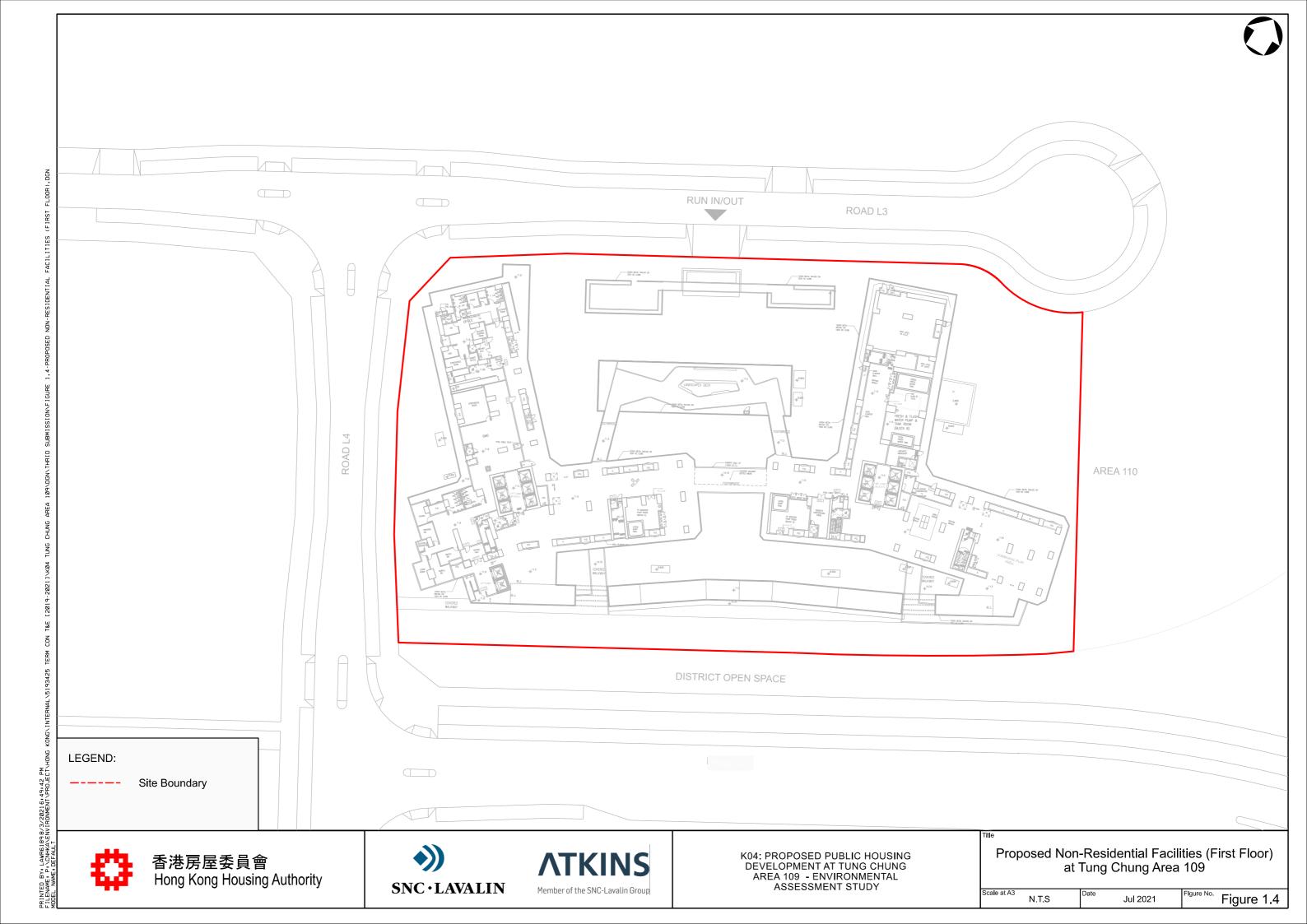
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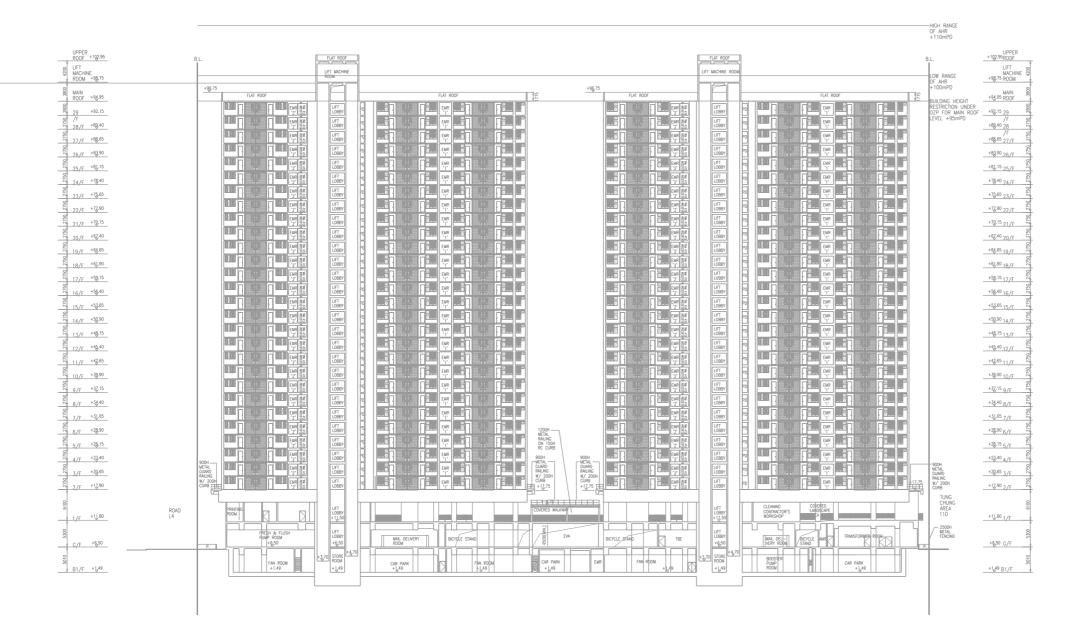
Figure 1.1











Key Plan

TC109 BLK A FRONT SEC 28 domestic storeys

TC109 BLK B FRONT SEC 28 domestic storeys



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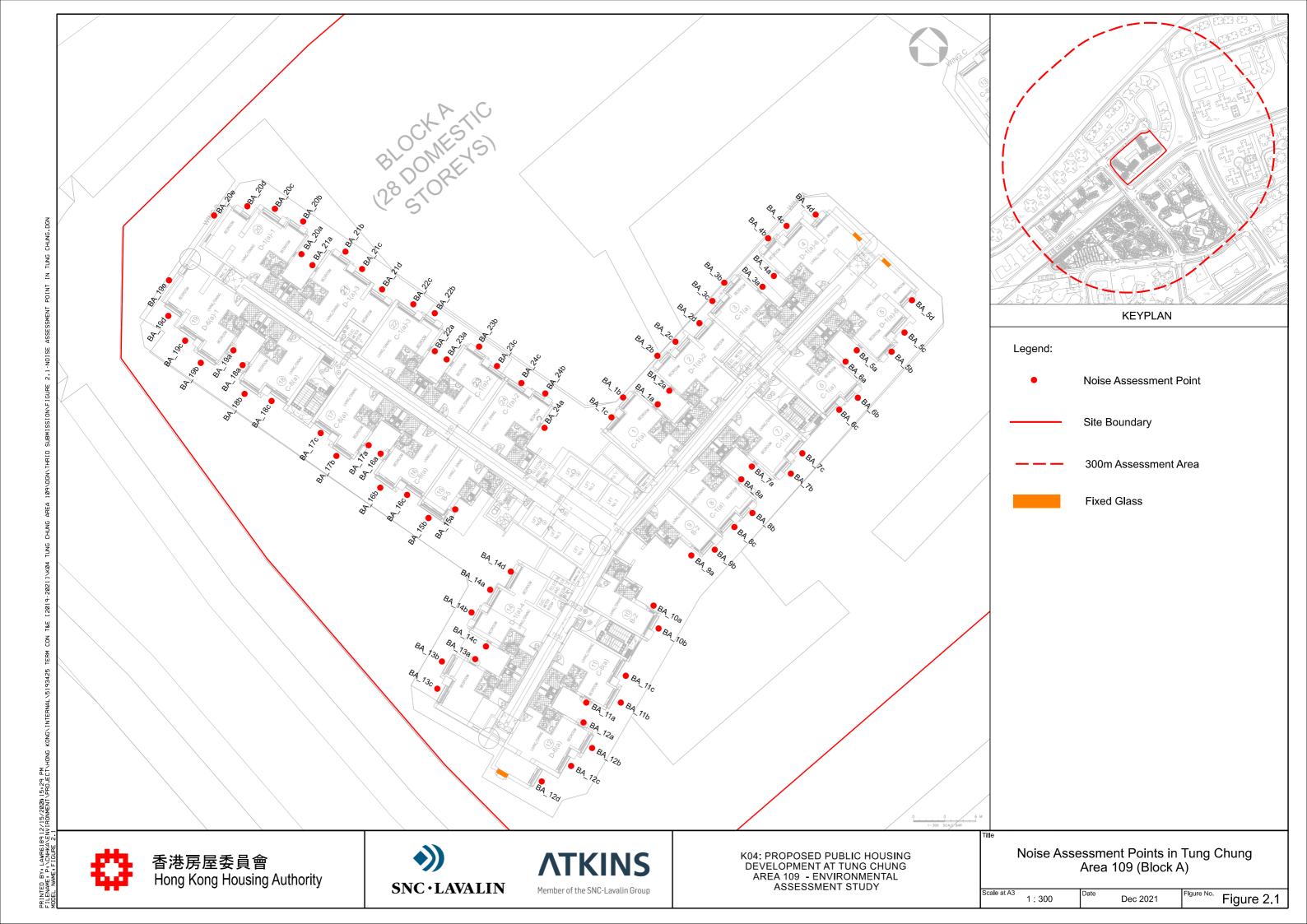


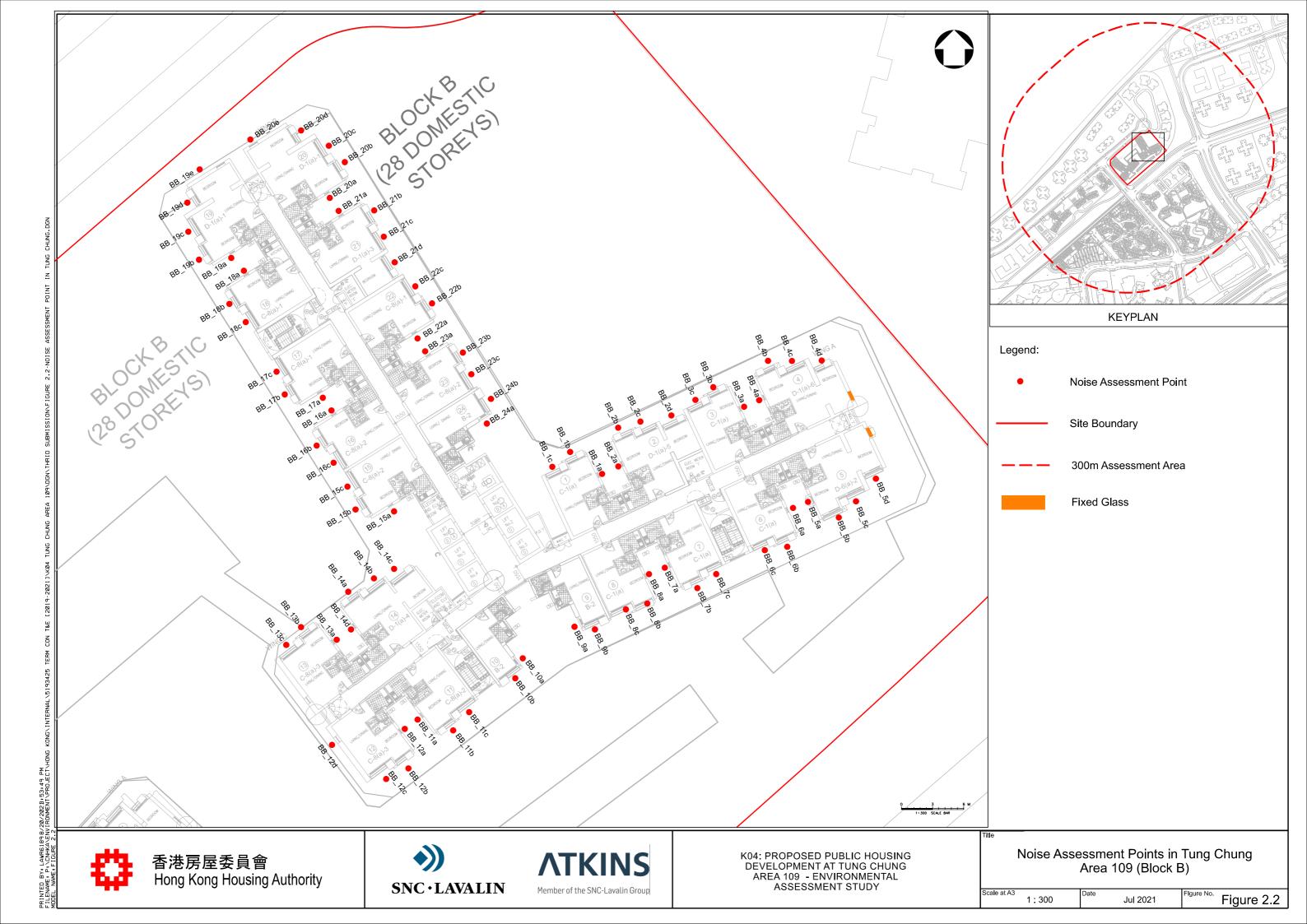
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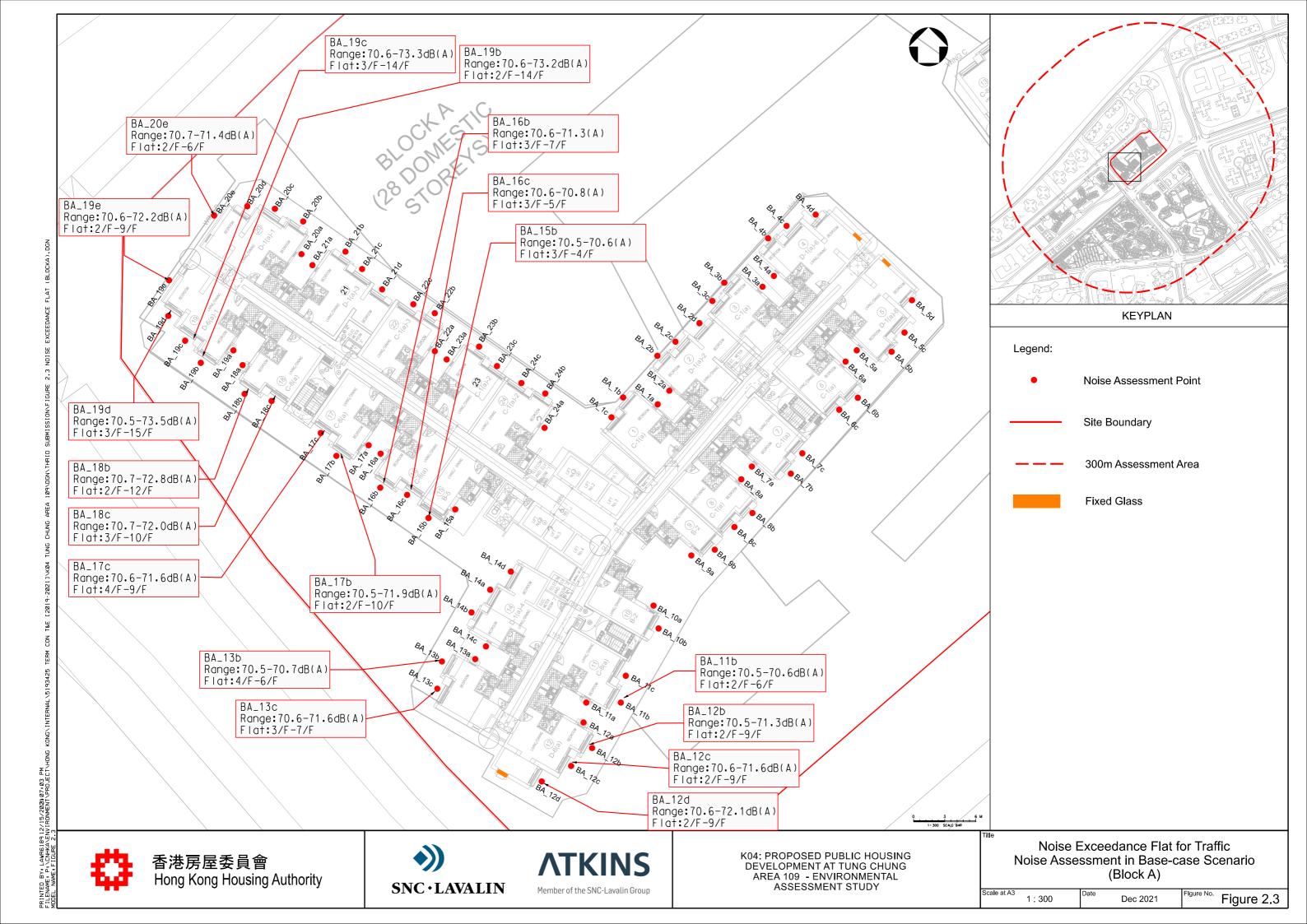
Block Section Plan of Area 109

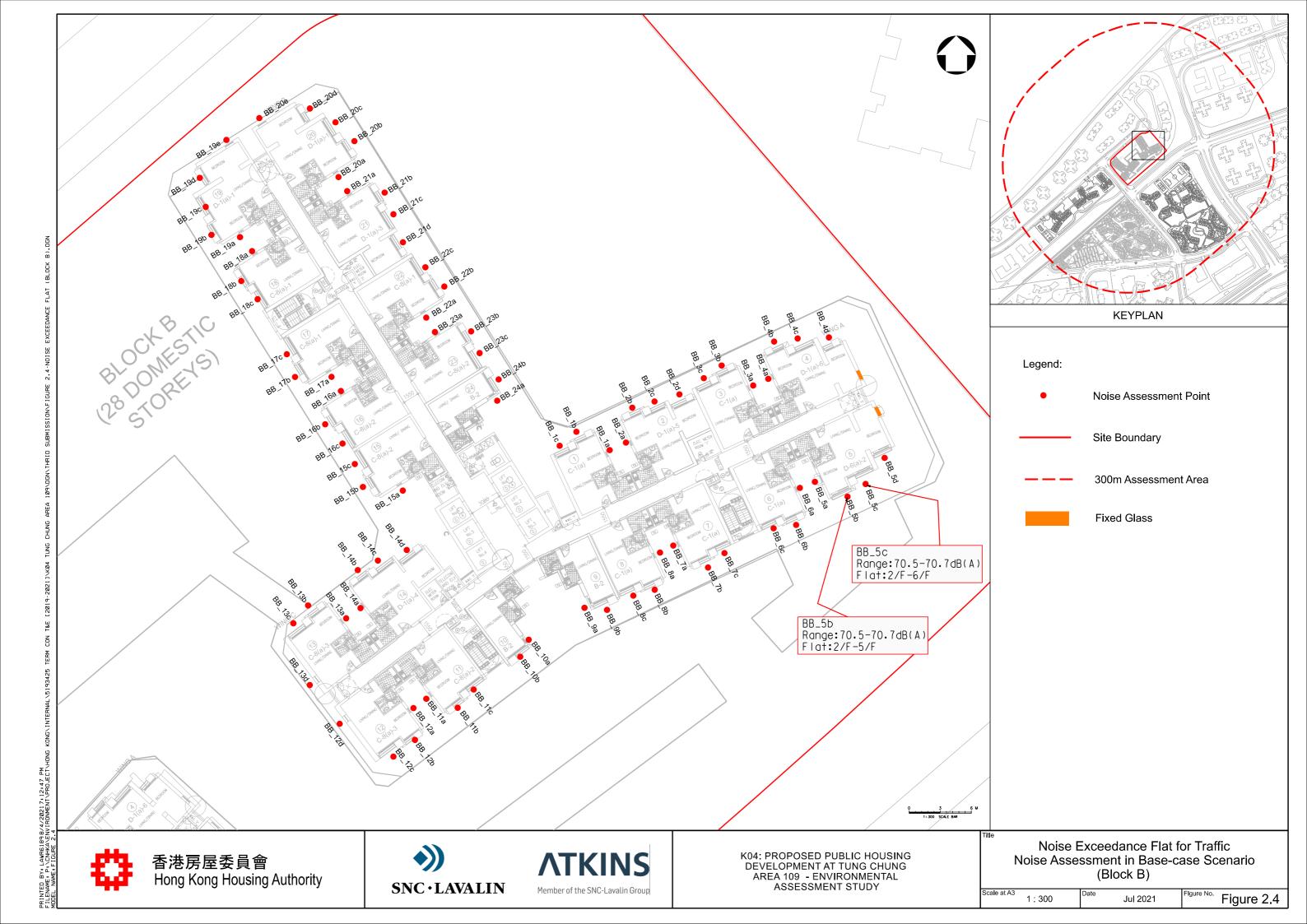
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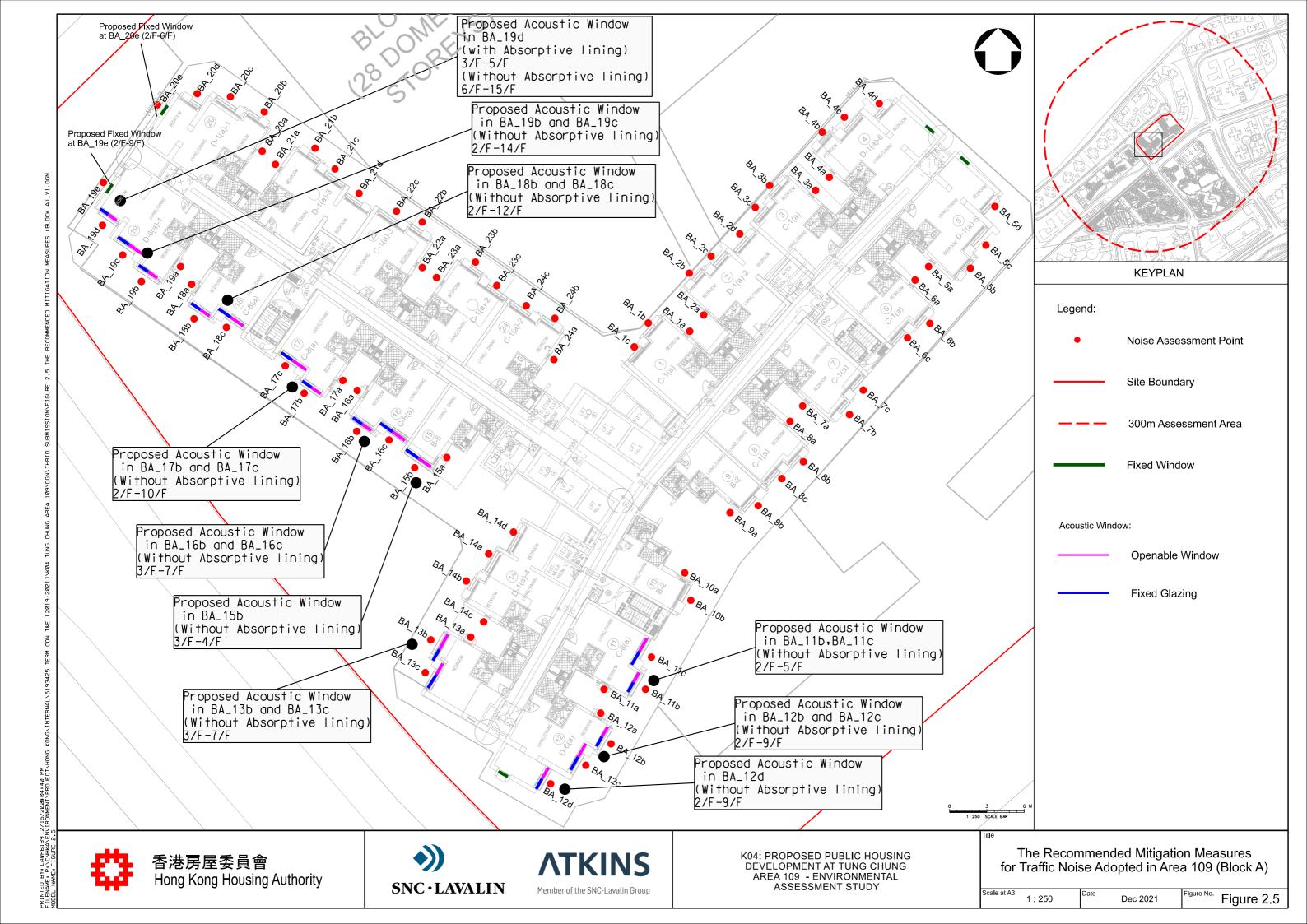
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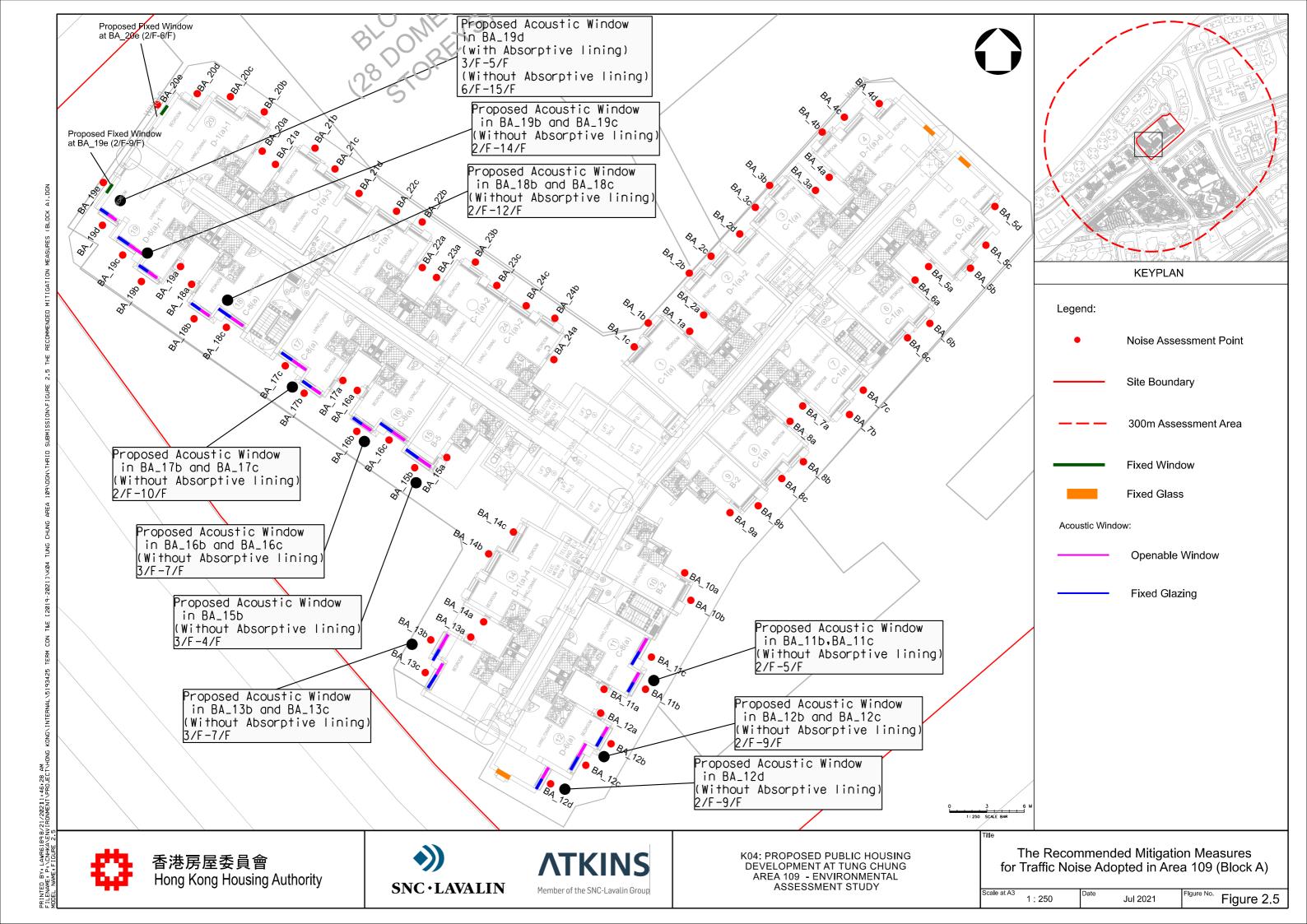


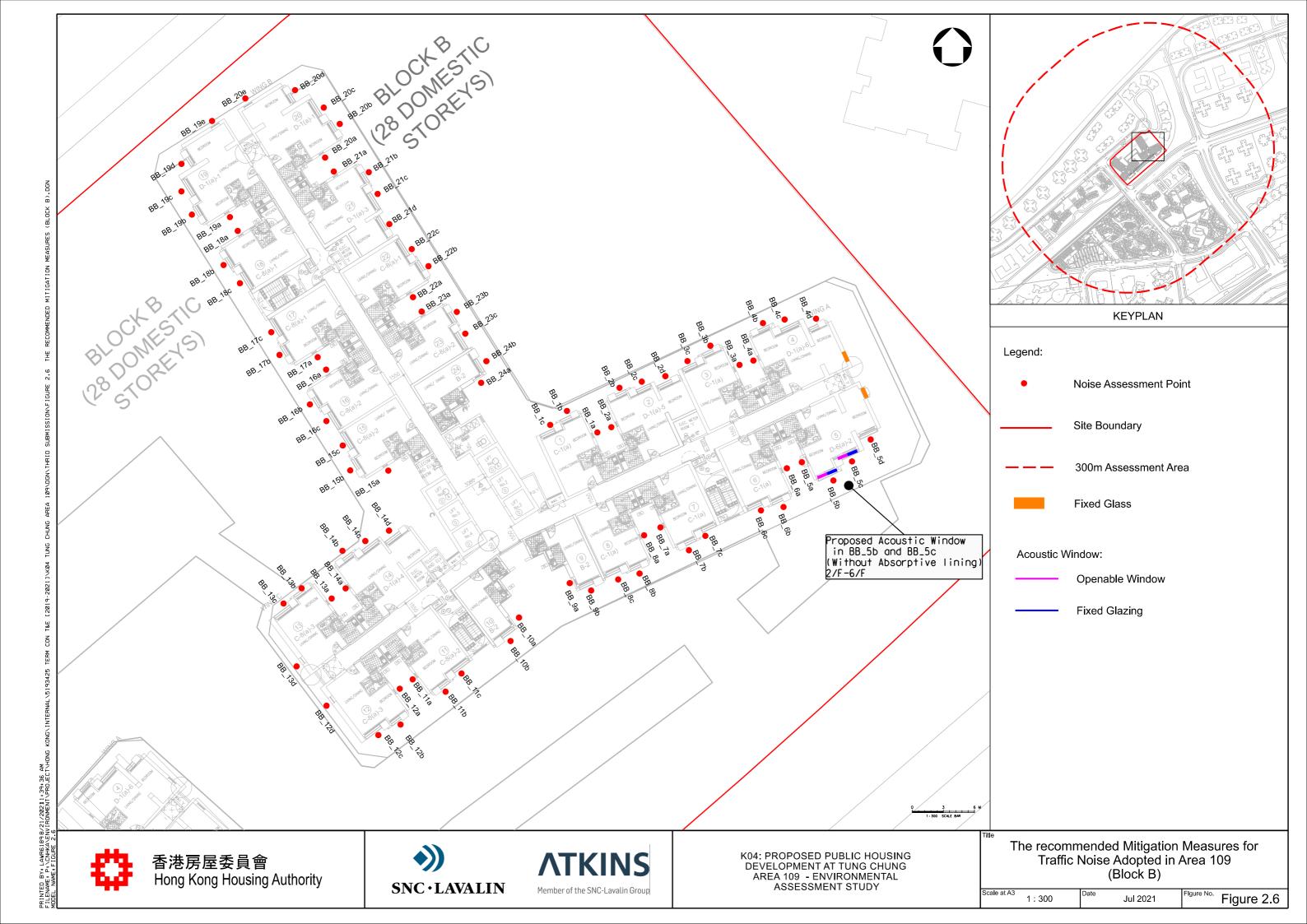


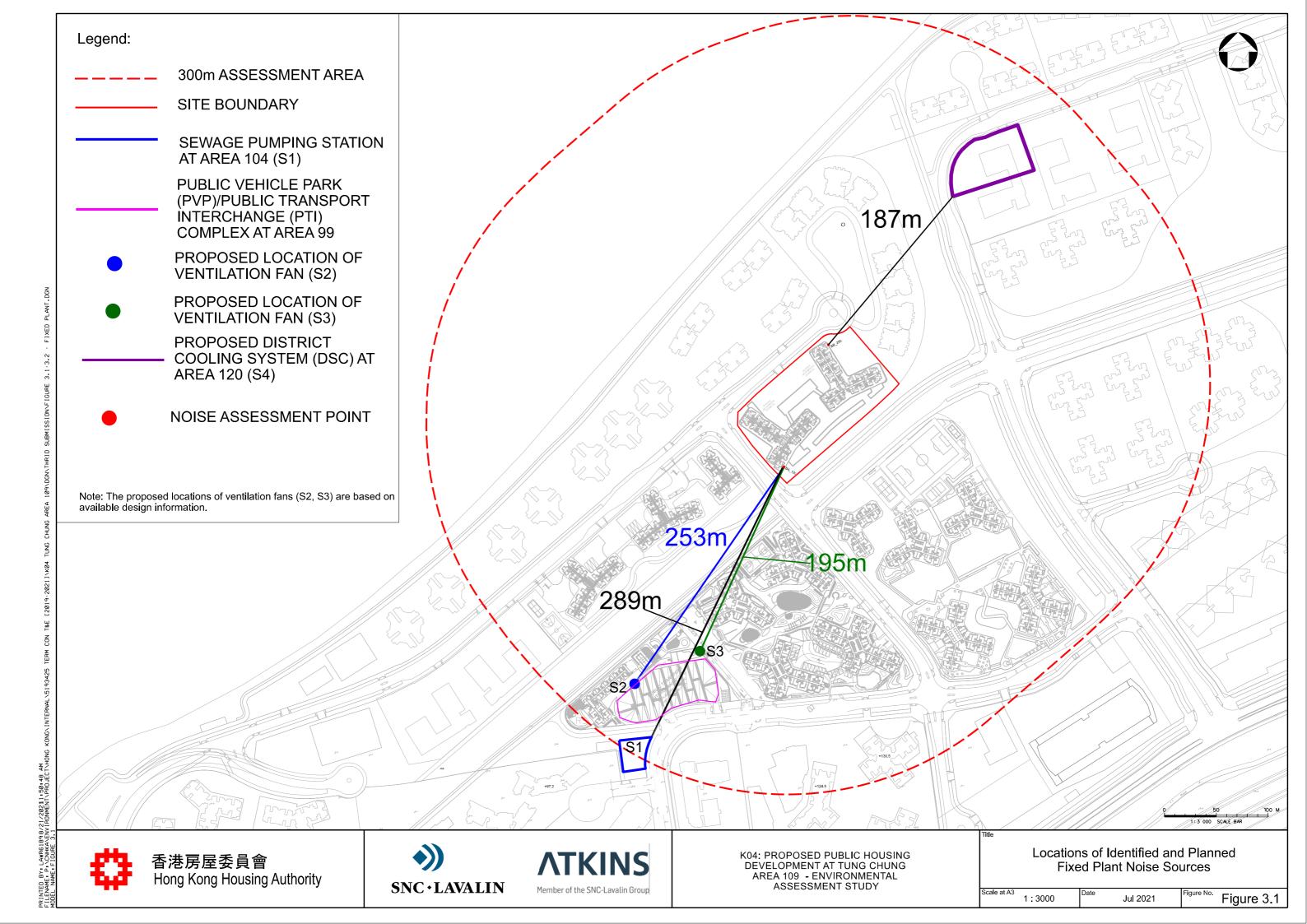


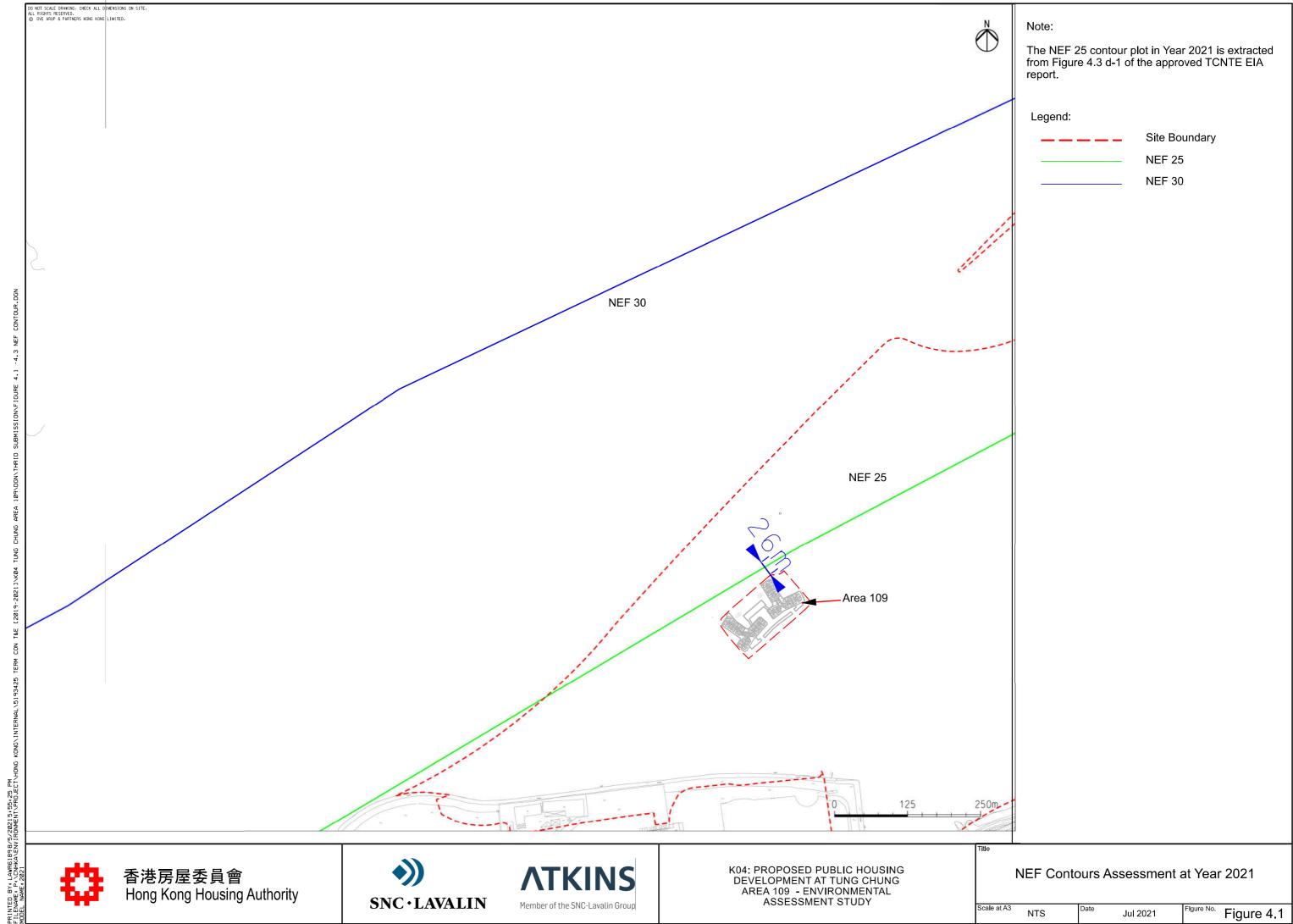


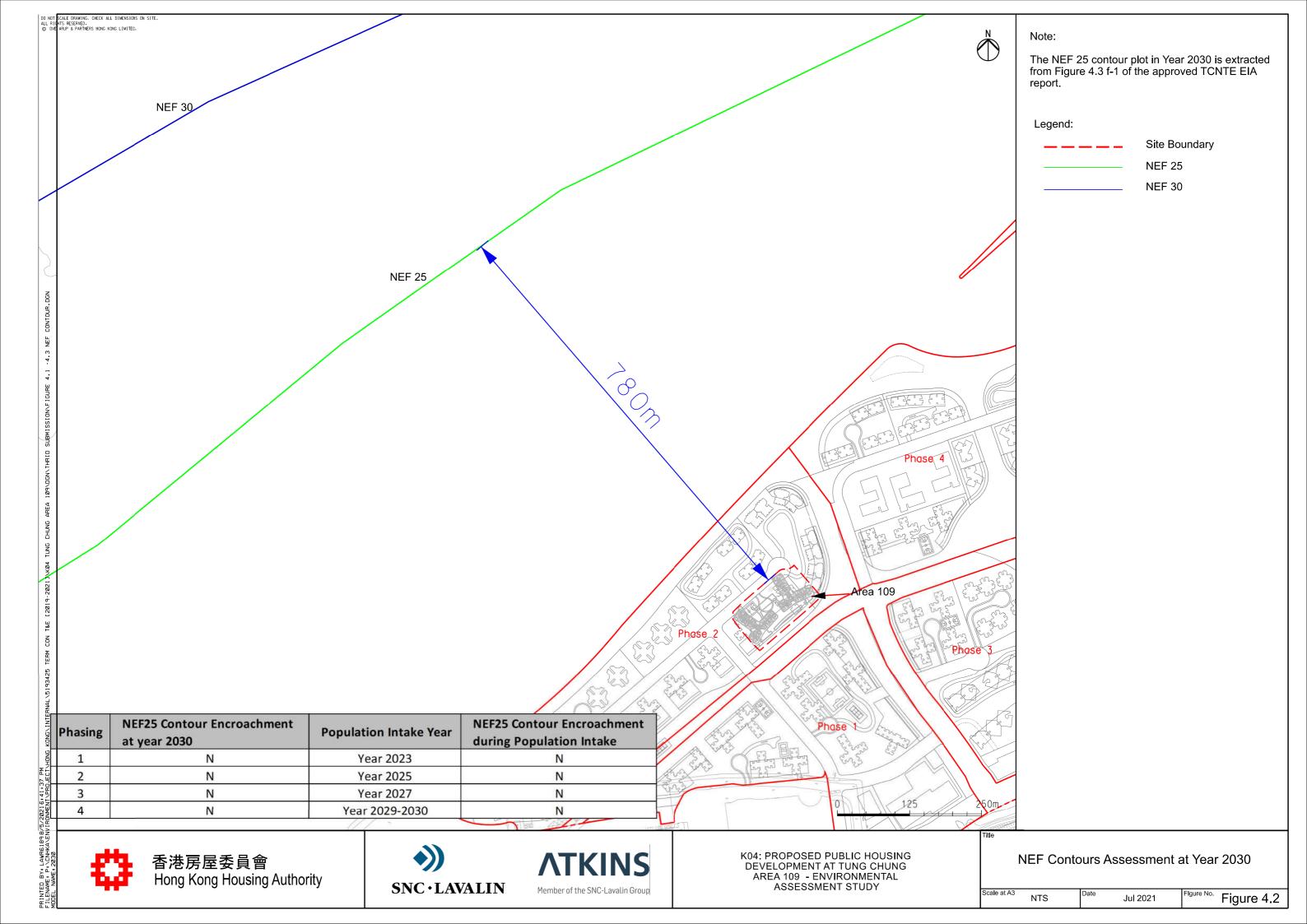


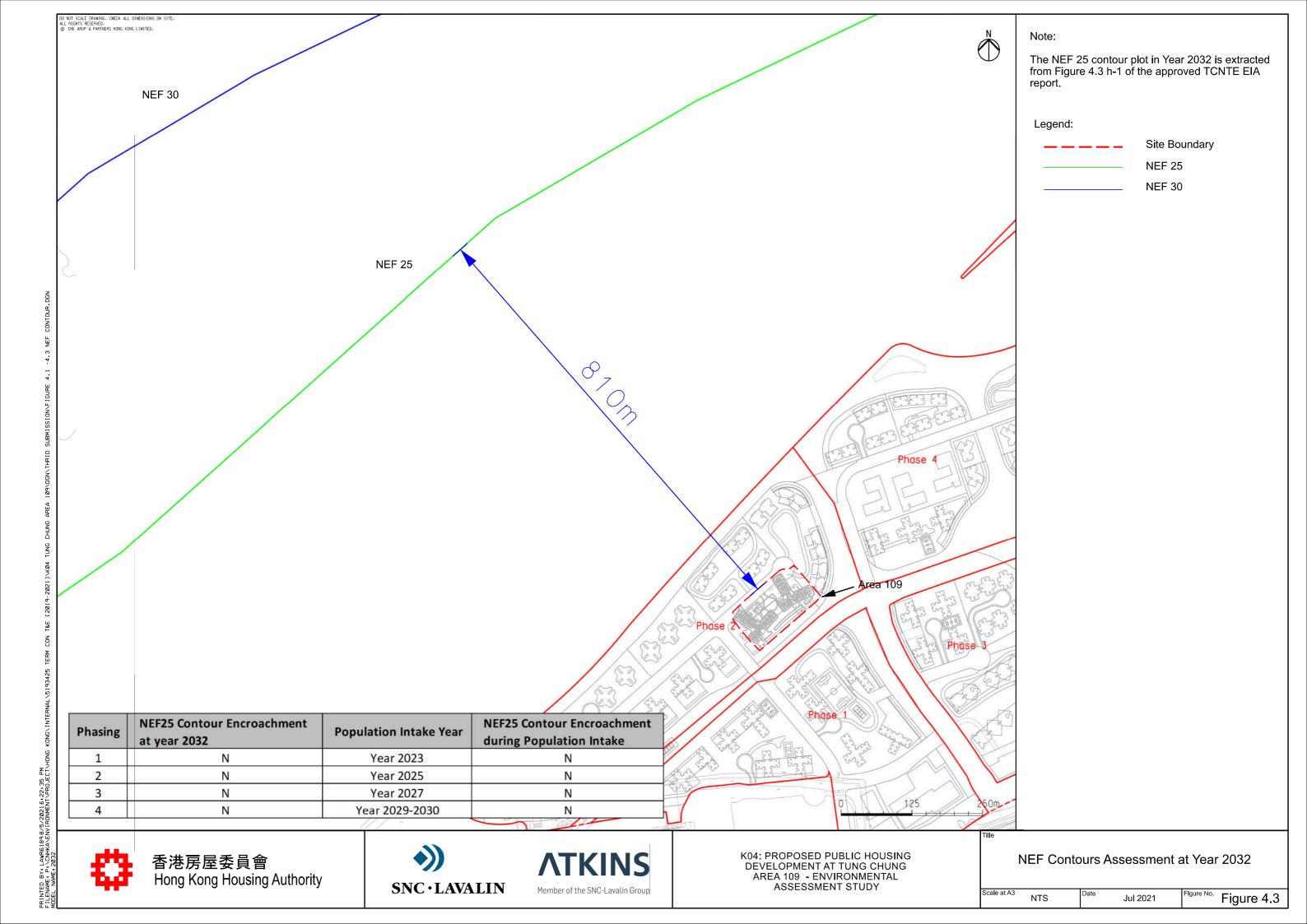


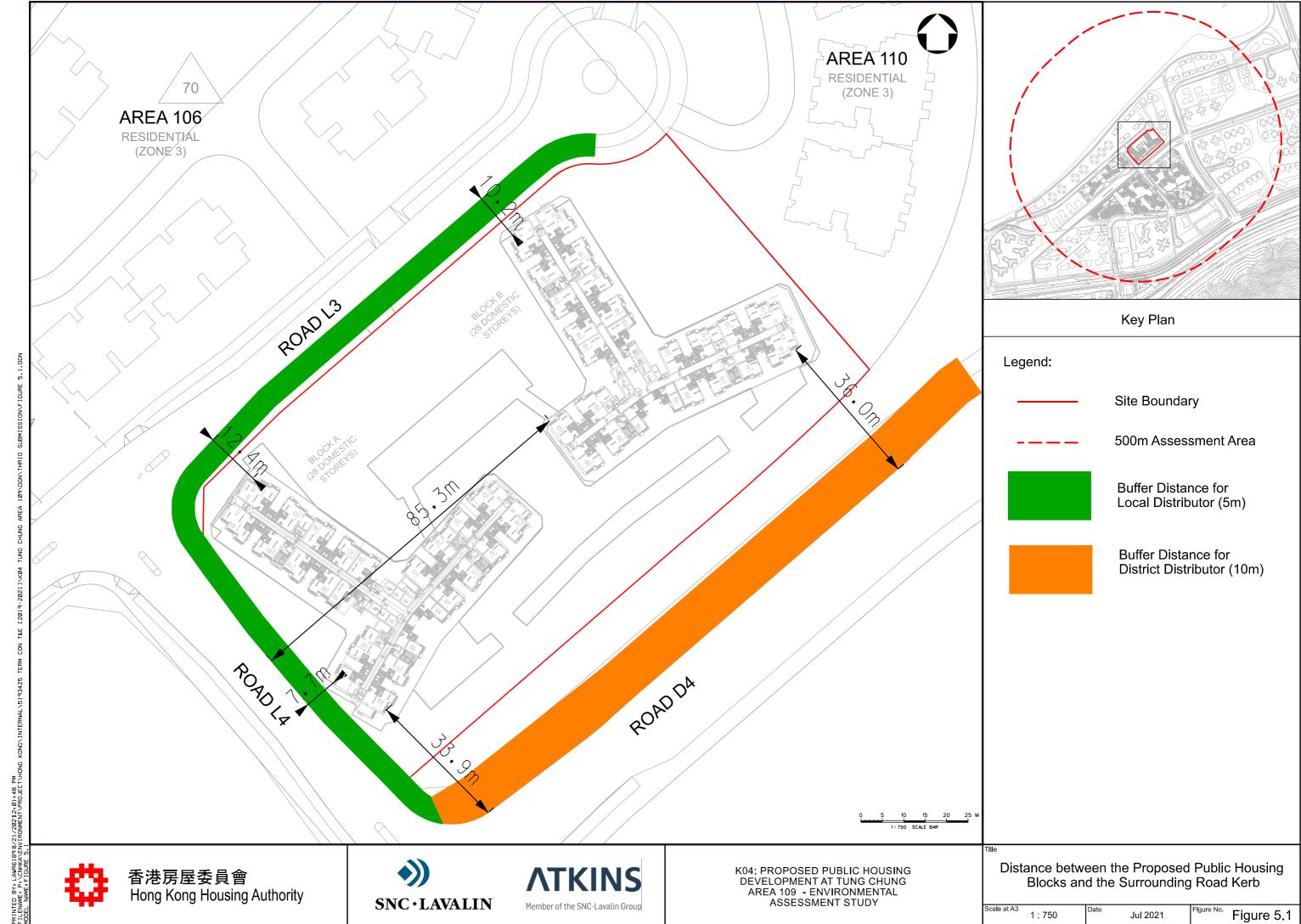


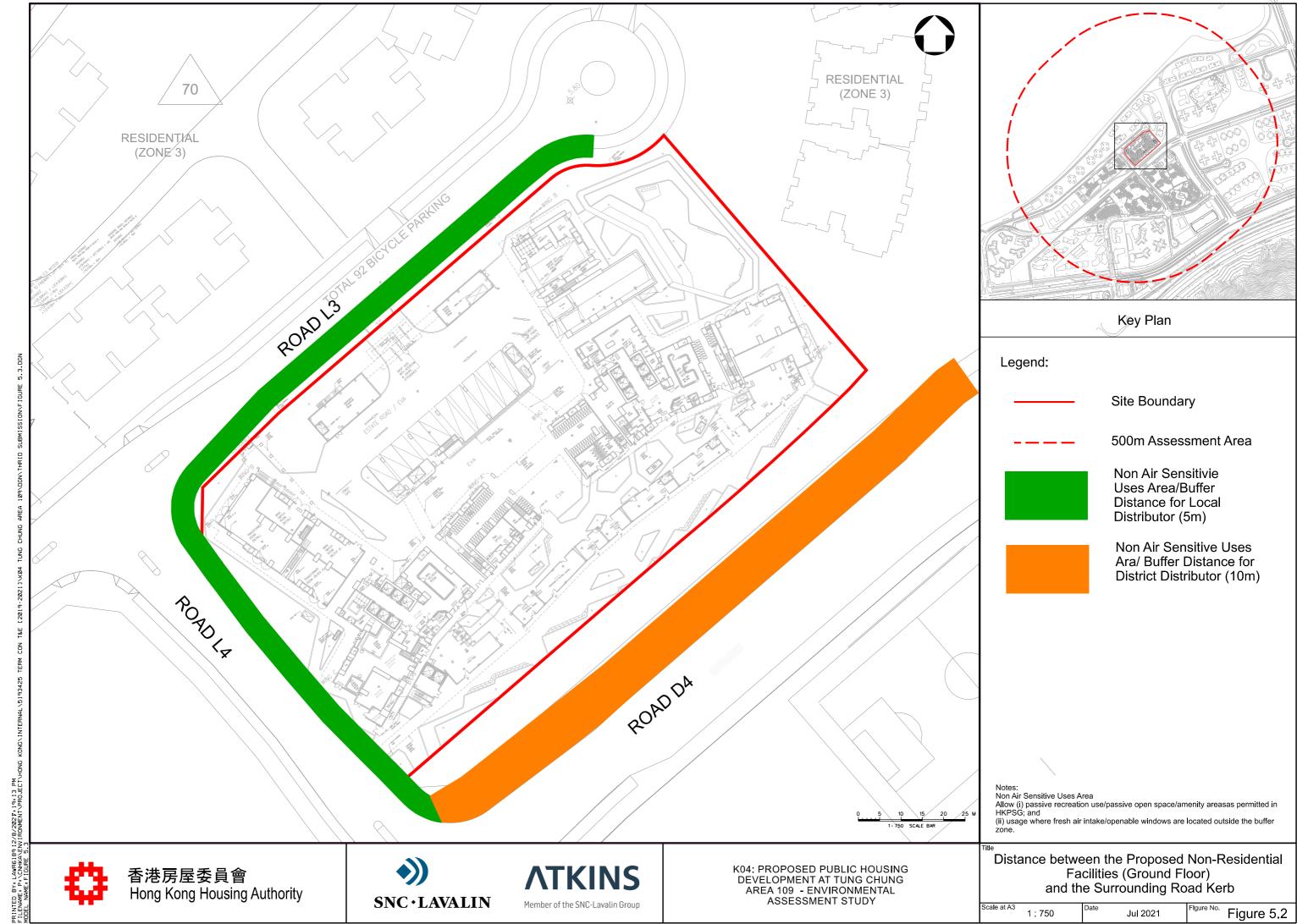


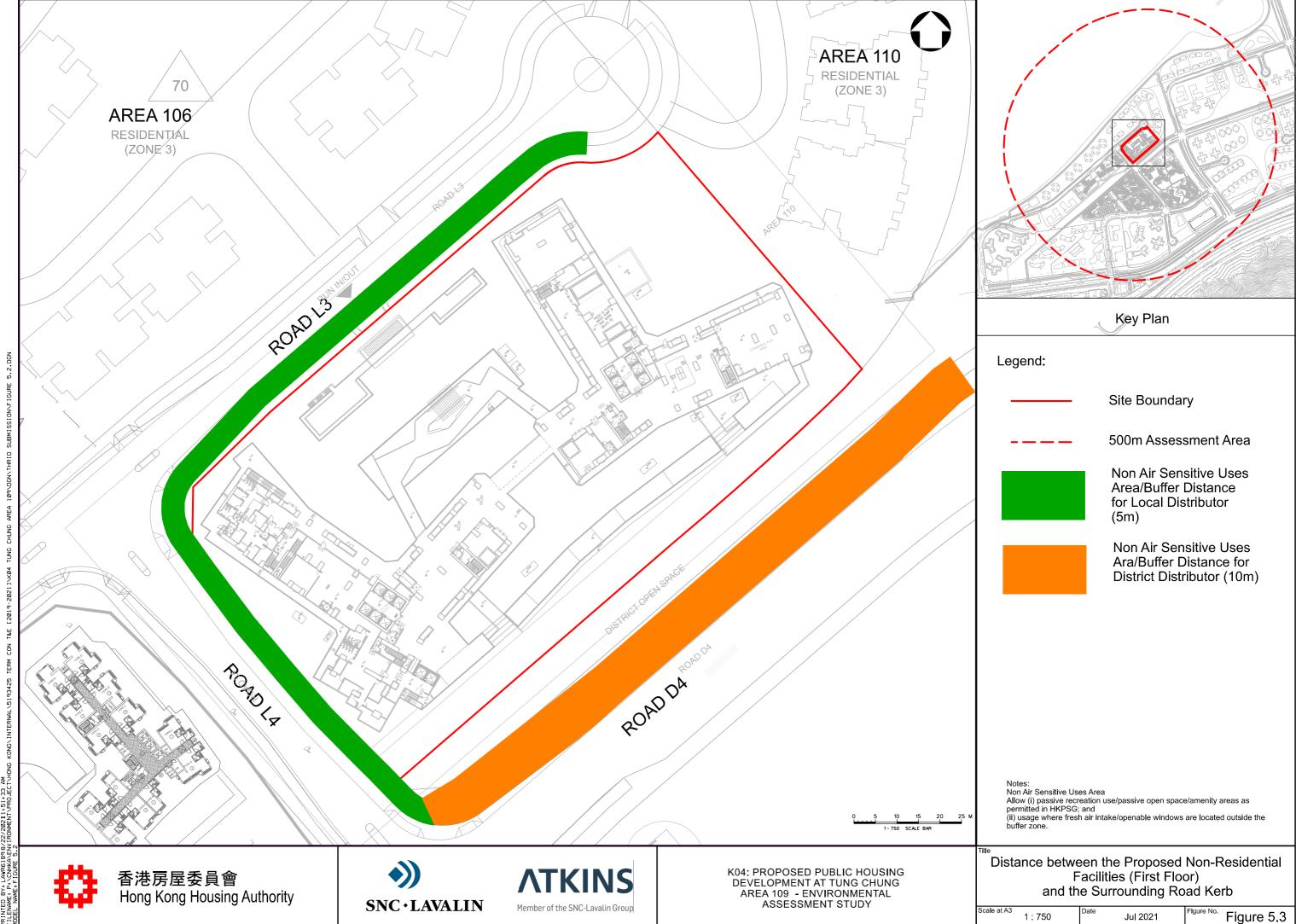






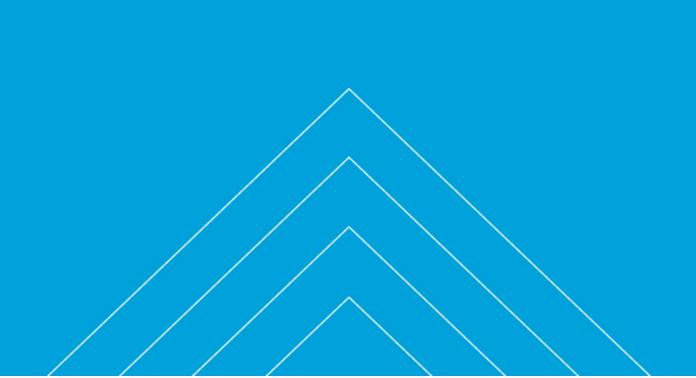






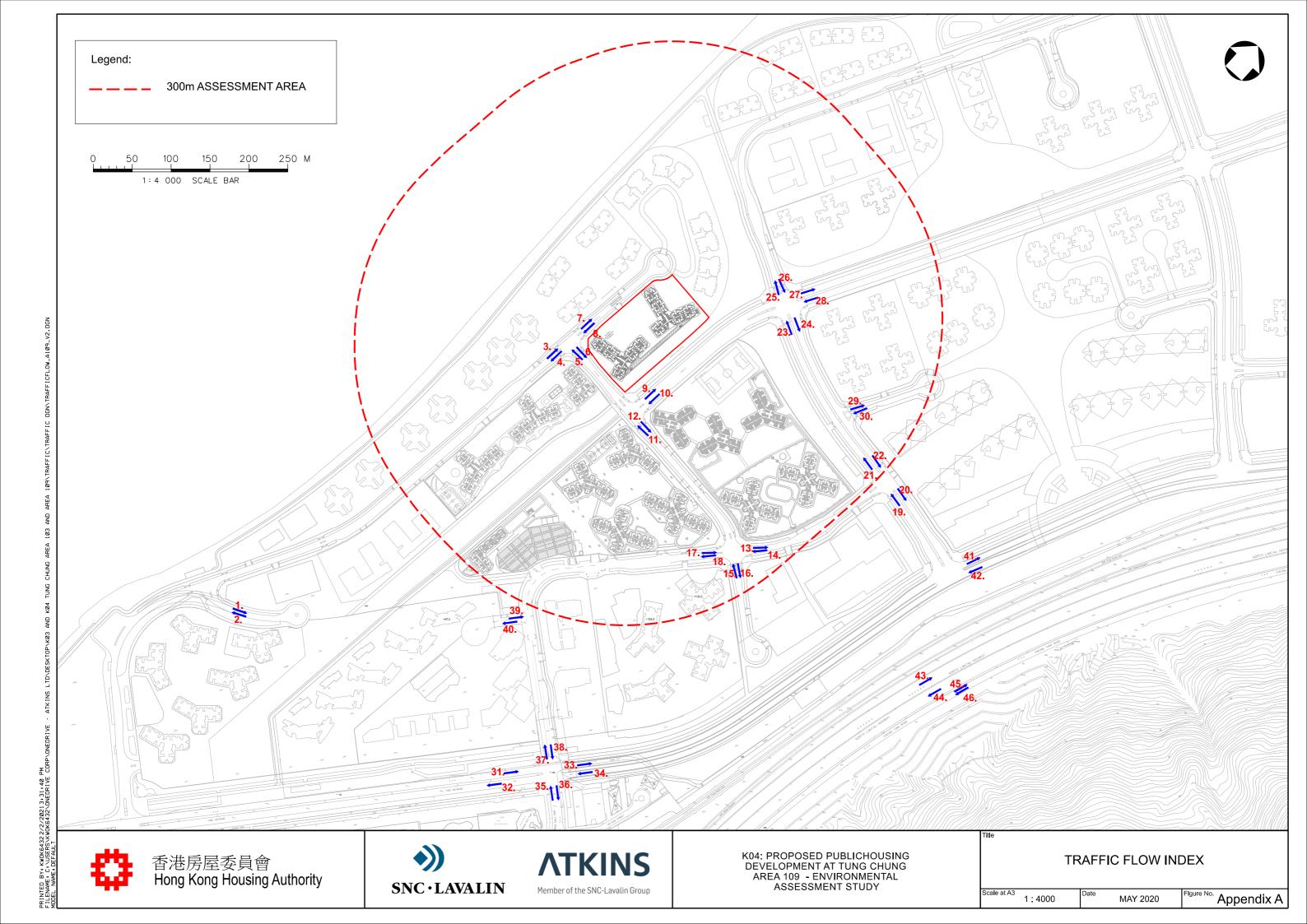
Appendix A

Traffic Forecast in Year 2045



Year 2045 Forecasted Traffic Flow for Housing Development at Tung Chung Area 109

					AM peak		PM peak	
ID	Road	Traffic Direction	Road Type	Speed Limit	Total Traffic Flow (veh/hr)	HV%	Total Traffic Flow (veh/hr)	HV%
1	Road L3	EB	LD	50	20	100%	20	100%
2	Road L3	WB	LD	50	20	100%	20	100%
3	Road L3	EB	LD	50	600	25%	500	24%
4	Road L3	WB	LD	50	250	33%	200	37%
5	Road L4	NB	LD	50	200	37%	200	37%
6	Road L4	SB	LD	50	650	21%	450	26%
7	Road L3	EB	LD	50	100	19%	150	18%
8	Road L3	WB	LD	50	200	16%	100	20%
9	Road D4	EB	DD	50	550	26%	350	38%
10	Road D4	WB	DD	50	200	29%	150	42%
11	Road L4	NB	LD	50	50	100%	50	100%
12	Road L4	SB	LD	50	150	38%	100	50%
13	Road L5	EB	LD	50	250	32%	200	35%
14	Road L5	WB	LD	50	150	36%	200	35%
15	Road L4	NB	LD	50	4	0%	6	17%
16	Road L4	SB	LD	50	8	13%	4	25%
17	Ying Tung Road	EB	LD	50	300	23%	250	22%
18	Ying Tung Road	WB	LD	50	200	16%	200	20%
19	Road D5	NB	DD	50	550	26%	650	36%
20	Road D5	SB	DD	50	800	22%	500	36%
21	Road D5	NB	DD	50	200	30%	250	39%
22	Road D5	SB	DD	50	300	25%	150	41%
23	Road D5	NB	DD	50	200	30%	250	39%
24	Road D5	SB	DD	50	250	26%	200	40%
25	Road D5	NB	DD	50	400	34%	400	43%
26	Road D5	SB	DD	50	350	30%	250	46%
27	Road D1	EB	DD	50	350	23%	150	34%
28	Road D1	WB	DD	50	100	30%	50	44%
29	Road L8	EB	LD	50	100	19%	100	17%
30	Road L8	WB	LD	50	150	17%	100	19%
31	Ying Hei Road	EB	PD	50	800	28%	750	37%
32	Ying Hei Road	WB	PD	50	800	24%	700	37%
33	Road P1	EB	PD	50	700	23%	750	34%
34	Road P1	WB	PD	50	700	20%	650	34%
35	Man Tung Road	NB	LD	50	400	32%	550	27%
36	Man Tung Road	SB	LD	50	600	21%	500	24%
37	Ying Tung Road	NB	LD	50	500	24%	450	23%
38	Ying Tung Road	SB	LD	50	700	18%	450	22%
39	Ying Hong Street	EB	LD	50	150	20%	50	18%
40	Ying Hong Street	WB	LD	50	50	16%	100	20%
41	Road P1	EB	PD	50	1150	25%	900	35%
42	Road P1	WB	PD	50	900	22%	950	35%
43	North Lantau Highway	EB	EX	110	2950	30%	3750	33%
44	North Lantau Highway	WB	EX	110	5100	30%	3900	32%
45	Cheung Tung Road	EB	LD	50	250	27%	150	61%
46	Cheung Tung Road	WB	LD	50	150	31%	200	30%



<u>Summary of Development Parameters:</u>

	Phase	Domestic PR			Flat No.				Population				
		RODP	B1#	B2#	L#	RODP	B1#	B2#	L#	RODP	B1#	B2#	L#
*Area 99	Phase 1	6	6.5	6.5	6.5	3,544	4,800	4,800	4,800	10,845	14,880	14,880	14,880
Area 100		6.5	5 Same as ROLP		4,255	5,200	5,200	5,200	13,020	16,120	16,120	16,120	
*Area 103	Phase 2	5	5	5	5.5	1,607	1,607	1,843	2,066	4,917	4,917	5,640	6,322
*Area 109		5	5	5	5.5	1,102	1,102	1,277	1,344	3,372	3,372	3,908	4,113
Area 114	Phase 3	6.5	Sa	ame as ROI	P	1,863	1,863	2,577	2,577	5,701	5,701	7,884	7,884
Area 117	Filase 3	6.5	Sa	ame as ROI	P	1,950	1,950	2,710	2,710	5,967	5,967	8,291	8,291
Area 119		5.5.	Sa	ame as ROI	P	1,428	1,428	1,681	1,681	4,370	4,370	5,145	5,145
Area 122		5.5	Sa	ame as ROI	P	1,415	1,415	1,666	1,666	4,330	4,330	5,097	5,097
*Area 133A	Phase 4	6	6	6	6.5	4,570	4,570	6,293	6,817	13,984	13,984	19,253	20,860
*Area 133B		6	6	6	6.5	2,026	2,026	2,373	2,571	6,200	6,200	7,263	7,868
*Area 133C		6	6	6	6.5	1,970	1,970	2,715	2,941	6,028	6,028	8,307	8,999
Total					25,730	27,931	33,135	34,373	78,734	85,870	101,788	105,579	

^{*} Areas that are subject to intensification.

B1 = CASE 1 (Scenario B1)

B2 = CASE 2 Scenario 1 (Scenario B2)

L = CASE 2 Scenario 2A (Scenario L) -

Traffic Department
Endorsement on The
Road Classification and
Traffic Data



Our Ref.

: (NHKQ3) in TD NR182/90-19

來函檔號

Your Ref. : 5186651/18.30/OC077/JY/PT/EC/

話 Tel. 圖文傳直

: 2399 2423

Fax

: 2381 3799

Email

: shukyeehui@td.gov.hk



21 September 2021

Atkins China Ltd. 13/F, Wharf T&T Centre. Harbour City, Tsim Sha Tsui, Kowloon, Hong Kong (Attn.: Jacky Yeung)

Dear Sir.

Agreement No. CB20180686 Term Traffic and Environmental Consultancy Services 2019-2021 for Kowloon Central and West and Islands Region

> Instruction No. K03 & K04 Proposed Public Housing Development at Tung Chung Area 103 & 109 Traffic Forecasting for Environmental Assessment- Draft Report

I refer to your captioned letter dated 6 August 2021. Please find our comments as follow:

- 1. Please note that the Environmental Assessment is not under our purview. We are not in a position to provide comments on the traffic figures tailor-made for the environmental assessment study.
 - 2. Notwithstanding the above, we have no comments on the methodology of the traffic forecast, provided that you have made reference to the TIA reports under the proposed housing development at Tung Chung Area 103 & 109 and TCNTE(TCE) projects and the traffic data of the technical note shall tally with those for the TIA reports. In case there is any discrepancy in the traffic data between the TIA reports and the EIA report, please highlight it for our consideration.

新界分區辦事處 NT Regional Office 九龍聯運街三十號旺角政府合署七樓 7th Floor, Mong Kok Government Offices, 30 Luen Wan Street, Kowloon. 國文傳真 Fax No.: 2381 3799 (新界區) (NTRO) 網址 Web Site: http://www.td.gov.hk

P.002

-2-

Yours faithfully,

(Ms Fanny HUI)
for Commissioner for Transport

Appendix B

Gazette Plan of Tung Chung New Tung Extension (East) and HyD Standard Drawing of Street Furniture

道路(工程、使用及補償)條例(第370章) ROADS (WORKS, USE AND COMPENSATION) ORDINANCE (CHAPTER 370)

工務計劃項目第7786CL號 東涌新市鎮擴展 (東涌東及P1路(東涌東至大蠔段)道路工程)

PWP ITEM NO. 7786CL

TUNG CHUNG NEW TOWN EXTENSION

(TUNG CHUNG EAST AND ROAD P1 (TUNG CHUNG EAST TO TAI HO SECTION) ROAD WORKS)

圖 則 編 號 PL AN NO.	頁次 SHEET NO.
60507694/C11/100	索引圖 KEY PLAN
60507694/C11/110	圖 例 LEGEND
60507694/C11/111	十張之第一張 SHEET 1 OF 10
60507694/C11/112	十張之第二張 SHEET 2 OF 10
60507694/C11/113	十 張 之 第 三 張 SHEET 3 OF 10
60507694/C11/114	十張之第四張 SHEET 4 OF 10
60507694/C11/115	十張之第五張 SHEET 5 OF 10
60507694/C11/116	十張之第六張 SHEET 6 OF 10
60507694/C11/117	十張之第七張 SHEET 7 OF 10
60507694/C11/118	十張之第八張 SHEET 8 OF 10
60507694/C11/119	十張之第九張 SHEET 9 OF 10
60507694/C11/120	十張之第十張 SHEET 10 OF 10 ——

圖則名稱 PLAN TITLE

根據≪道路(工程、使用及補償)條例≫(第370章)而在憲報公布之圖則

PLAN FOR GAZETTING UNDER ROADS (WORKS, USE AND COMPENSATION) ORDINANCE (CHAPTER 370)

批簽 ENDORSED BY

黎以德

JOSEPH Y T LAI

運輸及房屋局 常任秘書長(運輸) PERMANENT SECRETARY FOR TRANSPORT AND HOUSING (TRANSPORT)

> 日期 DATE:

核准 APPROVED BY

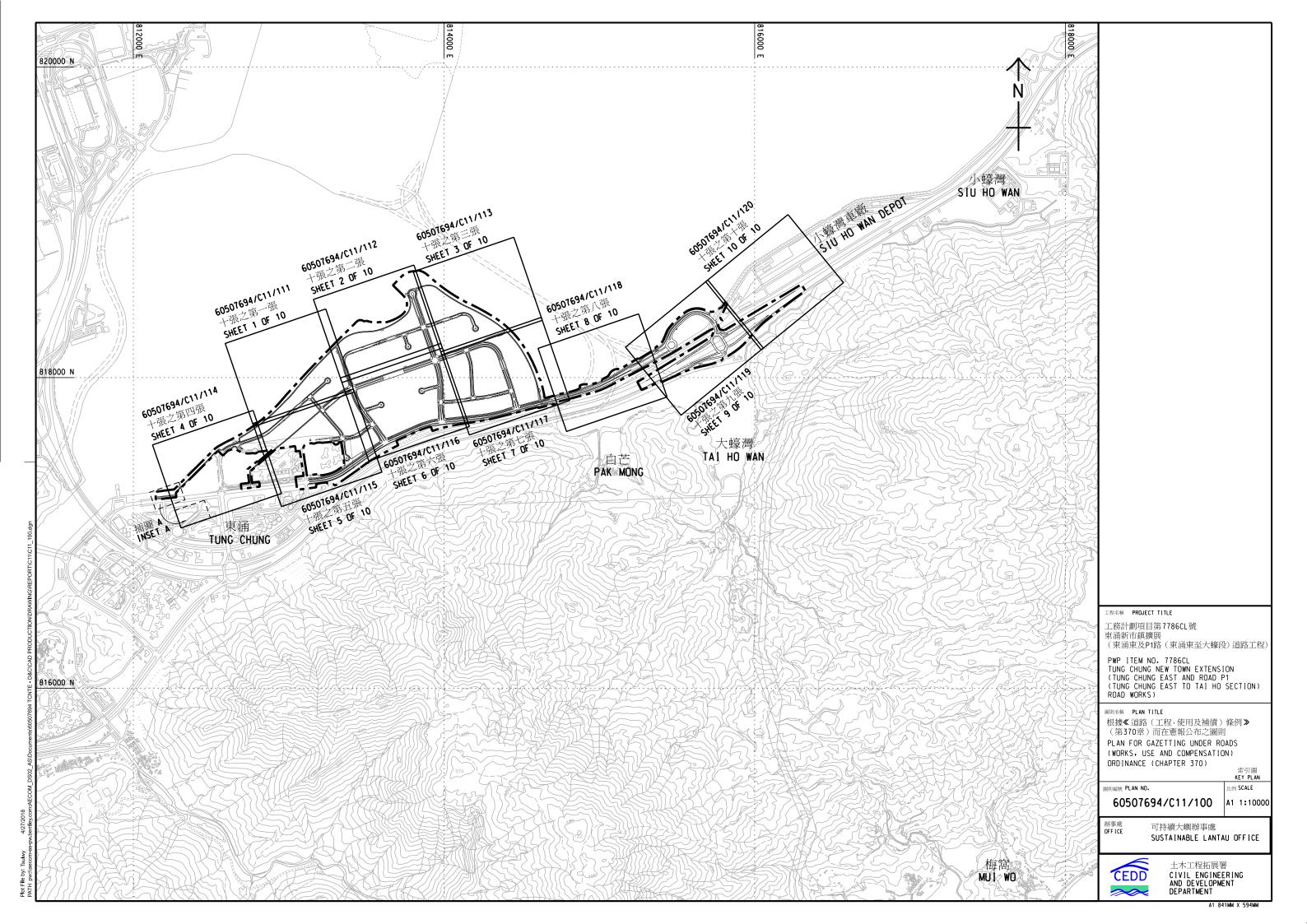
寅 國 輝

ALFRED K F WONG

可持續大嶼辦事處 土木工程拓展署 CHIEF ENGINEER / LANTAU 1 SUSTAINABLE LANTAU OFFICE CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

總工程師/大嶼山1

日期 DATE:



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改建為地面行車道 EXISTING AT GRADE FOOTPATH TO BE PERMANENTLY CLOSED AND CONVERTED INTO AT GRADE CARRIAGEWAY

改建為地面單車徑 EXISTING AT GRADE FOOTPATH TO BE PERMANENTLY CLOSED AND CONVERTED INTO AT GRADE CYCLE TRACK

及改建為地面美化市容地帶 EXISTING AT GRADE FOOTPATH TO BE PERMANENTLY CLOSED AND CONVERTED INTO AT GRADE AMENITY AREA

現有地面行人路將永久封閉及

現有地面行人路將永久封閉

圖例: LEGEND: 現有地面行人路將永久封閉及 改建為路中預留帶/安全島 施工區界限 LIMIT OF WORKS AREA EXISTING AT GRADE FOOTPATH TO BE PERMANENTLY CLOSED AND CONVERTED INTO CENTRAL RESERVE/REFUGE ISLAND 擬建行車隧道 PROPOSED VEHICULAR UNDERPASS INIO LENIRAL RESERVE/REFUGE ISLAND 現有地面美化市容地帶將永久封閉 及改建為地面行車道 EXISTING AT GRADE AMENITY AREA TO BE PERMAMENITY CLOSED AND CONVERTED INTO AT GRADE CARRIAGEWAY 現有地面美化石容地帶將永久封閉及 可能性地形容有一段 擬建低於地面行車道 PROPOSED DEPRESSED CARRIAGEWAY 擬建地面行車道 PROPOSED AT GRADE CARRIAGEWAY 擬建高架行車道 PROPOSED ELEVATED CARRIAGEWAY 成性為地面行人路 EXISTING AT GRADE AMENITY AREA TO BE PERMANENTLY CLOSED AND CONVERTED INTO AT GRADE FOOTPATH 擬建行人隧道 PROPOSED SUBWAY 現有地面美化市容地帶將永久封閉及 改建為路中預留帶/安全島 擬建低於地面行人路 PROPOSED DEPRESSED FOOTPATH EXISTING AT GRADE AMENITY AREA TO BE PERMANENTLY CLOSED AND CONVERTED INTO CENTRAL RESERVE/REFUGE ISLAND 擬建地面行人路 PROPOSED AT GRADE FOOTPATH 現有高架美化市容地帶將永久封閉及 改建為高架行車道 EXISTING ELEVATED AMENITY AREA TO BE PERMANENTLY CLOSED AND CONVERTED INTO ELEVATED CARRIAGEWAY 擬建高架行人路 PROPOSED ELEVATED FOOTPATH 擬建低於地面單車徑 PROPOSED DEPRESSED CYCLE TRACK 擬建地面單車徑 PROPOSED AT GRADE CYCLE TRACK 現有高架美化市容地帶將永久封閉及 次建海路中預留帶/安全島 EXISTING ELEVATED AMENITY AREA TO BE PERMANENTLY CLOSED AND CONVERTED INTO CENTRAL RESERVE/REFUGE ISLAND 擬建高架單車徑 PROPOSED ELEVATED CYCLE TRACK 擬建單車停放處 PROPOSED CYCLE PARKING AREA 現有地面行車道將永久封閉及拆卸 EXISTING AT GRADE CARRIAGEWAY TO BE PERMANENTLY CLOSED AND DEMOLISHED 擬建地面美化市容地帶 PROPOSED AT GRADE AMENITY AREA 現有高樂行東道將永久封閉及拆卸 EXISTING ELEVATED CARRIAGEWAY TO BE PERMANENTLY CLOSED AND DEMOLISHED 現有地面行人路將永久封閉及拆卸 EXISTING AT GRADE FOOTPATH TO BE PERMANENTLY CLOSED AND DEMOLISHED 擬建高架美化市容地帶 PROPOSED ELEVATED AMENITY AREA PROPOSED CENTRAL RESERVE/REFUGE ISLAND 擬建車輛進出口通道 PROPOSED RUN-IN/RUN-OUT 現有地面行車道將暫時封閉及重建 擬建行人過路處 PROPOSED PEDESTRIAN CROSSING 現有高架行車道將暫時封閉及重建 EXISTING ELEVATED CARRIAGEWAY TO BE TEMPORARILY CLOSED AND RECONSTRUCTED 777 擬建斜坡 PROPOSED SLOPE 擬建直立式隔音屏障 PROPOSED VERTICAL NOISE BARRIER 現有行人隧道將暫時封閉及重建 EXISTING SUBWAY TO BE TEMPORARILY CLOSED AND RECONSTRUCTED 擬建懸臂式隔音屏障 PROPOSED CANTILEVER NOISE BARRIER 現有地面行人B終暫時封閉及重建 EXISTING AT GRADE FOOTPATH TO BE TEMPORARILY CLOSED AND RECONSTRUCTED 擬建護土牆 PROPOSED RETAINING WALL 擬建建築物 PROPOSED BUILDING 現有地面單車徑將暫時封閉及重建 EXISTING AT GRADE CYCLE TRACK TO BE TEMPORARILY CLOSED AND RECONSTRUCTED 現有地面行車道將永久封閉及 改建為地面行人路 EXTEMPALIBITIA 人時 EXISTING AT GRADE CARRIAGEWAY TO BE PERMANENTLY CLOSED AND CONVERTED INTO AT GRADE FOOTPATH 現有地面美化市容地帶將暫時封閉及重建 EXISTING AT GRADE AMENITY AREA TO BE TEMPORARILY CLOSED AND RECONSTRUCTED 現有高架美化市容地帶將暫時封閉及重建 EXISTING ELEVATED AMENITY AREA TO BE TEMPORARILY CLOSED AND RECONSTRUCTED 現有地面行車道將永久封閉及 改建為地面單車便 EXISTING AT GRADE CARRIAGEWAY TO BE PERMANENTLY CLOSED AND CONVERTED INTO AT GRADE CYCLE TRACK 現有路中預留帶/安全島將暫時封閉及重建 EXISTING CENTRAL RESERVE/REFUGE ISLAND TO BE TEMPORARILY CLOSED AND RECONSTRUCTED 現有地面行車道將永久封閉及 低於地面/地面/高架行車道之 改建為地面美化市容地帶 EXISTING AT GRADE CARRIAGEWAY TO BE PERMANENTLY CLOSED AND CONVERTED INTO AT GRADE AMENITY AREA 建議路面水平(約數) PROPOSED ROAD LEVEL OF DEPRESSED/AT GRADE/ELEVATED CARRIAGEWAY (APPROXIMATE) 現有地面行車道將永久封閉及 行車線 (每一箭咀代表一條行車線) TRAFFIC LANE (ONE ARROW REPRESENTS ONE LANE) 改建為路中預留帶/安全島 EXISTING AT CRADE CARRIAGEWAY TO BE PERMANENTLY CLOSED AND CONVERTED INTO CENTRAL RESERVE/REFUGE ISLAND 現有高架行車道將永久封閉及 区域局的计算由市/女主局 EXISTING ELEVATED CARRIAGEWAY TO BE PERMANENTLY CLOSED AND CONVERTED INTO CENTRAL RESERVE/REFUGE ISLAND 現有行人隧道將永久封閉及改建為地面美化市容地帶 EXISTING SUBWAY TO BE PERMANENTLY CLOSED AND CONVERTED INTO AT GRADE AMENITY AREA 現有地面行人路將永久封閉及

工程名稱 PROJECT TITLE 工務計劃項目第7786CL號

東涌新市鎮擴展

(東涌東及P1路(東涌東至大蠔段)道路工程) PWP ITEM NO. 7786CL

TUNG CHUNG NEW TOWN EXTENSION
(TUNG CHUNG EAST AND ROAD P1
(TUNG CHUNG EAST TO TAI HO SECTION)
ROAD WORKS)

根據《道路(工程、使用及補償)條例≫

(第370章) 而在憲報公布之圖則
PLAN FOR GAZETTING UNDER ROADS
(WORKS, USE AND COMPENSATION)
ORDINANCE (CHAPTER 370)

圖則編號 PLAN NO. 60507694/C11/110

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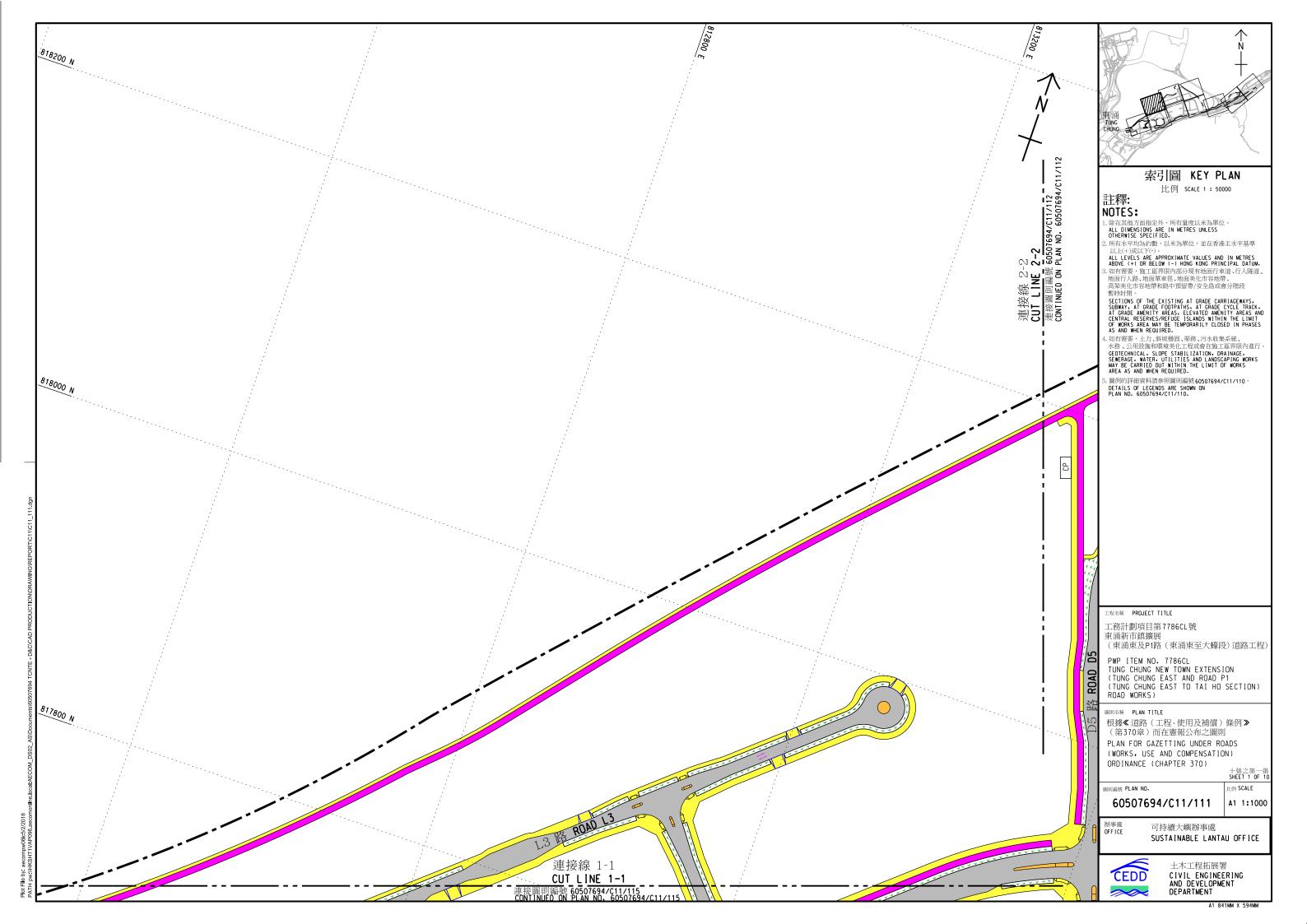
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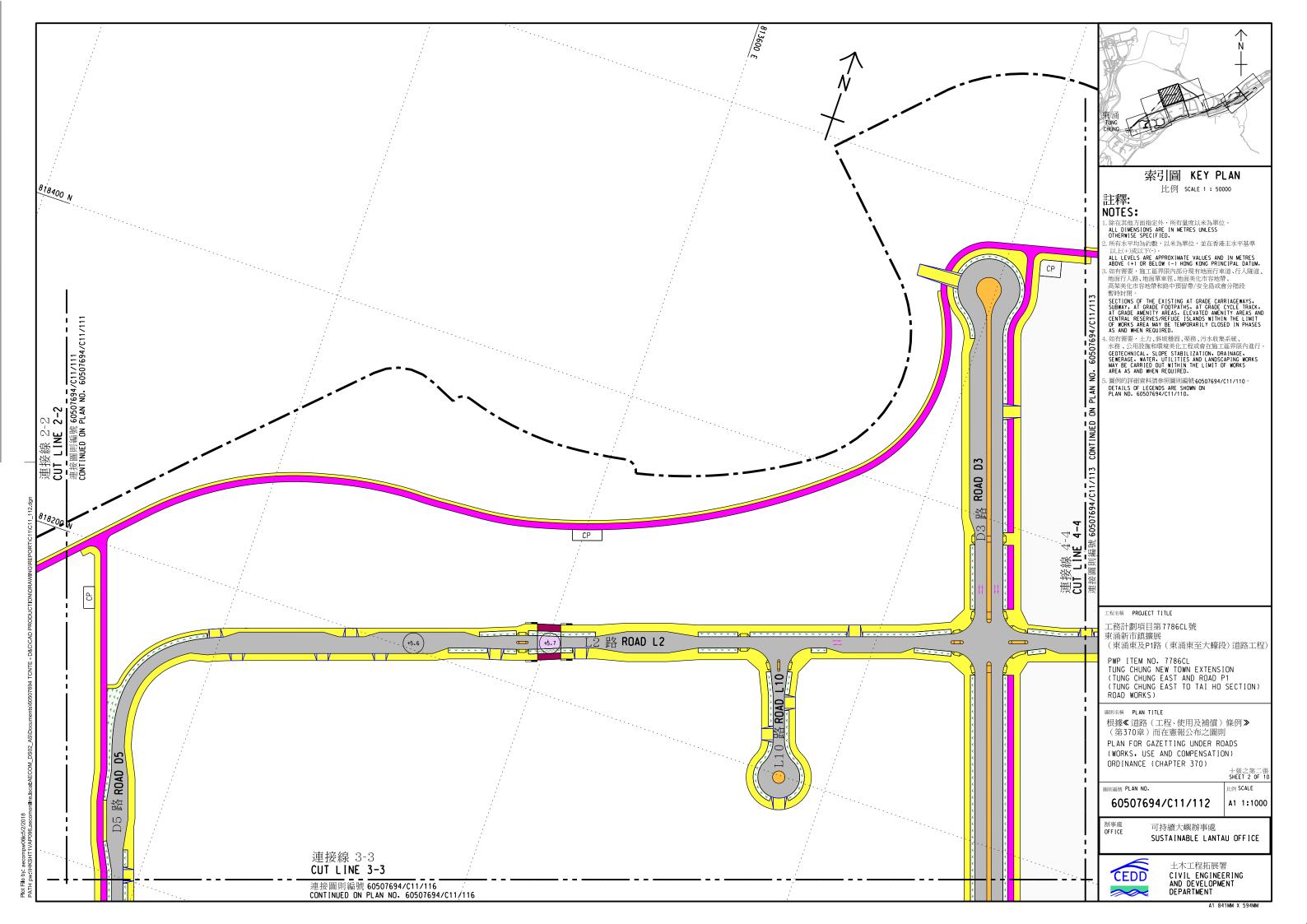


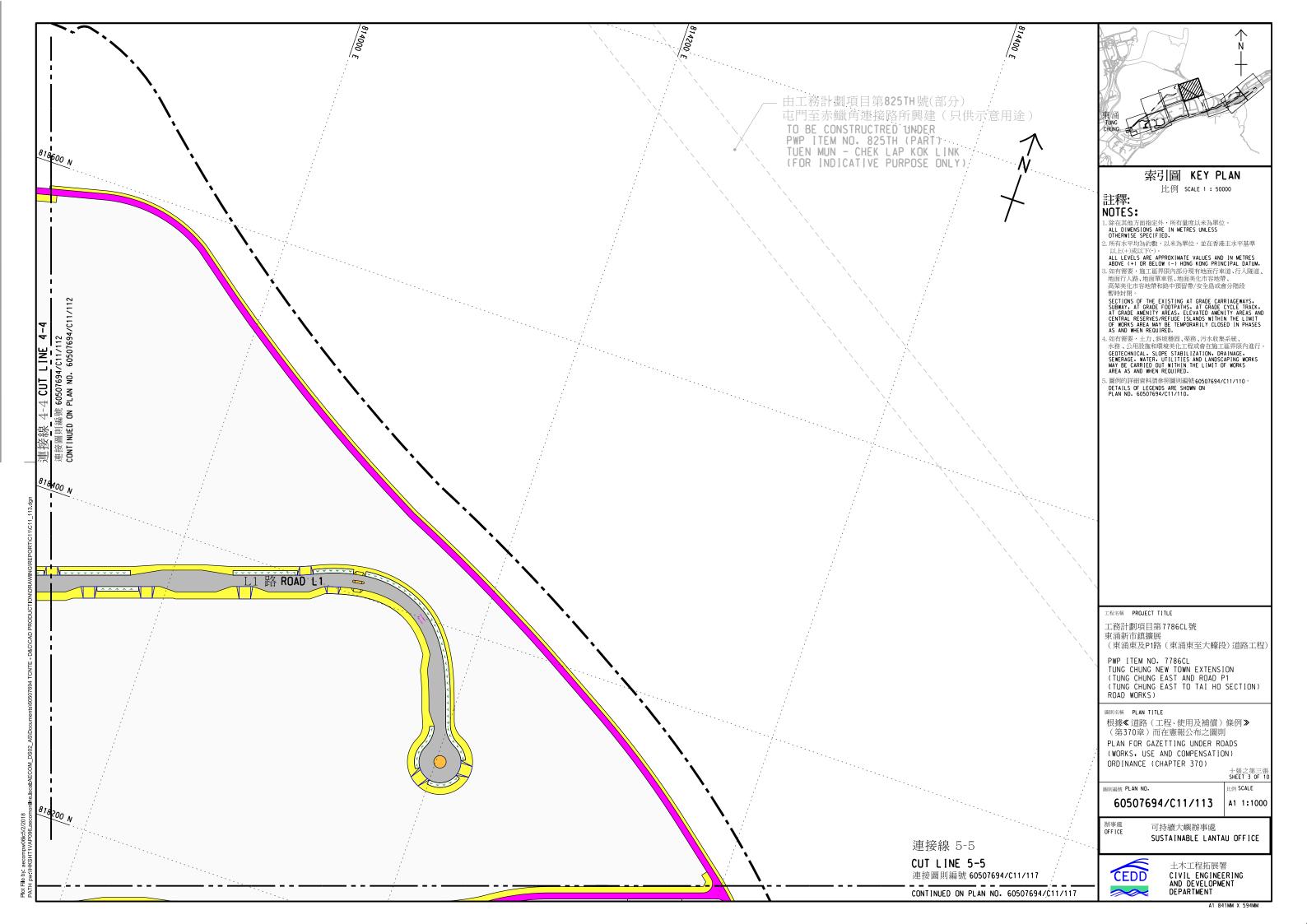
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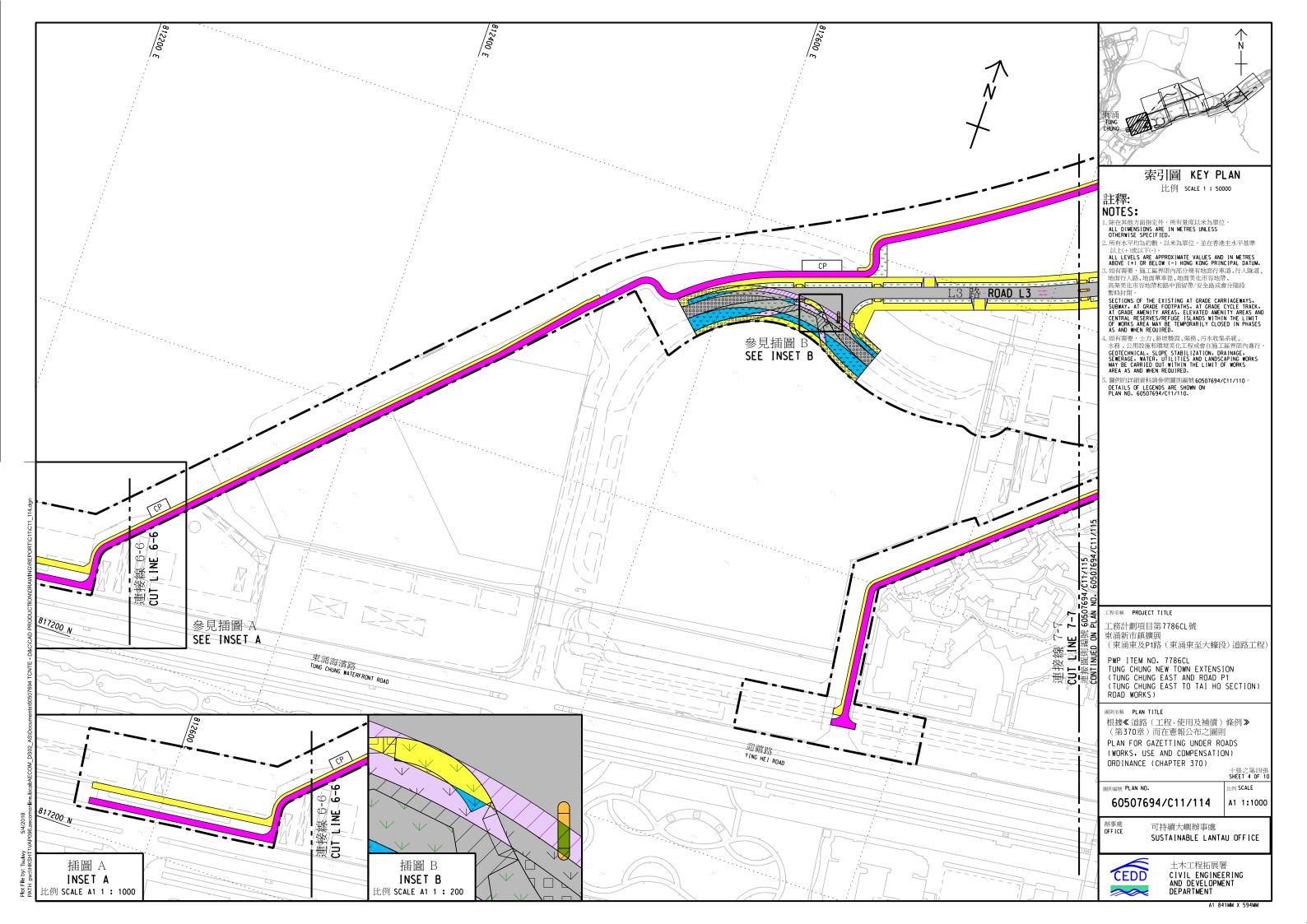
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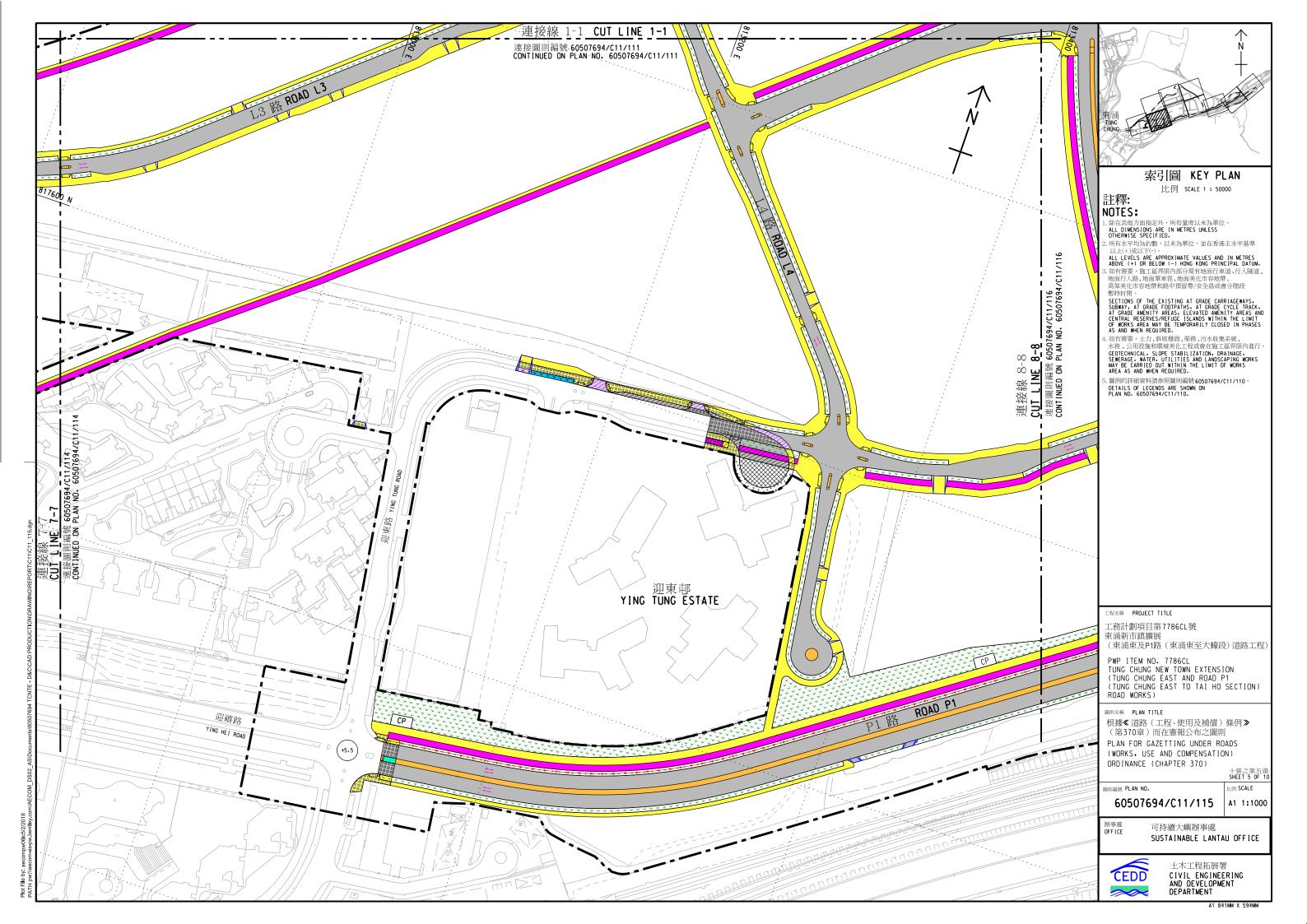
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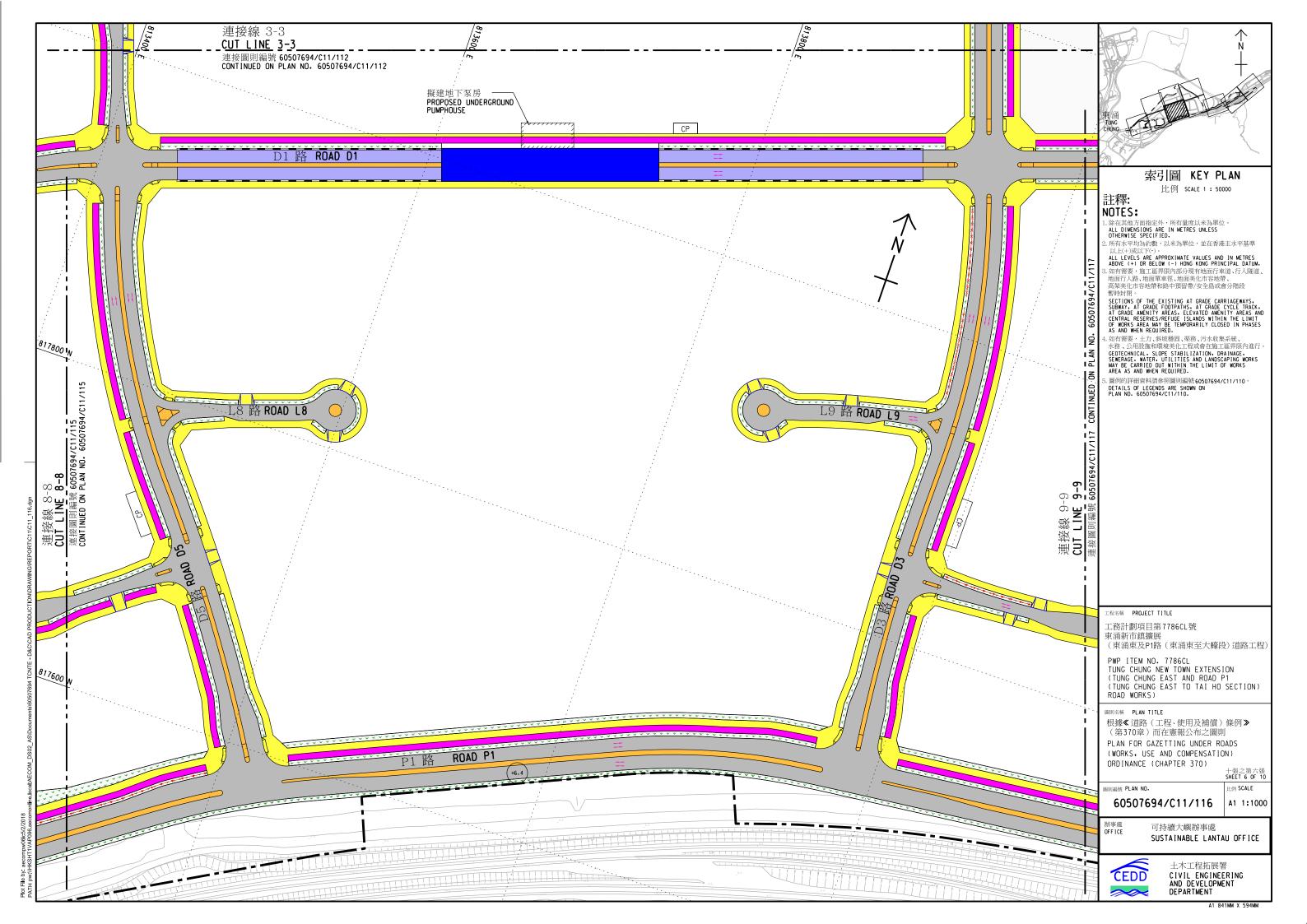


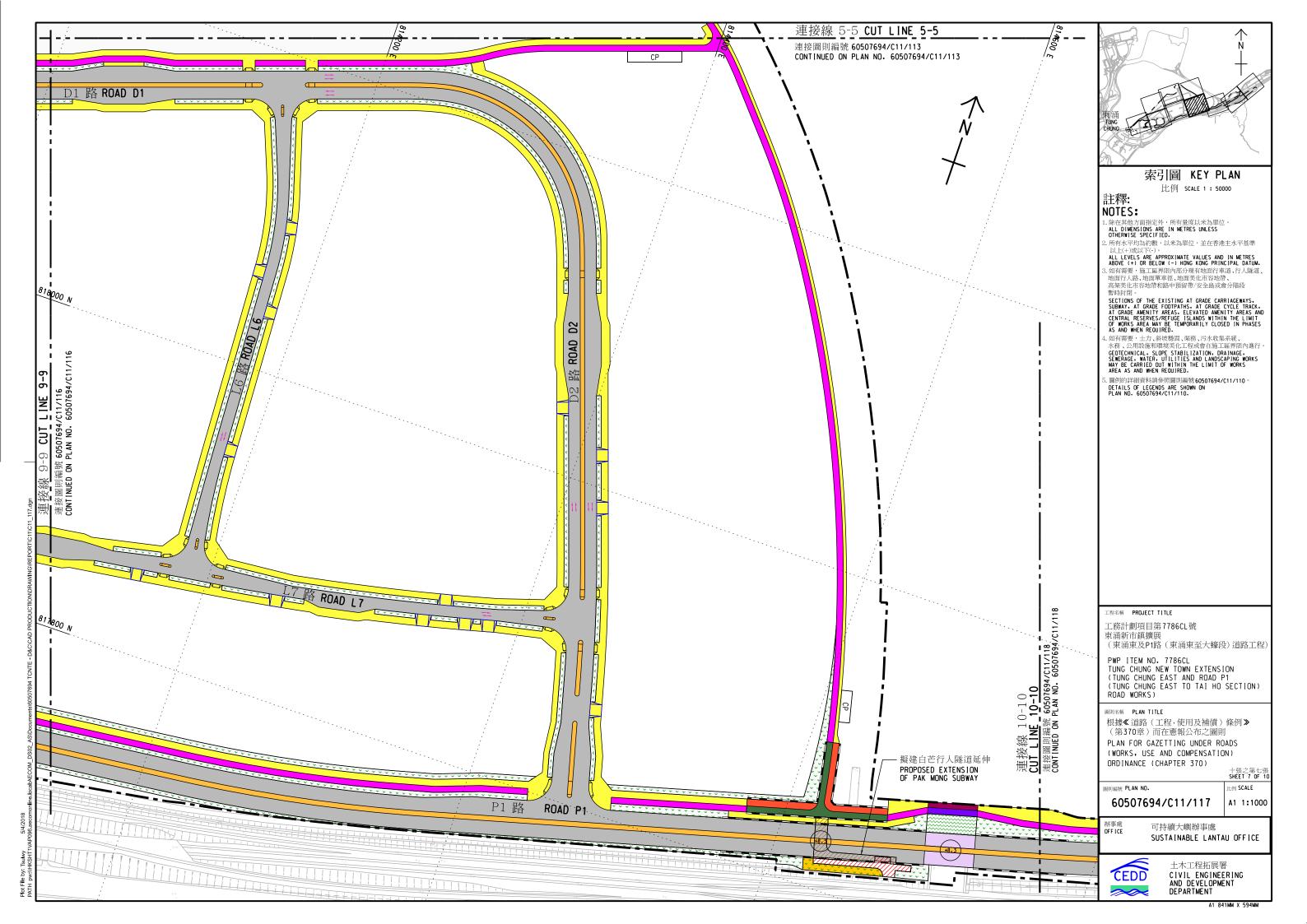


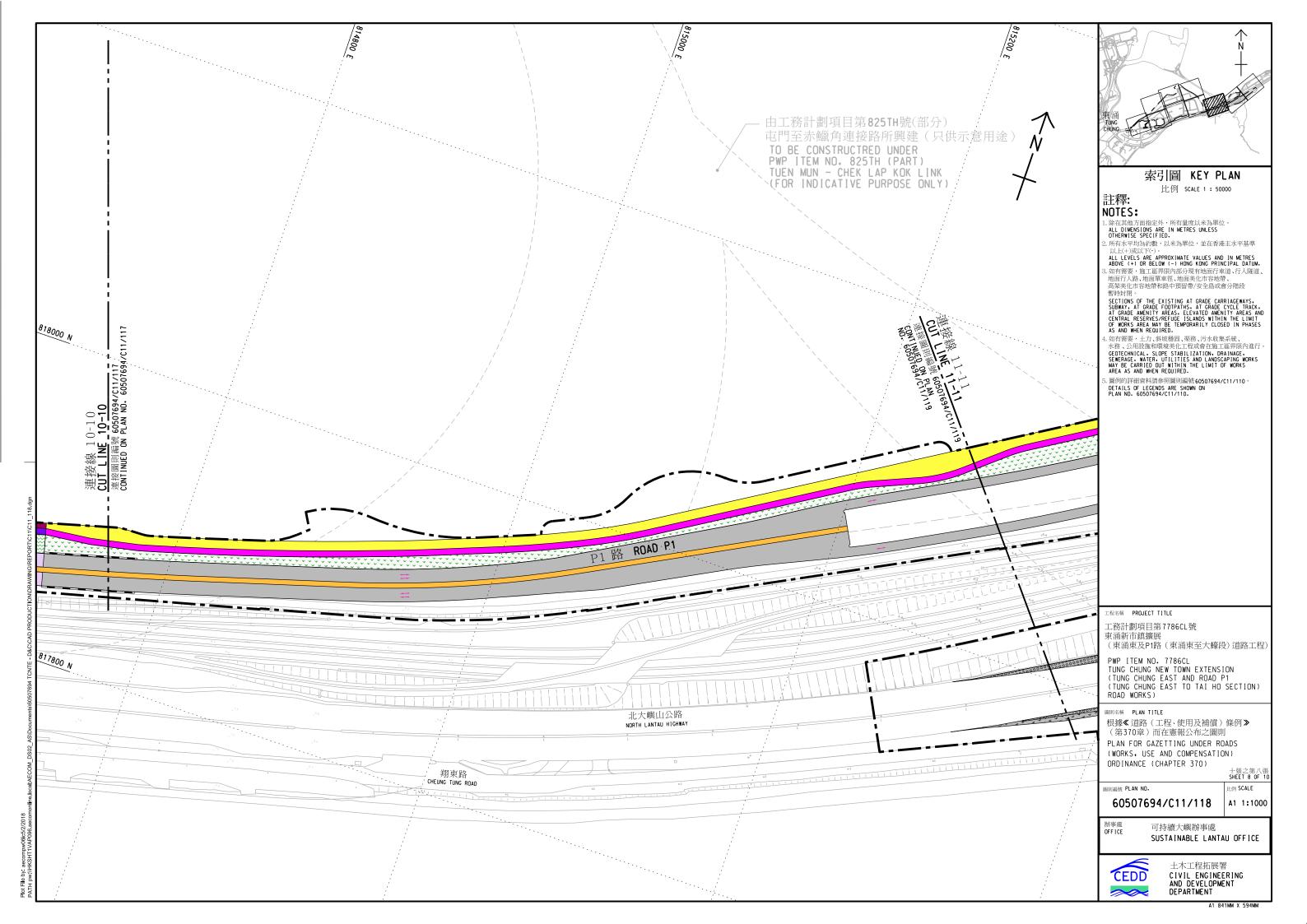


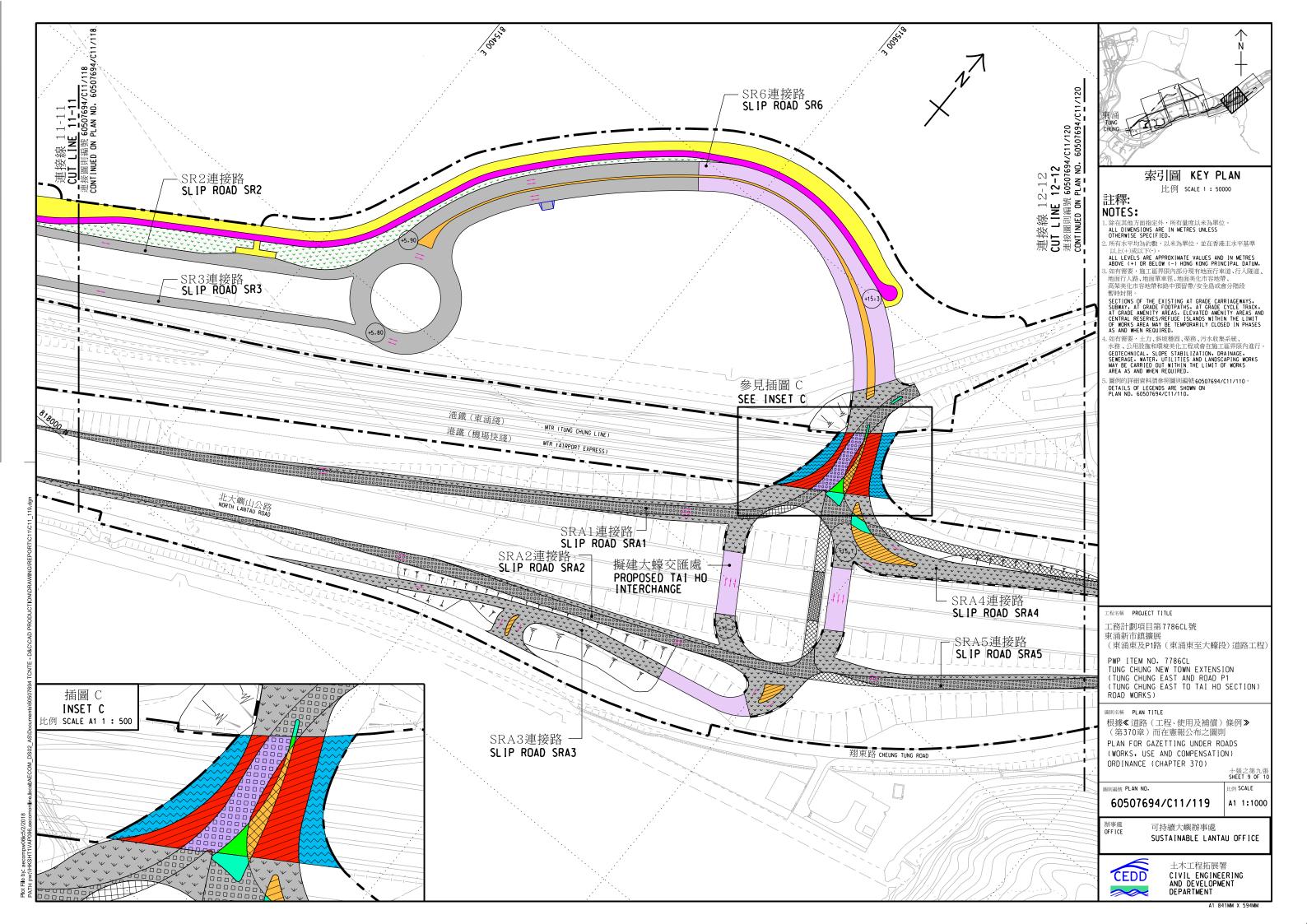


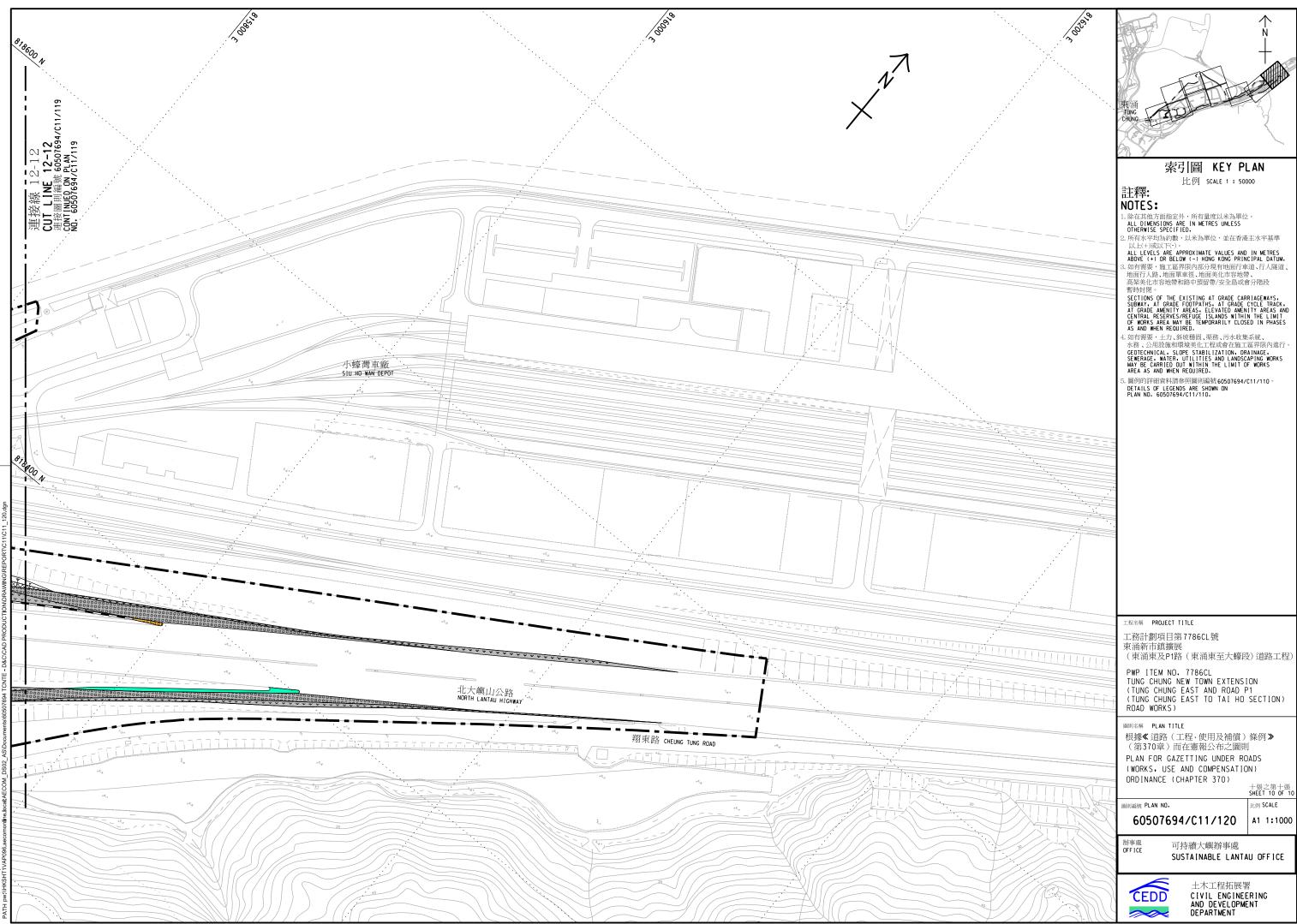


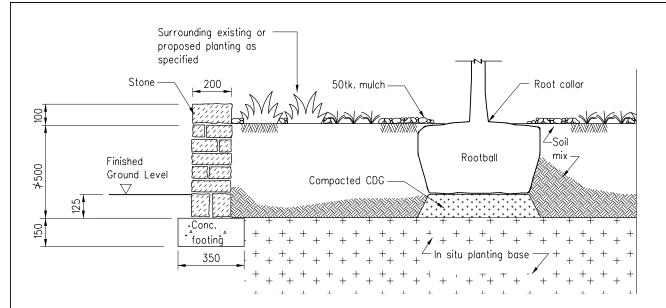




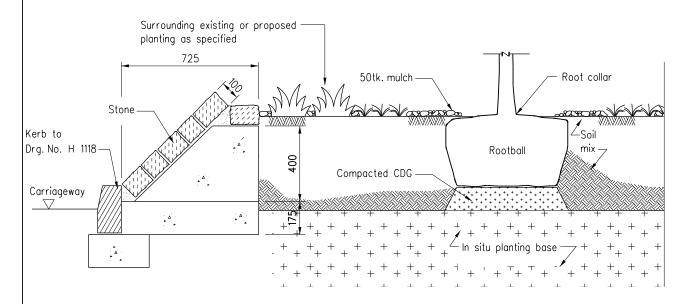








VERTICAL WALL



SLOPING WALL

Notes:

- 1. All dimensions are in millimetres.
- 2. Stones to be specified in accordance with G.S. clause 24.192.
- 3. Landscape Unit/HyD should be consulted on stone facing pattern & planting species.
- 4. Where dwarf walls are dedicated for toe wall planting adjoining slopes, Landscape Unit/HyD should be consulted on the interface details.
- 5. As an alternative to dwarf wall planter, kerb planter (H5138) should also be considered to suit site condition.
- 6. All concrete to be grade 30/20.

С	Soft landscape graphic and planting detail revised	Original signed	Aug 17
В	Note 2 reference to the G.S. updated	-	Apr 10
А	General revision	_	May 97
	Former Drg. No. H5002/1 with general revision	_	Jun 94
REF.	REVISION	SIGNATURE	DATE

DWARF WALLS - STONE

PARTMENT
/ING No. CAD
H 5103C

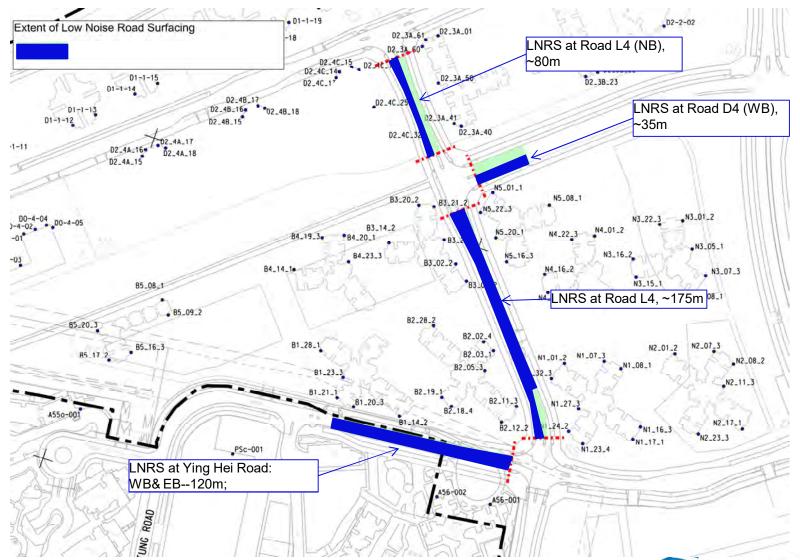
Appendix C

The Extent of the Proposed Low Noise Road Surfacing



The extent of the proposed Low Noise Road Surface along Road L4, Road D4 and Ying Tung Road

Implementation of LNRS on Separate Road Direction as per discussion in the meeting on 17 July 2020







Appendix D

Predicted Road Traffic Noise Results (Base-case Scenario)



Block A - Unmitigated Scenario

Block A	BA_1a	BA_1b	BA_1c	Max	BA_2a	BA_2b	BA_2c	BA_2d	Max	BA_3a	BA_3b	BA_3c	Max	BA_4a	BA_4b	BA_4c	BA_4d	Max	BA_5a	BA_5b	BA_5c	BA_5d	Max	BA_6a	BA_6b	BA_6c	Max	BA_7a	BA_7b	BA_7c	Max
G/F																															
1/F																															
2/F	55.5	59	58.8	59	52.2	59.4	59.4	59.4	59.4	56.8	59.9	59.7	59.9	55.3	60.1	60	59.9	60.1	61.5	69.1	68.9	67.6	69.1	61.6	69.2	69.2	69.2	61.3	69.4	69.2	69.4
3/F	56.4	59.3	59.1	59.3	53.1	59.7	59.8	59.8	59.8	58	60.2	60	60.2	56.6	60.4	60.4	60.3	60.4	63.2	69.2	69.1	67.9	69.2	63.3	69.4	69.3	69.4	63.1	69.5	69.4	69.5
4/F	56.5	59.3	59.2	59.3	53.2	59.7	59.8	59.9	59.9	58.1	60.2	60.1	60.2	56.7	60.4	60.4	60.4	60.4	63.1	69.2	69.1	67.8	69.2	63.3	69.4	69.3	69.4	63	69.5	69.4	69.5
5/F	56.4	59.3	59.1	59.3	53.2	59.7	59.8	59.8	59.8	58	60.2	60.1	60.2	56.7	60.4	60.3	60.3	60.4	63.1	69.2	69.1	67.8	69.2	63.2	69.3	69.3	69.3	62.9	69.4	69.3	69.4
6/F	56.5	59.3	59.1	59.3	53.2	59.7	59.7	59.8	59.8	58	60.2	60	60.2	56.6	60.4	60.3	60.3	60.4	63	69.1	69.1	67.7	69.1	63.2	69.3	69.2	69.3	62.8	69.3	69.2	69.3
7/F	56.5	59.3	59.1	59.3	53.5	59.7	59.7	59.8	59.8	57.9	60.1	60	60.1	56.7	60.3	60.3	60.3	60.3	62.9	69	69	67.6	69	63.1	69.2	69.2	69.2	62.8	69.2	69.2	69.2
8/F	56.5	59.3	59.1	59.3	53.5	59.6	59.7	59.8	59.8	57.8	60.1	60	60.1	56.6	60.3	60.3	60.2	60.3	62.8	69	68.9	67.6	69	63	69.1	69.1	69.1	62.7	69.2	69.1	69.2
9/F	56.5	59.2	59	59.2	53.7	59.6	59.7	59.8	59.8	57.7	60.1	59.9	60.1	56.6	60.2	60.2	60.2	60.2	62.7	68.9	68.8	67.5	68.9	62.9	69	69	69	62.6	69	69	69
10/F	56.5	59.2	59	59.2	53.8	59.5	59.6	59.7	59.7	57.6	60	59.9	60.0	56.6	60.2	60.2	60.1	60.2	62.6	68.8	68.7	67.4	68.8	62.8	68.9	68.9	68.9	62.5	68.9	68.9	68.9
11/F	56.5	59.1	59	59.1	53.9	59.5	59.6	59.7	59.7	57.5	60	59.8	60.0	56.5	60.1	60.1	60.1	60.1	62.5	68.7	68.6	67.3	68.7	62.6	68.8	68.8	68.8	62.4	68.8	68.8	68.8
12/F	56.5	59.1	58.9	59.1	53.8	59.5	59.5	59.6	59.6	57.4	59.9	59.8	59.9	56.4	60.1	60.1	60	60.1	62.4	68.6	68.5	67.2	68.6	62.5	68.7	68.7	68.7	62.3	68.7	68.7	68.7
13/F	56.4	59 50.0	58.8	59 50.0	53.8	59.4	59.5	59.6	59.6	57.3	59.8	59.7	59.8	56.3	60.1	60.1	60	60.1	62.3	68.5	68.4	67.1	68.5	62.4	68.6	68.6	68.6	62.1	68.6	68.6	68.6
14/F	56.4	58.9	58.7	58.9	53.9	59.3	59.4	59.5	59.5	57.2	59.7	59.7	59.7	56.2	60	60	59.9	60.0	62.2	68.4	68.3	67	68.4	62.3	68.5	68.5	68.5	62	68.5	68.4	68.5
15/F	56.3	58.8	58.6	58.8 58.7	53.8	59.2	59.3	59.4	59.4	57.1	59.6	59.6	59.6	56.2	59.9	59.9	59.8	59.9	62.1	68.2	68.2	66.9	68.2	62.2	68.4	68.4	68.4	61.9	68.4	68.3	68.4
16/F 17/F	56.3	58.7 58.7	58.6 58.5	58.7 58.7	53.8 53.8	59.2	59.3 59.2	59.4	59.4	57	59.6 59.5	59.5 59.4	59.6 59.5	56.1 55.9	59.8 59.7	59.8 59.8	59.8	59.8 59.8	62	68.1	68.1 68	66.8 66.7	68.1	62.1	68.3	68.2 68.1	68.3 68.1	61.8	68.3	68.2 68.1	68.3
	56.2		58.4	58.6	53.7	59.1 59		59.2	59.2	56.9 56.8	59.5 59.4	59.4 59.3	59.4	55.8	59.7 59.7	59.8 59.7	59.7	59.7	61.8 61.7	68 68	67.9	66.6	68 68	62	68.1 68	68		61.7	68.2	68	68.2 68.1
18/F 19/F	56.1 56	58.6 58.5	58.3	58.5	53.7	58.9	59 58.9	59.1 59	59.1 59	56.7	59.4	59.5 59.2	59.3	55.7	59.6	59.6	59.6 59.5	59.6	61.6	67.8	67.8	66.5	67.8	61.9 61.8	68	67.9	68 68	61.5 61.5	68.1 67.9	67.9	67.9
20/F	55.9	58.4	58.2	58.4	53.5	58.8	58.8	58.9	58.9	56.6	59.2	59.1	59.2	55.6	59.5	59.5	59.4	59.5	61.5	67.7	67.7	66.4	67.7	61.7	67.9	67.8	67.9	61.4	67.9	67.8	67.9
21/F	55.8	58.3	58.1	58.3	53.4	58.6	58.7	58.8	58.8	56.5	59.1	59	59.1	55.5	59.4	59.4	59.3	59.4	61.4	67.6	67.6	66.2	67.6	61.6	67.7	67.7	67.7	61.3	67.7	67.7	67.7
22/F	55.7	58.2	58	58.2	53.3	58.5	58.6	58.7	58.7	56.4	59	58.9	59.0	55.4	59.3	59.3	59.2	59.3	61.3	67.6	67.5	66.2	67.6	61.5	67.6	67.6	67.6	61.1	67.6	67.6	67.6
23/F	55.6	58.1	57.9	58.1	53.2	58.4	58.5	58.6	58.6	56.3	58.9	58.8	58.9	55.3	59.2	59.2	59.1	59.2	61.2	67.5	67.4	66.1	67.5	61.3	67.5	67.5	67.5	61	67.5	67.5	67.5
24/F	55.5	58	57.8	58	53.1	58.3	58.4	58.5	58.5	56.2	58.8	58.7	58.8	55.2	59.1	59.1	59	59.1	61	67.4	67.3	66	67.4	61.2	67.5	67.4	67.5	61	67.4	67.4	67.4
25/F	55.4	57.9	57.7	57.9	53	58.2	58.3	58.4	58.4	56.1	58.6	58.6	58.6	55.1	58.9	58.9	58.9	58.9	61	67.3	67.2	65.9	67.3	61.1	67.3	67.3	67.3	60.9	67.3	67.3	67.3
26/F	55.3	57.8	57.6	57.8	52.9	58.1	58.2	58.3	58.3	56	58.5	58.5	58.5	55	58.8	58.8	58.8	58.8	60.9	67.1	67.1	65.8	67.1	61	67.2	67.2	67.2	60.8	67.2	67.2	67.2
27/F	55.2	57.7	57.5	57.7	52.8	58.1	58.1	58.2	58.2	55.9	58.4	58.4	58.4	54.9	58.7	58.7	58.7	58.7	60.8	67.1	67	65.7	67.1	60.9	67.1	67.1	67.1	60.7	67.1	67.1	67.1
28/F	55.1	57.6	57.4	57.6	52.7	58	58	58.1	58.1	55.8	58.3	58.3	58.3	54.8	58.6	58.6	58.6	58.6	60.7	67	66.9	65.6	67	60.8	67.1	67	67.1	60.6	67	67	67
29/F	55	57.5	57.3	57.5	52.6	57.9	57.9	58	58	55.7	58.3	58.2	58.3	54.7	58.5	58.5	58.5	58.5	60.6	66.9	66.9	65.5	66.9	60.8	67	66.9	67	60.5	66.9	66.9	66.9

* Noto

Block A - Unmitigated Scenario

Block A - U			DA 0-		DA 0-	DA Ob		DA 10-	DA 40b	N4	DA 44-	DA 44h	DA 44 -	N.A	DA 42-	DA 425	DA 42-	DA 42-l	N.A	DA 42-	DA 42b	DA 12-		DA 44-	DA 14b	DA 44-	DA 44-l		DA 45-	DA 455	
Block A	BA_8a	BA_8b	BA_8c	Max	BA_9a	BA_9b	Max	BA_10a	BA_10b	Max	BA_11a	BA_11b	BA_11c	Max	BA_12a	BA_12b	BA_12c	BA_12d	Max	BA_13a	BA_13b	BA_13C	Max	BA_14a	BA_14b	BA_14c	BA_140	Max	BA_15a	BA_15b	Max
i/F																															
./F																														,	
/F	61.9	69.5	69.6	69.6	66.4	69.6	69.6	68.5	69.8	69.8	64.5	70.5	69.5	70.5	62.7	70.8	70.7	70.6	70.8	64.1	68.1	67.9	68.1	66.9	67.8	62.6	63.6	67.8	62	69.2	69.2
/F	63.5	69.6	69.7	69.7	67.9	69.7	69.7	69.1	70.1	70.1	65.8	70.6	70.2	70.6	64.6	71.3	71.6	72.1	72.1	66.9	70.1	71.5	71.5	69.1	69.7	65.9	67.6	69.7	67.1	70.6	70.6
/F	63.4	69.6	69.6	69.6	67.9	69.6	69.6	69	70	70.0	65.7	70.5	70.1	70.5	64.5	71.3	71.6	71.9	71.9	66.9	70.6	71.6	71.6	69.3	69.8	65.9	68.6	69.8	67.2	70.5	70.5
/F	63.3	69.5	69.5	69.5	67.8	69.5	69.5	68.9	69.9	69.9	65.6	70.5	69.9	70.5	64.3	71.2	71.5	71.7	71.7	66.7	70.7	71.3	71.3	69.2	69.7	65.7	68.6	69.7	66.9	70.3	70.3
/F	63.3	69.4	69.4	69.4	67.7	69.5	69.5	68.8	69.8	69.8	65.5	70.3	69.8	70.3	64.2	71.1	71.2	71.4	71.4	66.5	70.5	71	71	69.1	69.7	65.6	68.4	69.7	66.8	70.1	70.1
/F	63.2	69.3	69.3	69.3	67.6	69.4	69.4	68.7	69.7	69.7	65.3	70.2	69.6	70.2	64.1	70.9	71	71.1	71.1	66.3	70.3	70.6	70.6	68.9	69.6	65.4	68.3	69.6	66.6	69.9	69.9
/F	63.1	69.2	69.2	69.2	67.5	69.3	69.3	68.6	69.6	69.6	65.2	70	69.5	70	64	70.6	70.8	70.8	70.8	66.1	70	70.3	70.3	68.8	69.4	65.2	68.2	69.4	66.5	69.8	69.8
/ F	63	69.1	69.1	69.1	67.3	69.2	69.2	68.5	69.5	69.5	65	69.8	69.3	69.8	63.8	70.5	70.6	70.6	70.6	65.9	69.7	70.1	70.1	68.6	69.2	65	68.1	69.2	66.4	69.6	69.6
0/F	62.9	69	69	69.0	67.2	69.1	69.1	68.3	69.3	69.3	64.9	69.7	69.2	69.7	63.7	70.2	70.3	70.3	70.3	65.7	69.5	69.8	69.8	68.4	69	64.8	67.9	69	66.2	69.5	69.5
1/F	62.8	68.9	68.9	68.9	67.1	68.9	68.9	68.2	69.2	69.2	64.8	69.5	69	69.5	63.6	70.1	70.1	70.1	70.1	65.6	69.2	69.5	69.5	68.3	68.8	64.7	67.7	68.8	66	69.2	69.2
2/F	62.7	68.8	68.8	68.8	66.9	68.8	68.8	68.1	69	69.0	64.7	69.3	68.9	69.3	63.4	69.9	69.9	69.9	69.9	65.4	69	69.3	69.3	68.1	68.6	64.5	67.6	68.6	65.8	69.1	69.1
3/F	62.5	68.7	68.7	68.7	66.8	68.7	68.7	68	68.9	68.9	64.5	69.1	68.7	69.1	63.3	69.7	69.8	69.7	69.8	65.3	68.8	69.1	69.1	67.9	68.4	64.4	67.4	68.4	65.6	68.9	68.9
4/F	62.4	68.6	68.6	68.6	66.7	68.6	68.6	67.8	68.8	68.8	64.3	69	68.6	69	63.1	69.5	69.6	69.5	69.6	65.1	68.7	68.9	68.9	67.7	68.2	64.3	67.3	68.2	65.5	68.7	68.7
5/F	62.3	68.4	68.5	68.5	66.5	68.5	68.5	67.7	68.6	68.6	64.2	68.8	68.4	68.8	63	69.4	69.4	69.3	69.4	65	68.5	68.7	68.7	67.6	68	64.1	67.1	68	65.3	68.5	68.5
6/F	62.2	68.3	68.4	68.4	66.4	68.3	68.3	67.6	68.5	68.5	64.1	68.7	68.3	68.7	62.9	69.2	69.2	69.1	69.2	64.8	68.3	68.5	68.5	67.4	67.8	64	67	67.8	65.1	68.3	68.3
7/F	62.1	68.2	68.2	68.2	66.3	68.2	68.2	67.4	68.3	68.3	63.9	68.5	68.1	68.5	62.7	69	69.1	68.9	69.1	64.7	68.1	68.3	68.3	67.2	67.6	63.9	66.8	67.6	64.9	68.2	68.2
8/F	62	68.1	68.1	68.1	66.1	68.1	68.1	67.3	68.2	68.2	63.8	68.4	68	68.4	62.6	68.9	68.9	68.8	68.9	64.6	67.9	68.1	68.1	67.1	67.5	63.8	66.6	67.5	64.7	68	68
9/F	61.9	68	68	68.0	66	68	68	67.2	68.1	68.1	63.7	68.2	67.9	68.2	62.5	68.7	68.8	68.6	68.8	64.4	67.7	67.9	67.9	66.9	67.3	63.6	66.5	67.3	64.5	67.9	67.9
0/F	61.8	67.9	67.9	67.9	65.9	67.8	67.8	67.1	67.9	67.9	63.5	68.1	67.7	68.1	62.3	68.6	68.6	68.4	68.6	64.3	67.6	67.8	67.8	66.7	67.2	63.5	66.4	67.2	64.4	67.7	67.7
1/F	61.7	67.8	67.8	67.8	65.7	67.7	67.7	67	67.8	67.8	63.4	68	67.6	68	62.2	68.4	68.5	68.3	68.5	64.1	67.4	67.6	67.6	66.6	67	63.4	66.2	67	64.2	67.6	67.6
2/F	61.5	67.6	67.6	67.6	65.6	67.6	67.6	66.8	67.7	67.7	63.3	67.8	67.5	67.8	62.1	68.3	68.3	68.1	68.3	64	67.3	67.4	67.4	66.5	66.8	63.2	66.1	66.8	64.1	67.4	67.4
3/F	61.4	67.5	67.5	67.5	65.5	67.5	67.5	66.7	67.6	67.6	63.2	67.7	67.3	67.7	62	68.2	68.2	68	68.2	63.9	67.1	67.3	67.3	66.3	66.7	63.1	65.9	66.7	63.9	67.2	67.2
4/F	61.3	67.4	67.4	67.4	65.4	67.4	67.4	66.6	67.5	67.5	63	67.6	67.2	67.6	61.8	68	68.1	67.8	68.1	63.7	67	67.2	67.2	66.2	66.6	63	65.8	66.6	63.8	67.1	67.1
5/F	61.2	67.3	67.3	67.3	65.3	67.3	67.3	66.5	67.4	67.4	62.9	67.5	67.1	67.5	61.7	67.9	67.9	67.7	67.9	63.6	66.8	67	67	66	66.4	62.9	65.7	66.4	63.6	67	67
6/F	61.1	67.2	67.2	67.2	65.1	67.2	67.2	66.4	67.2	67.2	62.8	67.3	67	67.3	61.6	67.8	67.8	67.6	67.8	63.5	66.7	66.9	66.9	65.9	66.3	62.8	65.5	66.3	63.5	66.9	66.9
7/F	61.1	67.1	67.1	67.1	65	67.1	67.1	66.3	67.1	67.1	62.7	67.2	66.9	67.2	61.5	67.7	67.7	67.5	67.7	63.4	66.6	66.7	66.7	65.8	66.2	62.7	65.4	66.2	63.4	66.7	66.7
8/F	61	67	67	67.0	64.9	67	67	66.2	67	67.0	62.6	67.1	66.8	67.1	61.4	67.6	67.6	67.4	67.6	63.3	66.5	66.6	66.6	65.7	66	62.6	65.3	66	63.2	66.6	66.6
9/F	60.9	66.9	66.9	66.9	64.9	66.9	66.9	66.1	66.9	66.9	62.5	67	66.7	67	61.3	67.5	67.6	67.3	67.6	63.2	66.3	66.5	66.5	65.6	65.9	62.4	65.2	65.9	63.2	66.5	66.5

* Note:

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Block A - Unmitigated Scenario

Block A	BA 16a	RΔ 16h	BA 16c	Max	RΔ 17a	BA 17b	BA 17c	Max	RΔ 18a	BA 18b	BA 18c	Max	RΔ 19a	BA 19b	RΔ 19c	BA 19d	RΔ 19e	Max	BA 20a	BA 20b	RΔ 20c	RΔ 20d	BA 20e	Max	BA 21a	BA 21b	BA 21c	BΔ 21d	Max
G/F	B/1_100	D/ 1_100	D/ (_100	IVIGA		D/_1/5	D/(_1/6	IVIQX	B/_100	D/_100	B/1_100	IVIUX		B/ (_136	D/ (_150	B/_130	D/ (_150	WIGH	D/1_200	D/1_200	B/1_200	B/1_200	B/1_200	IVIGA	D/_210	D/ 1_210	B/_ZIC	D/_210	WIGH
1/F																													
2/F	60.2	70.2	67.8	70.2	62.3	70.9	68.4	70.9	62.2	71.5	68.9	71.5	60.6	71.8	69.8	70	72.2	71.8	56.7	63.4	62.9	64.2	71.1	71.1	58.2	62.2	61.2	60.5	62.2
3/F	67.1	71.3	70.8	71.3	68.1	71.9	71.6	71.9	67.5	72.8	72	72.8	66.8	73.2	73.1	73.5	72.1	73.5	57	63.9	64.9	66.6	71.4	71.4	59.4	62.7	62.1	61.6	62.7
4/F	67.5	71.2	70.7	71.2	68.2	71.7	71.6	71.7	68.2	72.6	72	72.6	68	73.2	73.3	73.5	72	73.5	56.8	64.2	65.1	66.5	71.2	71.2	59.3	62.7	62.2	61.7	62.7
5/F	67.3	71	70.6	71	68	71.5	71.5	71.5	68.1	72.4	71.9	72.4	68	73.0	73	73.2	71.8	73.2	56.7	64.1	64.9	66.2	70.9	70.9	59	62.7	62.2	61.7	62.7
6/F	67	70.8	70.4	70.8	67.7	71.3	71.2	71.3	67.9	72.2	71.7	72.2	67.7	72.7	72.7	72.9	71.5	72.9	56.5	63.9	64.7	65.9	70.7	70.7	58.9	62.5	62.1	61.6	62.5
7/F	66.8	70.6	70.2	70.6	67.4	71.1	71	71.1	67.5	71.9	71.4	71.9	67.4	72.4	72.4	72.6	71.2	72.6	56.3	63.7	64.4	65.6	70.4	70.4	58.6	62.4	62	61.5	62.4
8/F	66.5	70.4	70.1	70.4	67.2	70.9	70.8	70.9	67.2	71.6	71.2	71.6	67.1	72.1	72.1	72.2	70.9	72.2	56.1	63.4	64.1	65.3	70.1	70.1	58.4	62.2	61.9	61.4	62.2
9/F	66.3	70.2	69.9	70.2	66.9	70.7	70.6	70.7	67	71.4	70.9	71.4	66.8	71.8	71.9	72	70.6	72.0	55.9	63.2	63.8	65	69.8	69.8	58.2	62	61.7	61.2	62.0
10/F	66.1	70	69.7	70	66.7	70.5	70.3	70.5	66.7	71.1	70.7	71.1	66.5	71.6	71.6	71.7	70.4	71.7	55.7	62.9	63.6	64.8	69.6	69.6	58	61.8	61.5	61.1	61.8
11/F	65.8	69.8	69.5	69.8	66.5	70.3	70.1	70.3	66.5	70.9	70.4	70.9	66.3	71.3	71.3	71.4	70.1	71.4	55.5	62.7	63.4	64.5	69.3	69.3	57.9	61.6	61.4	60.9	61.6
12/F	65.6	69.7	69.3	69.7	66.2	70	69.9	70	66.2	70.7	70.2	70.7	66	71.1	71.1	71.2	69.8	71.2	55.4	62.5	63.1	64.3	69.1	69.1	57.7	61.4	61.2	60.7	61.4
13/F	65.4	69.4	69.1	69.4	66	69.9	69.7	69.9	66	70.4	70	70.4	65.8	70.9	70.9	70.9	69.6	70.9	55.2	62.3	62.9	64	68.8	68.8	57.5	61.2	61	60.5	61.2
14/F	65.2	69.2	69	69.2	65.8	69.7	69.5	69.7	65.8	70.2	69.8	70.2	65.6	70.6	70.6	70.7	69.4	70.7	55.1	62.1	62.7	63.8	68.6	68.6	57.3	61	60.9	60.4	61.0
15/F	64.9	69.1	68.8	69.1	65.6	69.5	69.3	69.5	65.6	70.0	69.6	70	65.4	70.4	70.4	70.5	69.2	70.5	54.9	61.9	62.5	63.6	68.4	68.4	57.2	60.9	60.7	60.2	60.9
16/F	64.7	68.9	68.6	68.9	65.4	69.3	69.1	69.3	65.4	69.8	69.4	69.8	65.2	70.2	70.2	70.3	69	70.3	54.7	61.7	62.3	63.4	68.2	68.2	57	60.7	60.5	60.1	60.7
17/F	64.6	68.7	68.4	68.7	65.2	69.1	68.9	69.1	65.2	69.6	69.2	69.6	65	70.0	70	70.1	68.8	70.1	54.6	61.5	62.1	63.2	68	68.0	56.8	60.5	60.3	59.9	60.5
18/F	64.4	68.5	68.3	68.5	65	68.9	68.8	68.9	65	69.4	69	69.4	64.8	69.8	69.8	69.9	68.6	69.9	54.5	61.3	61.9	63	67.8	67.8	56.7	60.3	60.2	59.7	60.3
19/F	64.2	68.4	68.1	68.4	64.8	68.8	68.6	68.8	64.8	69.2	68.9	69.2	64.6	69.7	69.7	69.7	68.4	69.7	54.3	61.2	61.7	62.8	67.6	67.6	56.5	60.2	60	59.6	60.2
20/F	64	68.2	67.9	68.2	64.6	68.6	68.4	68.6	64.6	69.1	68.7	69.1	64.4	69.5	69.5	69.5	68.2	69.5	54.2	61.0	61.6	62.7	67.5	67.5	56.4	60	59.9	59.4	60.0
21/F	63.9	68.1	67.8	68.1	64.5	68.4	68.3	68.4	64.4	68.9	68.5	68.9	64.2	69.3	69.3	69.4	68.1	69.4	54	60.8	61.4	62.5	67.3	67.3	56.2	59.9	59.7	59.3	59.9
22/F	63.7	67.9	67.6	67.9	64.3	68.3	68.1	68.3	64.3	68.8	68.4	68.8	64.1	69.1	69.1	69.2	67.9	69.2	53.9	60.7	61.3	62.3	67.1	67.1	56.1	59.7	59.6	59.2	59.7
23/F	63.6	67.8	67.5	67.8	64.2	68.1	68	68.1	64.1	68.6	68.2	68.6	63.9	69.0	69	69	67.7	69.0	53.8	60.5	61.1	62.2	67	67.0	55.9	59.6	59.5	59	59.6
24/F	63.4	67.6	67.3	67.6	64	68	67.8	68	64	68.5	68.1	68.5	63.8	68.8	68.8	68.9	67.6	68.9	53.6	60.4	60.9	62	66.8	66.8	55.8	59.5	59.3	58.9	59.5
25/F	63.3	67.5	67.2	67.5	63.9	67.8	67.7	67.8	63.8	68.3	67.9	68.3	63.6	68.7	68.7	68.7	67.4	68.7	53.5	60.2	60.8	61.9	66.7	66.7	55.7	59.3	59.2	58.8	59.3
26/F	63.2	67.3	67.1	67.3	63.7	67.7	67.5	67.7	63.7	68.2	67.8	68.2	63.5	68.5	68.5	68.6	67.3	68.6	53.4	60.1	60.6	61.7	66.5	66.5	55.5	59.2	59	58.6	59.2 50.1
27/1	63	67.3	66.9	67.3	63.6	67.6	67.4	67.6	63.5	68.0	67.6	68 67.0	63.3	68.4	68.4	68.5	67.1	68.5	53.3	60.0	60.5	61.6	66.4	66.4	55.4	59.1	58.9	58.5	59.1 58.0
28/F	62.9	67.1	66.8	67.1	63.5	67.5	67.3	67.5	63.4	67.9	67.5	67.9	63.2	68.3	68.3	68.3	67 66.0	68.3	53.2	59.8	60.4	61.5	66.3	66.3	55.3	58.9	58.8	58.4	58.9
29/F	62.8	6/	66.7	67	63.4	67.3	67.2	67.3	63.3	67.8	67.4	67.8	63	68.2	68.1	68.2	66.9	68.2	53	59.7	60.3	61.4	66.1	66.1	55.2	58.8	58.7	58.3	58.8

* Noto

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Block A - Unmitigated Scenario

Block A	BA_22a	BA_22b	BA_22c	Max	BA_23a	BA_23b	BA_23c	Max	BA_24a	BA_24b	BA_24c	Max
G/F												
1/F												
2/F	50.7	60.9	60.7	60.9	56.5	60.4	59.8	60.4	27.5	59.4	59.4	59.4
3/F	50.8	61.2	61.3	61.3	57.1	60.6	60.2	60.6	27.5	59.7	59.9	59.9
4/F	50.7	61.2	61.4	61.4	57	60.5	60.2	60.5	27.5	59.7	59.9	59.9
5/F	50.6	61.2	61.5	61.5	56.9	60.5	60.2	60.5	27.5	59.7	59.9	59.9
6/F	50.5	61.2	61.4	61.4	56.8	60.6	60.2	60.6	27.4	59.6	59.9	59.9
7/F	50.4	61.2	61.4	61.4	56.7	60.5	60.2	60.5	27.4	59.6	59.9	59.9
8/F	50.3	61.1	61.3	61.3	56.6	60.5	60.1	60.5	27.4	59.6	59.8	59.8
9/F	50.2	61	61.2	61.2	56.4	60.4	60.1	60.4	27.4	59.6	59.8	59.8
10/F	50.1	60.9	61.1	61.1	56.3	60.3	60	60.3	27.3	59.5	59.7	59.7
11/F	50	60.8	60.9	60.9	56.2	60.2	59.9	60.2	27.3	59.4	59.6	59.6
12/F	49.9	60.6	60.8	60.8	56.1	60.1	59.8	60.1	27.3	59.3	59.5	59.5
13/F	49.8	60.5	60.6	60.6	55.9	60	59.7	60	27.3	59.3	59.4	59.4
14/F	49.7	60.4	60.4	60.4	55.8	59.9	59.5	59.9	27.3	59.2	59.4	59.4
15/F	49.7	60.2	60.3	60.3	55.7	59.7	59.5	59.7	27.3	59.1	59.2	59.2
16/F	49.6	60.1	60.2	60.2	55.6	59.6	59.3	59.6	27.3	59	59.1	59.1
17/F	49.5	59.9	60	60	55.5	59.5	59.2	59.5	27.3	58.9	59	59
18/F	49.4	59.8	59.8	59.8	55.3	59.4	59.1	59.4	27.2	58.8	58.9	58.9
19/F	49.3	59.6	59.7	59.7	55.2	59.2	59	59.2	27.2	58.7	58.8	58.8
20/F	49.2	59.5	59.6	59.6	55.1	59.1	58.8	59.1	27.2	58.6	58.7	58.7
21/F	49.1	59.4	59.4	59.4	54.9	59	58.7	59	27.2	58.4	58.5	58.5
22/F	49	59.2	59.3	59.3	54.8	58.8	58.6	58.8	27	58.3	58.4	58.4
23/F	48.9	59.1	59.2	59.2	54.7	58.7	58.5	58.7	27.4	58.2	58.3	58.3
24/F	48.8	59	59	59	54.6	58.6	58.4	58.6	27.9	58.1	58.2	58.2
25/F	48.7	58.8	58.9	58.9	54.5	58.5	58.2	58.5	28.5	58	58.1	58.1
26/F	48.6	58.7	58.8	58.8	54.3	58.4	58.1	58.4	29.1	57.9	58	58
27/F	48.5	58.6	58.6	58.6	54.2	58.3	58	58.3	30.2	57.8	57.9	57.9
28/F	48.4	58.5	58.5	58.5	54.1	58.1	57.9	58.1	31.7	57.7	57.8	57.8
29/F	48.4	58.4	58.4	58.4	54.1	58	57.8	58	35.5	57.6	57.7	57.7
* Noto:												

* Note

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Block B - Unmitigated Scenario

Block B	BB_1a	BB_1b	BB_1c	Max	BB_2a	BB_2b	BB_2c	BB_2d	Max	BB_3a	BB_3b	BB_3c	Max	BB_4a	BB_4b	BB_4c	BB_4d	Max	BB_5a	BB_5b	BB_5c	BB_5d	Max	BB_6a	BB_6b	BB_6c	Max	BB_7a	BB_7b	BB_7c	Max
G/F																															
1/F																															
2/F	55.4	56.5	55.9	56.5	55.4	56.8	56.9	56.5	56.9	54.1	57.6	56.9	57.6	54.6	60.8	62	63.1	63.1	63.2	70.7	70.6	69.8	70.7	63.9	70.2	69.4	70.2	62.3	45.2	45.6	62.3
3/F	56.1	56.5	56.1	56.5	56.1	57	57.1	56.6	57.1	55.2	58.3	57.3	58.3	55.8	61.6	62.6	63.4	63.4	65.3	70.7	70.7	70.4	70.7	65.8	70.3	69.7	70.3	64.3	45.1	45.6	64.3
4/F	56	56.5	56	56.5	56	57	57.1	56.6	57.1	55.1	58.3	57.3	58.3	55.7	61.6	62.5	63.3	63.3	65.2	70.6	70.7	70.3	70.7	65.7	70.2	69.7	70.2	64.2	45.2	45.5	64.2
5/F	55.9	56.5	55.9	56.5	55.9	57	57	56.5	57	55	58.2	57.2	58.2	55.6	61.5	62.5	63.2	63.2	65.1	70.5	70.6	70.2	70.6	65.7	70.1	69.6	70.1	64.1	45.3	45.5	64.1
6/F	55.9	56.4	55.8	56.4	55.8	56.9	56.9	56.4	56.9	54.9	58.2	57.1	58.2	55.5	61.4	62.4	63.2	63.2	65	70.4	70.5	70.1	70.5	65.6	70	69.5	70	64	45.4	45.5	64
7/F	55.8	56.3	55.7	56.3	55.8	56.8	56.8	56.3	56.8	54.8	58.1	57.1	58.1	55.4	61.4	62.3	63.1	63.1	64.9	70.3	70.3	70	70.3	65.5	69.9	69.4	69.9	63.9	45.4	45.4	63.9
8/F	55.7	56.2	55.6	56.2	55.7	56.7	56.8	56.2	56.8	54.7	58	57	58.0	55.3	61.3	62.2	63	63.0	64.8	70.2	70.2	69.9	70.2	65.4	69.8	69.3	69.8	63.8	45.5	45.4	63.8
9/F	55.6	56.1	55.5	56.1	55.6	56.6	56.7	56.1	56.7	54.6	57.9	56.9	57.9	55.2	61.2	62.1	62.9	62.9	64.6	70.1	70.1	69.8	70.1	65.3	69.7	69.2	69.7	63.7	45.5	45.4	63.7
10/F	55.5	56	55.4	56	55.5	56.5	56.6	56	56.6	54.5	57.9	56.8	57.9	55.1	61.1	62	62.8	62.8	64.5	70	70	69.7	70	65.2	69.6	69.1	69.6	63.6	45.4	45.3	63.6
11/F	55.4	55.9	55.3	55.9	55.4	56.4	56.5	55.9	56.5	54.4	57.8	56.8	57.8 57.7	55	61	61.9	62.7	62.7	64.4	69.8	69.9	69.6	69.9	65.1	69.5	69	69.5	63.5	45.4	45.3	63.5
12/F	55.3	55.9	55.3	55.9	55.3	56.3	56.4	55.8	56.4	54.3	57.7	56.7	57.7	54.9	60.9	61.8	62.6	62.6	64.3	69.7	69.8	69.4	69.8	64.9	69.4	68.9	69.4	63.4	45.4	45.3	63.4
13/F	55.2	55.8	55.2	55.8	55.2	56.3	56.3	55.7	56.3	54.2	57.7	56.6	57.7	54.8	60.8	61.7	62.5	62.5	64.2	69.6	69.7	69.3	69.7	64.8	69.2	68.8	69.2	63.2	45.4	45.3	63.2
14/F	55.2	55.8	55.2	55.8 55.7	55.2	56.2	56.3	55.7	56.3	54 53.0	57.6	56.6	57.6 57.6	54.7	60.7	61.6	62.4	62.4	64.1	69.5	69.6	69.2	69.6	64.8	69.1	68.6	69.1	63.2	45.4 45.2	45.2	63.2
15/F	55.1	55.7	55.1	55.7 55.6	55.1	56.2	56.2	55.6 55.6	56.2	53.9	57.6	56.5	57.5	54.6	60.6	61.5	62.3	62.3	63.9	69.4	69.4	69.1	69.4	64.6	69 68.0	68.5	69 68.0	63	45.3	45.2	63.0
16/F	55	55.6	55 54.0	55.6 55.6	55 54.0	56.1	56.2	55.6 EE E	56.2 56.1	53.8	57.5	56.5 56.4	57.5 57.5	54.5	60.6	61.5	62.2	62.2 62.1	63.8	69.3	69.3	69	69.3	64.5	68.9	68.4	68.9	62.9	45.3	45.2 45.1	62.9
17/F 18/F	55 54.9	55.5 55.4	54.9 54.8	55.5 55.4	54.9 54.9	56 55.9	56.1 56	55.5 55.4	56.1 56	53.7 53.6	57.5 57.4	56.3	57.5 57.4	54.4 54.2	60.5 60.4	61.4 61.3	62.1 62.1	62.1	63.6 63.5	69.1 69	69.2 69.1	68.9 68.8	69.2 69.1	64.4 64.3	68.8 68.7	68.3 68.2	68.8 68.7	62.8 62.7	45.3 45.3	45.1 45.1	62.8 62.7
10/F	54.8	55.3	54.7	55. 4 55.3	54.8	55.8	55.9	55.3	55.9	53.5	57.4 57.3	56.3	57. 4 57.3	54.2	60.3	61.2	62	62.0	63.4	68.9	69	68.7	69	64.2	68.6	68.1	68.6		45.2	45.1 45.1	62.5
20/F	54.7	55.2	54.7	55.2	54.7	55.8	55.8	55.2	55.8	53.4	57.3 57.2	56.2	57.3 57.2	54	60.2	61.1	61.9	61.9	63.3	68.8	68.9	68.5	68.9	64.1	68.5	68	68.5	62.5 62.4	45.2 45.2	45.1 45.1	62.4
21/F	54.6	55.2	54.5	55.2	54.5	55.7	55.7	55.2	55.7	53.4	57.2 57.2	56.1	57.2	53.9	60.2	61	61.8	61.8	63.2	68.7	68.8	68.4	68.8	64	68.4	67.9	68.4	62.3	45.2	45	62.3
22/F	54.5	55.1	54.4	55.1	54.4	55.6	55.7	55.1	55.7 55.7	53.2	57.2 57.1	56.1	57.1	53.8	60.1	61	61.7	61.7	63.1	68.6	68.7	68.4	68.7	63.9	68.3	67.8	68.3	62.2	45.2	45	62.2
23/F	54.4	55	54.4	55	54.4	55.5	55.6	55	55. <i>6</i>	53.1	57.1	56	57.1	53.7	60	60.9	61.7	61.7	63	68.5	68.6	68.3	68.6	63.9	68.2	67.7	68.2	62.1	45.1	45	62.1
24/F	54.3	55	54.3	55	54.3	55.5	55.6	55.1	55.6	52.9	57.1	56.1	57.1	53.6	60	60.9	61.7	61.7	62.8	68.4	68.5	68.2	68.5	63.7	68	67.6	68	62	45.1	45	62
25/F	54.2	55	54.3	55	54.1	55.6	55.7	55.2	55.7	52.8	57.3	56.3	57.3	53.5	60.2	61.1	61.8	61.8	62.7	68.3	68.4	68.2	68.4	63.6	68	67.5	68	61.9	46.3	47.3	61.9
26/F	54	55.1	54.5	55.1	54	55.9	56	55.7	56	52.7	57.7	56.6	57.7	53.4	60.3	61.2	62	62.0	62.6	68.2	68.3	68.1	68.3	63.6	67.9	67.4	67.9	61.8	46.3	47.4	61.8
27/F	53.9	55.4	54.8	55.4	53.9	56.1	56.3	56	56.3	52.6	57.9	56.9	57.9	53.3	60.5	61.4	62.2	62.2	62.5	68.2	68.2	68.1	68.2	63.5	67.8	67.3	67.8	61.7	46.8	47.8	61.7
28/F	53.8	55.8	55.2	55.8	53.8	56.4	56.6	56.3	56.6	52.5	58.2	57.2	58.2	53.2	60.7	61.7	62.6	62.6	62.4	68.1	68.1	68	68.1	63.4	67.7	67.2	67.7	61.7	48.2	49	61.7
29/F	53.7	56	55.4	56	53.7	56.6	56.8	56.5	56.8	52.4	58.5	57.5	58.5	53.1	61.1	62.1	62.9	62.9	62.4	68	68	68	68	63.3	67.6	67.1	67.6	61.6	55.7	55.8	61.6

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Block B - L	Inmitigated	Scenario																															
Block B	BB_8a	BB_8b	BB_8c	Max	BB_9a	BB_9b	Max	BB_10a	BB_10b	Max	BB_11a	BB_11b	BB_11c	Max	BB_12a	BB_12b	BB_12c	BB_12d	Max	BB_13a	BB_13b	BB_13c	BB_13d	Max	BB_14a	BB_14b	BB_14c	BB_14d	Max	BB_15a	BB_15b	BB_15c	Max
G/F																																	
1/F																																	
2/F	62.4	47.1	47.5	62.4	66.6	68.7	68.7	65.7	69.1	69.1	62.9	69.1	69.1	69.1	63.2	69	68.9	65.1	69.0	54.4	59.9	60	57.4	60.0	59.6	59.4	58.3	55.6	59.6	32.4	59.9	60	60
3/F	64.5	47	47.4	64.5	67.3	68.9	68.9	67.4	69.4	69.4	64.5	69.3	69.3	69.3	64.8	69.2	69.1	65.7	69.2	54.9	60.1	60.2	58.2	60.2	59.8	59.6	59.2	56.8	59.8	32.3	60.2	60.5	60.5
4/F	64.4	47	47.4	64.4	67.3	68.9	68.9	67.4	69.3	69.3	64.4	69.3	69.3	69.3	64.7	69.2	69.1	65.8	69.2	54.9	60.1	60.2	58.5	60.2	59.8	59.6	59.3	56.8	59.8	32.3	60.3	60.6	60.6
5/F	64.3	47	47.4	64.3	67.2	68.8	68.8	67.3	69.3	69.3	64.4	69.2	69.2	69.2	64.7	69.1	69.1	65.8	69.1	54.8	60.1	60.2	58.6	60.2	59.7	59.5	59.3	56.7	59.7	32.3	60.3	60.7	60.7
6/F	64.3	47	47.4	64.3	67.1	68.7	68.7	67.2	69.2	69.2	64.3	69.2	69.2	69.2	64.6	69.1	69	65.8	69.1	54.7	60	60.1	58.5	60.1	59.7	59.5	59.3	56.6	59.7	32.2	60.3	60.7	60.7
7/F	64.2	46.9	47.4	64.2	67.1	68.7	68.7	67.2	69.1	69.1	64.2	69.1	69.1	69.1	64.6	69	68.9	65.7	69.0	54.7	60	60.1	58.5	60.1	59.7	59.5	59.3	56.6	59.7	32.1	60.3	60.7	60.7
8/F	64.1	46.9	47.3	64.1	67	68.6	68.6	67.1	69.1	69.1	64.1	69	69	69	64.5	68.9	68.9	65.7	68.9	54.6	60	60.1	58.5	60.1	59.7	59.5	59.3	56.5	59.7	32.1	60.4	60.8	60.8
9/F	64	46.9	47.3	64.0	66.9	68.5	68.5	67	69	69.0	64	68.9	68.9	68.9	64.4	68.8	68.8	65.6	68.8	54.5	60	60.1	58.5	60.1	59.8	59.6	59.3	56.4	59.8	32	60.4	60.8	60.8
10/F	63.9	46.9	47.3	63.9	66.8	68.4	68.4	66.9	68.9	68.9	64	68.8	68.8	68.8	64.3	68.7	68.7	65.6	68.7	54.5	60 60	60.1	58.5	60.1	59.8	59.6	59.3	56.3	59.8	31.9	60.4	60.8	60.8
11/F	63.7 63.6	46.9 46.8	47.2 47.2	63.7	66.7 66.6	68.3 68.2	68.3	66.8	68.8 68.7	68.8 68.7	63.8 63.7	68.7 68.6	68.7 68.6	68.7	64.2	68.6 68.5	68.6 68.5	65.5 65.4	68.6	54.4	60 60	60.1 60	58.4 58.4	60.1 60.0	59.8	59.6 59.6	59.3 59.3	56.2 56.1	59.8 59.7	31.9 31.8	60.3	60.7 60.7	60.7 60.7
12/F 13/F	63.5	46.8 46.8	47.2 47.2	63.6 63.5	66.5	68.1	68.2	66.7 66.6	68.6	68.6	63.6	68.5	68.5	68.6 68.5	64 64	68.5	68.4	65.4	68.5 68.5	54.3 54.3	59.9	60	58.4 58.3	60.0	59.7 59.7	59.6 59.5	59.3 59.3	56.1 56	59.7 59.7	31.8	60.3 60.3	60.7	60.6
14/F	63.4	46.8	47.2 47.2	63.4	66.4	68	68.1 68	66.5	68.5	68.5	63.5	68.5	68.4	68.5	63.9	68.3	68.3	65.3	68.3	54.3 54.2	59.9	59.9	58.3	59.9	59.6	59.5	59.2	55.9	59.7 59.6	31.6	60.2	60.5	60.5
15/F	63.2	46.8	47.2	63.2	66.3	67.9	67.9	66.4	68.4	68.4	63.4	68.3	68.3	68.3	63.8	68.2	68.2	65.2	68.2	54.2	59.8	59.9	58.3	59.9	59.6	59.4	59.2	55.8	59.6	31.6	60.1	60.4	60.4
16/F	63.1	46.7	47.2	63.1	66.2	67.8	67.8	66.3	68.3	68.3	63.3	68.2	68.2	68.2	63.7	68.1	68.1	65.1	68.1	54.2	59.7	59.8	58.2	59.8	59.5	59.4	59.2	55.7	59.5	31.5	60	60.3	60.3
17/F	63	46.7	47.2	63.0	66.1	67.7	67.7	66.2	68.2	68.2	63.2	68.1	68.1	68.1	63.5	68.1	68	65	68.1	54.2	59.6	59.7	58.1	59.7	59.5	59.3	59.1	55.6	59.5	31.4	59.9	60.2	60.2
18/F	62.9	46.7	47.1	62.9	66	67.6	67.6	66.1	68.1	68.1	63.1	68	68	68	63.4	67.9	67.9	64.9	67.9	54.1	59.5	59.6	58.1	59.6	59.4	59.2	59	55.5	59.4	31.3	59.8	60.1	60.1
19/F	62.8	46.7	47.1	62.8	65.9	67.5	67.5	66	68	68.0	63	67.9	67.9	67.9	63.3	67.8	67.8	64.8	67.8	54	59.5	59.5	58	59.5	59.3	59.2	59	55.4	59.3	31.3	59.7	60	60
20/F	62.7	46.7	47.1	62.7	65.8	67.4	67.4	65.9	67.9	67.9	62.9	67.8	67.8	67.8	63.2	67.8	67.7	64.8	67.8	53.9	59.4	59.4	58	59.4	59.2	59.1	58.9	55.3	59.2	31.2	59.6	59.9	59.9
21/F	62.6	46.7	47.1	62.6	65.7	67.3	67.3	65.8	67.8	67.8	62.8	67.7	67.7	67.7	63.1	67.7	67.6	64.7	67.7	53.8	59.3	59.3	57.9	59.3	59.2	59	58.8	55.2	59.2	31.1	59.5	59.8	59.8
22/F	62.5	46.7	47.1	62.5	65.6	67.2	67.2	65.7	67.7	67.7	62.7	67.7	67.6	67.7	63	67.6	67.5	64.6	67.6	53.7	59.2	59.2	57.8	59.2	59.1	58.9	58.7	55.1	59.1	31	59.4	59.7	59.7
23/F	62.3	46.6	47.1	62.3	65.5	67.1	67.1	65.6	67.6	67.6	62.5	67.5	67.5	67.5	62.9	67.4	67.5	64.5	67.5	53.6	59.1	59.2	57.7	59.2	59	58.8	58.6	55	59	30.9	59.3	59.6	59.6
24/F	62.2	46.6	47.1	62.2	65.4	67	67	65.5	67.5	67.5	62.4	67.4	67.4	67.4	62.8	67.4	67.4	64.4	67.4	53.5	59	59.1	57.6	59.1	58.9	58.7	58.5	54.9	58.9	30.9	59.2	59.5	59.5
25/F	62.1	49.1	49.8	62.1	65.3	66.9	66.9	65.4	67.4	67.4	62.3	67.4	67.4	67.4	62.7	67.3	67.3	64.3	67.3	53.4	58.9	59	57.5	59.0	58.8	58.6	58.4	54.8	58.8	30.8	59.1	59.4	59.4
26/F	62	49.1	49.8	62.0	65.2	66.8	66.8	65.3	67.3	67.3	62.2	67.3	67.3	67.3	62.6	67.2	67.2	64.2	67.2	53.3	58.8	58.9	57.4	58.9	58.7	58.5	58.3	54.7	58.7	30.7	59	59.3	59.3
27/F	61.9	49.4	50	61.9	65.2	66.7	66.7	65.3	67.3	67.3	62.1	67.2	67.2	67.2	62.5	67.1	67.1	64.1	67.1	53.2	58.7	58.8	57.3	58.8	58.6	58.4	58.2	54.6	58.6	31.4	58.9	59.1	59.1
28/F	61.8	50.2	50.7	61.8	65.1	66.6	66.6	65.1	67.2	67.2	62	67.1	67.1	67.1	62.4	67	67	64.1	67.0	53.2	58.6	58.6	57.3	58.6	58.4	58.3	58.1	54.5	58.4	33.1	58.8	59	59
29/F	61.8	56.1	56.1	61.8	65	66.6	66.6	65	67.1	67.1	61.9	67	67	67	62.3	66.9	66.9	64	66.9	53.1	58.5	58.5	57.2	58.5	58.3	58.2	58	54.4	58.3	39.4	58.7	58.9	58.9

Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Block B - Unmitigated Scenario

Block B	BB_16a	BB_16b	BB_16c	Max	BB_17a	BB_17b	BB_17c	Max	BB_18a	BB_18b	BB_18c	Max	BB_19a	BB_19b	BB_19c	BB_19d	BB_19e	Max	BB_20a	BB_20b	BB_20c	BB_20d	BB_20e	Max	BB_21a	BB_21b	BB_21c	BB_21d	Max
G/F																													
1/F																													
2/F	56.4	61.4	60.3	61.4	55.2	62.4	62.2	62.4	60.1	64.4	63.6	64.4	60.1	64.7	63.7	66.3	68.0	68.0	31.3	61.8	61.5	62.8	67.5	67.5	31.4	61.2	60.4	59.6	61.2
3/F	57.1	61.6	61	61.6	55.9	62.6	62.9	62.9	60.5	64.7	64	64.7	60.3	65.2	66.0	67.1	67.7	67.7	31.3	63.0	63.9	65.6	67.5	67.5	31.4	62.2	61.7	61.0	62.2
4/F	57.4	61.6	61.1	61.6	56.3	62.7	63	63.0	60.4	64.8	64.2	64.8	60.2	65.7	66.2	66.8	67.4	67.4	31.3	63.6	64.2	65.5	67.1	67.1	31.4	62.4	61.9	61.5	62.4
5/F	57.6	61.7	61.1	61.7	56.6	62.8	63	63.0	60.3	64.8	64.2	64.8	60.1	65.6	65.9	66.5	67.0	67.0	31.3	63.6	64	65.2	66.8	66.8	31.4	62.6	62.1	61.7	62.6
6/F	57.8	61.7	61.2	61.7	57	62.8	63.1	63.1	60.1	64.8	64.2	64.8	59.9	65.4	65.7	66.2	66.7	66.7	31.2	63.5	63.9	64.9	66.4	66.4	31.4	62.6	62.2	61.7	62.6
7/F	58	61.7	61.2	61.7	57.3	62.8	63.1	63.1	59.9	64.7	64.1	64.7	59.8	65.2	65.4	65.9	66.4	66.4	31.2	63.4	63.7	64.6	66.1	66.1	31.3	62.6	62.1	61.7	62.6
8/F	58.2	61.7	61.2	61.7	57.5	62.8	63	63.0	59.8	64.5	64	64.5	59.6	65.0	65.2	65.6	66.1	66.1	31.2	63.2	63.5	64.4	65.8	65.8	31.3	62.4	62	61.5	62.4
9/F	58.2	61.7	61.2	61.7	57.6	62.7	63	63.0	59.6	64.3	63.8	64.3	59.4	64.8	64.9	65.3	65.8	65.8	31.2	63.0	63.3	64.1	65.5	65.5	31.3	62.3	61.9	61.4	62.3
10/F	58.2	61.6	61.2	61.6	57.6	62.7	62.9	62.9	59.5	64.1	63.7	64.1	59.3	64.6	64.7	65.1	65.5	65.5	31.1	62.8	63.1	63.9	65.2	65.2	31.3	62.1	61.7	61.3	62.1
11/F	58.1	61.6	61.1	61.6	57.5	62.6	62.7	62.7	59.3	64.0	63.5	64.0	59.1	64.3	64.5	64.8	65.2	65.2	31.1	62.7	63	63.6	64.9	64.9	31.3	61.9	61.6	61.2	61.9
12/F	58.1	61.5	61.1	61.5	57.5	62.4	62.6	62.6	59.1	63.8	63.3	63.8	59	64.2	64.3	64.6	65.0	65.0	31.1	62.5	62.8	63.4	64.7	64.7	31.2	61.8	61.5	61.0	61.8
13/F	58	61.4	61	61.4	57.4	62.3	62.4	62.4	59	63.6	63.2	63.6	58.8	63.9	64.1	64.4	64.7	64.7	31.1	62.3	62.6	63.2	64.4	64.4	31.2	61.6	61.3	60.9	61.6
14/F	57.9	61.3	60.9	61.3	57.3	62.2	62.3	62.3	58.9	63.4	63	63.4	58.7	63.8	63.9	64.2	64.6	64.6	31	62.2	62.5	63.0	64.2	64.2	31.2	61.5	61.2	60.8	61.5
15/F	57.8	61.2	60.8	61.2	57.2	62.1	62.2	62.2	58.7	63.3	62.8	63.3	58.6	63.6	63.7	64	64.3	64.3	31.2	62.0	62.3	62.8	64	64.0	31.4	61.4	61.1	60.7	61.4
16/F	57.7 57.6	60 U	60.7 60.6	61 60.9	57.1	61.9	62 61.9	62.0	58.6	63.1	62.7	63.1 63.0	58.4	63.5	63.5	63.8 63.7	64.1	64.1 63.9	31.4	61.9	62.2 62	62.6	63.8	63.8	31.7 32.2	61.2	60.9	60.5	61.2
17/F 18/F	57.5	60.9 60.8	60.5	60.8	57 56.9	61.8 61.7	61.8	61.9 61.8	58.5 58.3	63.0 62.9	62.6 62.4	62.9	58.3 58.2	63.3 63.1	63.3 63.2	63.5	63.9 63.8	63.8	31.9 32.6	61.8 61.6	61.9	62.5 62.3	63.6 63.4	63.6 63.4	32.7	61.1 61.0	60.8 60.7	60.4 60.3	61.1 61.0
19/F	57.5 57.4	60.7	60.3	60.7	56.8	61.6	61.6	61.6	58.2	62.7	62.3	62.7	58.1	63.0	63.0	63.3	63.6	63.6	33.4	61.5	61.8	62.1	63.2	63.2	33.4	60.9	60.6	60.2	60.9
20/F	57.4 57.3	60.6	60.2	60.6	56.8	61.4	61.5	61.5	58.1	62.6	62.1	62.6	57.9	62.8	62.9	63.2	63.4	63.4	34.4	61.4	61.6	62.0	63	63.0	34.2	60.8	60.5	60.1	60.8
20/1 21/F	57.3 57.2	60.4	60.1	60.4	56.6	61.3	61.4	61.4	58	62.4	62	62.4	57.8	62.7	62.8	63	63.2	63.2	35.5	61.3	61.5	61.8	62.8	62.8	35.1	60.7	60.4	60.0	60.7
22/F	57.1	60.3	60	60.3	56.5	61.2	61.3	61.3	57.9	62.3	61.9	62.3	57.7	62.6	62.6	62.9	63.1	63.1	36.7	61.1	61.4	61.7	62.6	62.6	36	60.6	60.3	59.8	60.6
23/F	57	60.2	59.9	60.2	56.5	61.1	61.1	61.1	57.7	62.2	61.8	62.2	57.6	62.4	62.5	62.8	63.0	63.0	38.2	61.1	61.3	61.5	62.5	62.5	37.1	60.5	60.2	59.8	60.5
24/F	56.9	60.1	59.8	60.1	56.3	60.9	61	61.0	57.6	62.1	61.6	62.1	57.5	62.3	62.4	62.6	62.8	62.8	39.8	60.9	61.2	61.5	62.4	62.4	38.3	60.4	60.1	59.7	60.4
25/F	56.8	60	59.7	60	56.2	60.8	60.9	60.9	57.5	61.9	61.5	61.9	57.3	62.2	62.2	62.5	62.7	62.7	41.7	60.9	61.1	61.3	62.2	62.2	39.6	60.3	60	59.6	60.3
26/F	56.7	59.9	59.5	59.9	56.1	60.7	60.8	60.8	57.4	61.8	61.4	61.8	57.2	62.1	62.1	62.4	62.5	62.5	44.1	60.8	61	61.2	62.1	62.1	41.2	60.3	60	59.6	60.3
27/F	56.6	59.8	59.4	59.8	56	60.6	60.7	60.7	57.3	61.7	61.3	61.7	57.1	61.9	62.0	62.3	62.4	62.4	46.7	60.8	61	61.1	62	62.0	43.5	60.3	60	59.6	60.3
28/F	56.5	59.6	59.3	59.6	55.9	60.4	60.6	60.6	57.1	61.6	61.2	61.6	57	61.9	61.9	62.1	62.3	62.3	48.8	60.8	61	61.2	61.8	61.8	46.1	60.3	60.1	59.7	60.3
29/F	56.4	59.5	59.2	59.5	55.8	60.4	60.5	60.5	57.1	61.5	61	61.5	56.9	61.7	61.8	62	62.2	62.2	50.6	60.9	61.1	61.2	61.8	61.8	48.3	60.4	60.2	59.8	60.4

* Note:

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Block B - Unmitiaated Scenario

Block B	BB_22a	BB_22b	BB_22c	Max	BB_23a	BB_23b	BB_23c	Max	BB_24a	BB_24b	Max
G/F											
L/F											
<u>2</u> /F	55	60.1	59.9	60.1	50.2	58.7	57	58.7	29.6	55.5	55.5
3/F	55.9	61	61.1	61.1	50.4	60.1	59.2	60.1	29.6	57.7	57.7
l/F	56.9	61.3	61.5	61.5	50.4	60.6	59.7	60.6	29.5	58.3	58.3
5/F	57.2	61.4	61.6	61.6	50.3	60.7	59.8	60.7	29.5	58.4	58.4
5/F	57.2	61.4	61.6	61.6	50.3	60.6	59.7	60.6	29.5	58.3	58.3
7/F	57.1	61.3	61.6	61.6	50.2	60.5	59.6	60.5	29.5	58.2	58.2
3/F	57	61.3	61.5	61.5	50.1	60.4	59.5	60.4	29.5	58.1	58.1
)/F	57	61.2	61.4	61.4	50.1	60.3	59.4	60.3	29.5	58.1	58.1
.0/F	56.9	61.1	61.3	61.3	50	60.2	59.3	60.2	29.5	58	58
L1/F	56.8	61	61.2	61.2	50	60.2	59.3	60.2	29.4	57.9	57.9
.2/F	56.7	60.9	61	61	49.9	60.1	59.2	60.1	29.4	57.8	57.8
.3/F	56.6	60.7	60.9	60.9	49.8	59.9	59.1	59.9	29.4	57.7	57.7
L4/F	56.5	60.6	60.8	60.8	49.7	59.8	59	59.8	29.3	57.6	57.6
L5/F	56.4	60.5	60.7	60.7	49.7	59.7	58.9	59.7	29.3	57.5	57.5
L6/F	56.4	60.4	60.5	60.5	49.6	59.6	58.8	59.6	29.2	57.4	57.4
L7/F	56.3	60.3	60.4	60.4	49.6	59.5	58.6	59.5	29.3	57.3	57.3
L8/F	56.2	60.1	60.3	60.3	49.5	59.4	58.5	59.4	29.3	57.2	57.2
L9/F	56.1	60	60.2	60.2	49.5	59.3	58.4	59.3	29.4	57.1	57.1
20/F	56.1	59.9	60.1	60.1	49.4	59.2	58.3	59.2	29.5	57	57
21/F	56	59.8	60	60	49.4	59.1	58.2	59.1	29.5	56.9	56.9
2/F	55.9	59.7	59.9	59.9	49.4	59	58.1	59	29.5	56.9	56.9
23/F	55.8	59.6	59.8	59.8	49.4	58.9	58.1	58.9	29.6	56.8	56.8
.4/F	55.8	59.5	59.7	59.7	49.4	58.8	58	58.8	29.6	56.7	56.7
25/F	55.7	59.5	59.6	59.6	49.5	58.7	57.9	58.7	29.6	56.7	56.7
26/F	55.7	59.4	59.6	59.6	49.8	58.7	57.9	58.7	31	56.7	56.7
27/F	55.7	59.5	59.6	59.6	50.1	58.7	58	58.7	33.6	56.9	56.9
28/F	55.8	59.5	59.7	59.7	50.6	58.7	58	58.7	37.3	56.9	56.9
29/F	56	59.6	59.8	59.8	51.4	58.7	58	58.7	44.1	57	57

* Note:

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Summary of the Predicted Ro	ad Traffic No	ise Compli	ance Rate	
	Blo	ck A	Blo	ck B
dB(A)	Unit	%	Unit	%
<= 70	609	91%	667	99%
>=70	63.0	9%	5	0.7%
Total	672		672	
Compliance Rate (%)	91%		99%	
Maxmuim Noise Level dB(A)	73.5		70.7	

Appendix E

Noise Attenuation of Acoustic Window System



Noise Attenuation of Acoustic Window System

Acoustic Window Configuration

Reference is made to HD's Technical Note on "Noise Attenuation for Modular Flat Design (MFD) with Acoustic Windows" (TD) for the Proposed Public Housing Development at Tung Chung Area 109.

Table 1 Acoustic Window Dimension at Area 109

Flat Type	Inner Window Opening	Outer Window Opening	Window Overlapping Length	Gap Width Between Window Panel	Window Pane Thickness
Type B-5	1383mm (H) x 940mm(W)	1383mm (H) x 1010mm(W)	200mm	175 mm	6mm
Type C-7(1B) & Type D-7(2B) – Living Room	1383mm (H) x 1040mm(W)	1383mm (H) x 1060mm(W)	140mm	175 mm	6mm
Type C-7(1B) & Type D-7(2B)– Bedroom	1383mm (H) x 575mm(W)	1383mm (H) x 550mm(W)	525mm	175 mm	6mm
Type D-6/ Type D-7 (Bedroom	1383mm (H) x 550mm(W)	1383mm (H) x 550mm(W)	500mm	175 mm	6mm

Note:

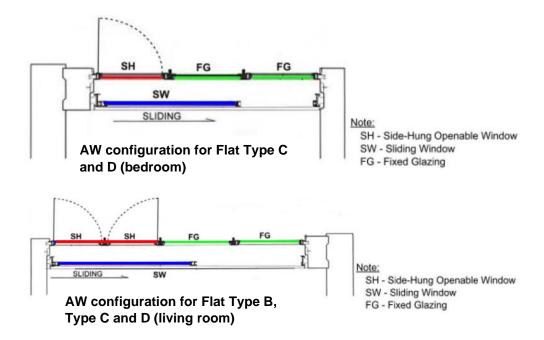
- (1) The adopted acoustic window system with/without sound absorptive lining at window is subjected to noise exceedance level.
- (2) The configurations of the proposed acoustic window system are retrieved from Housing Department's Technical Note on "Noise Attenuation for Modular Flat Design (MFD) with Acoustic Windows".
- (3) The panes of the side-hung openable window and the fixed glazing of the acoustic window shall be of 6 mm thick in accordance with Appendix 4.4 of HKPSG.

Table 2 below shows the flat types at the Development proposed with acoustic windows and their equivalent types to TD.

Table 2 Flat Types to Equivalent Flats at Area 109

Flat Type	Flats in Block
Type B-5	BA-15
Type C-7	BA-11, BA-13, BA-16, BA-17, BA-18
Type D-7	BA-12, BA-19, BB-5

Based on the acoustic window system design, the outer layer of the window system shall consist of fixed glazing and side hung openable gasketed window, and the inner layer shall consist of one sliding window. The basic configurations of the acoustic window for Flat Type B, Type C and Type D in the Development are shown below (configurations are extracted from Acoustic Design and Performance Evaluation of the Acoustic Window Final Report (ADPEAW)):



The panes of side-hung openable window and the fixed glazing of the acoustic window shall be of 6mm thick in accordance with Chapter 9 of the HKPSG.

Table 3 Sound Attenuation Performance of Acoustic Window

Type of Acoustic	Type B-5- Living	Type C-7 & Type D-7 -	Type D-7 –
Window System	Room	Living Room and Bedroom 1	Bedroom2
Sliding Window,			
without absorption at	5.5 dB(A)	5.4 dB(A)	2.7 dB(A)
window			
Sliding Window, with			3.9 dB(A)
absorption at window	-	-	3.8 UD(A)

Reference: Housing Department's Technical Note on "Noise Attenuation for Modular Flat Design (MFD) with Acoustic Windows" (TD)

An assumption was made to the acoustic window system at Area 109 – acoustic window should be installed in all rooms (Living room and bedroom for Type C and Type D flats) as adopting those sound attenuations.

Table 4 Details of Flats Proposed with Acoustic Window at Area 109

Block	Flat & Flat Type	Application of	Acoustic Wir	ndow ^(a)	Noise Attenuation or	Remark
		Living Room	Bedroom	Bedroom 2	Corrected Noise	
					Attenuation (b)	
Α	BA_11 (Type C)	Υ	Υ	N/A	5.4	N/A
Α	BA_12 (Type C)	Υ	Υ	N/A	5.4	N/A
Α	BA_13 (Type D)	Υ	Υ	-	5.4	N/A
		-	-	Υ	2.7	N/A
Α	BA_15 (Type B)	Υ	N/A	N/A	5.5	N/A
Α	BA_16 (Type C)	Υ	Υ	N/A	5.4	N/A
Α	BA_17 (Type C)	Υ	Υ	N/A	5.4	N/A
Α	BA_18 (Type C)	Υ	Υ	N/A	5.4	N/A
Α	BA_19 (Type D)	Υ	Υ	-	5.4	N/A
		-	-	Υ	2.7 (without sound	N/A
					absorptive material)	
					3.9 (with sound	
					absorptive material)	
В	BB_5 (Type D)	Υ	Υ	-	5.4	N/A

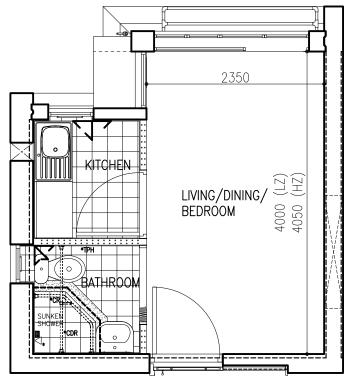
Remarks:

(a) Y= Yes; N=No; N/A = Not Application.

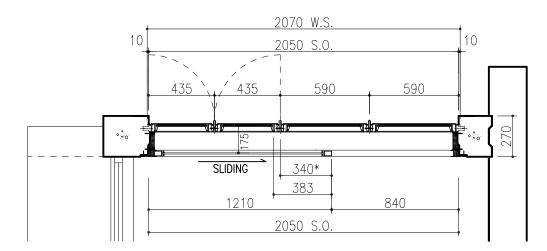
Details Drawing of Acoustic Window

Annex A

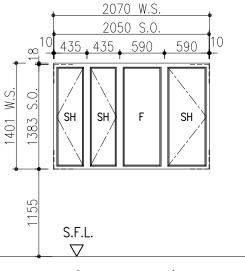
MFD with Acoustic Window



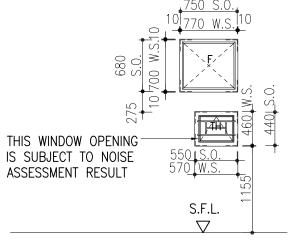
TYPE A-3 FLAT (WITH ACOUSTIC WINDOW)
SCALE 1:50(A3)



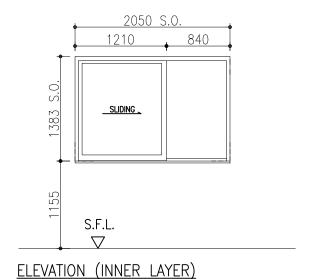
PART PLAN FOR ACOUSTIC WINDOW SCALE 1:25(A3)



ELEVATION (OUTER LAYER)
SCALE 1:50(A3)



SIDE ELEVATION—LIVING ROOM
SCALE 1:50(A3)



SCALE 1:50(A3)

IFA(LZ): 9.40m²

IFA(HZ): 9.62m²

NOTE: ELEVATIONS VIEWED FROM INSIDE

F - FIXED WINDOW

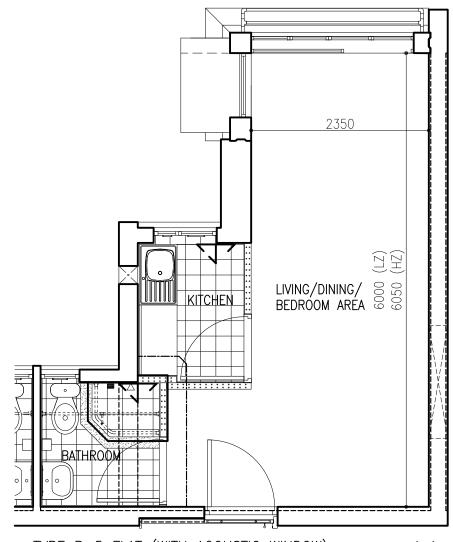
TH - TOP HUNG WINDOW

SH - SIDE HUNG WINDOW

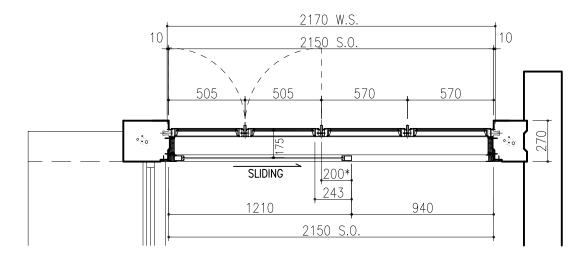
S.O. - STRUCTURAL OPENING

W.S. - WINDOW DIMENSION

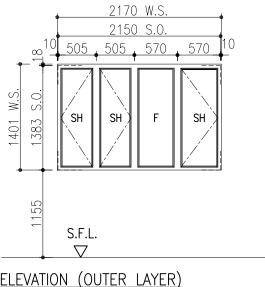
MODULAR FLAT WITH ACOUSTIC WINDOW TYPE A - 3 FLAT



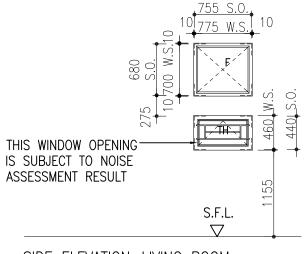
TYPE B-5 FLAT (WITH ACOUSTIC WINDOW) SCALE 1:50(A3)



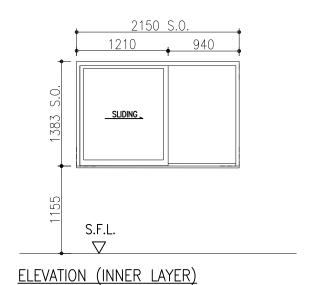
PART PLAN FOR ACOUSTIC WINDOW SCALE 1:25(A3)



ELEVATION (OUTER LAYER)
SCALE 1:50(A3)



SIDE ELEVATION—LIVING ROOM
SCALE 1:50(A3)



SCALE 1:50(A3)

IFA(LZ): 15.84m²

IFA(HZ): 16.17m²

NOTE: ELEVATIONS VIEWED FROM INSIDE

F - FIXED WINDOW

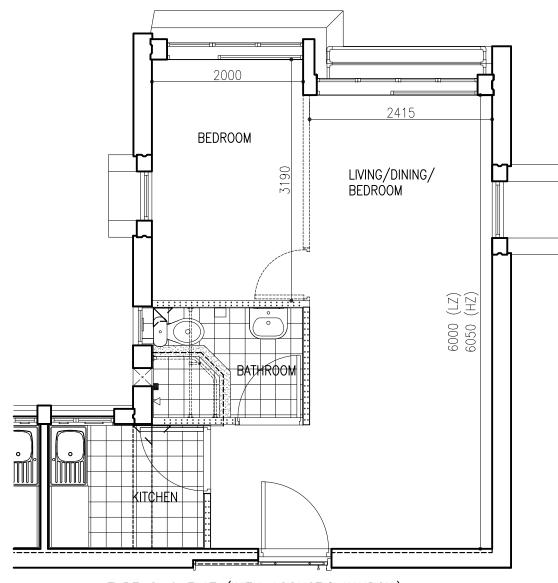
TH - TOP HUNG WINDOW

SH - SIDE HUNG WINDOW

S.O. - STRUCTURAL OPENING

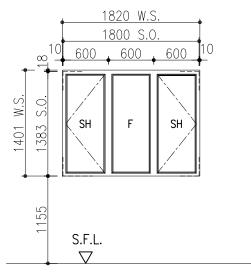
W.S. - WINDOW DIMENSION

MODULAR FLAT WITH ACOUSTIC WINDOW TYPE B - 5 FLAT

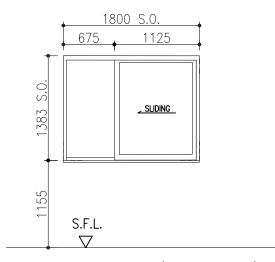


<u>TYPE C-6 FLAT (WITH ACOUSTIC WINDOW)</u> SCALE 1:50(A3)

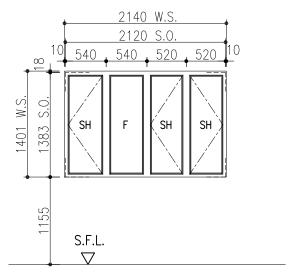
SCALE 1:25(A3)



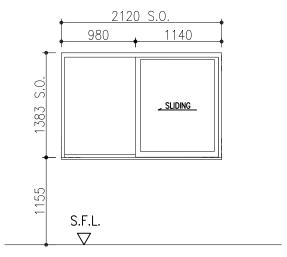
ELEVATION—BEDROOM (OUTER LAYER)
SCALE 1:50(A3)



ELEVATION—BEDROOM (INNER LAYER)
SCALE 1:50(A3)



ELEVATION—LIVING ROOM (OUTER LAYER)
SCALE 1:50(A3)



ELEVATION—LIVING ROOM (INNER LAYER)
SCALE 1:50(A3)

<u>IFA(LZ)</u>
-LIVING: 16.64m²
-BR1: 6.38m²

<u>IFA(HZ)</u>

-LIVING: 16.83m² -BR1: 6.38m²

NOTE: ELEVATIONS VIEWED FROM INSIDE

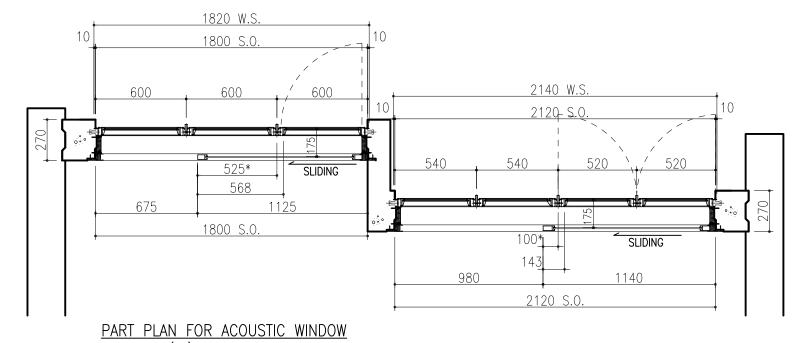
F - FIXED WINDOW

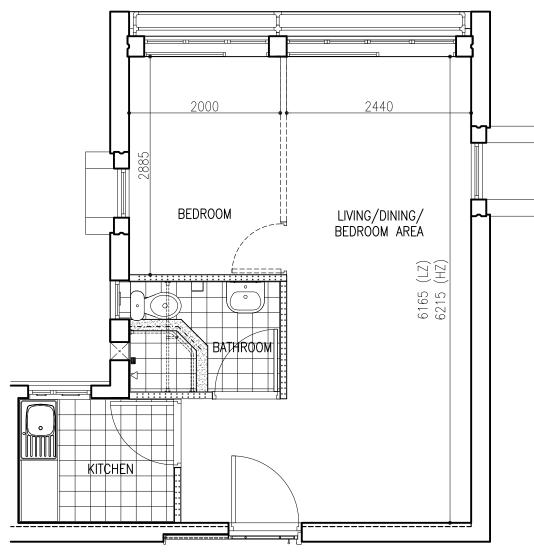
SH - SIDE HUNG WINDOW

S.O. - STRUCTURAL OPENING

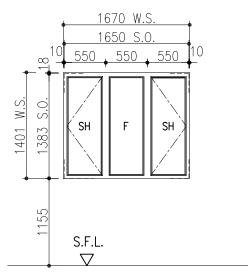
W.S. - WINDOW DIMENSION

MODULAR FLAT WITH ACOUSTIC WINDOW TYPE C - 6 FLAT

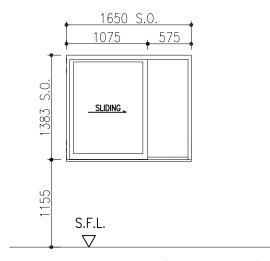




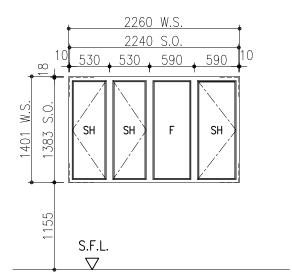
TYPE C-7 FLAT (WITH ACOUSTIC WINDOW) SCALE 1:50(A3)



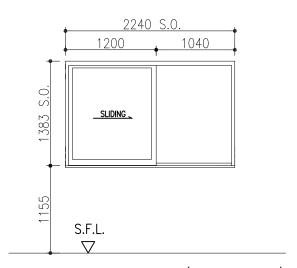
ELEVATION-BEDROOM (OUTER LAYER) SCALE 1:50(A3)



ELEVATION-BEDROOM (INNER LAYER) SCALE 1:50(A3)



ELEVATION-LIVING ROOM (OUTER LAYER) SCALE 1:50(A3)



ELEVATION-LIVING ROOM (INNER LAYER) SCALE 1:50(A3)

IFA(LZ) $-LIVING: 17.19m^2$ IFA(HZ)

 $-LIVING: 17.38m^2$ −BR1: $5.77m^2$

−BR1: $5.77m^2$

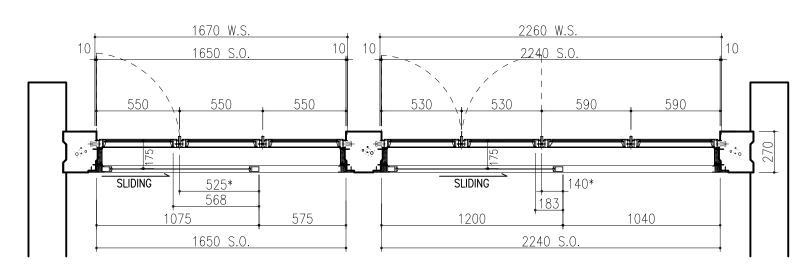
NOTE: ELEVATIONS VIEWED FROM INSIDE

- FIXED WINDOW

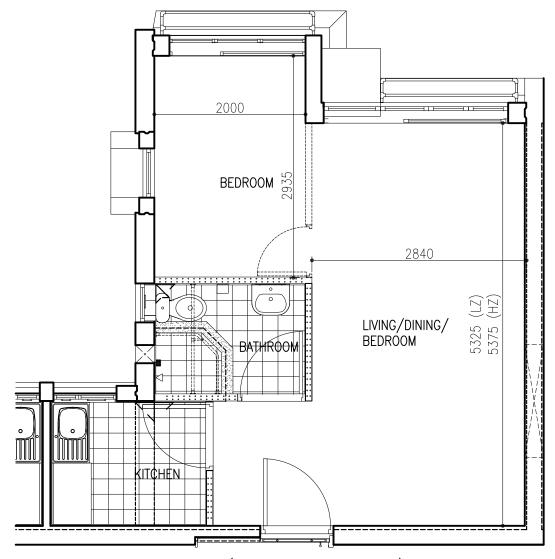
- SIDE HUNG WINDOW

STRUCTURAL OPENING

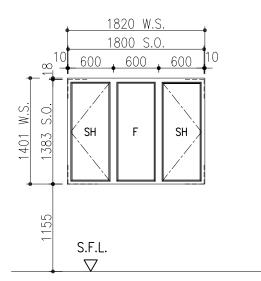
W.S. - WINDOW DIMENSION MODULAR FLAT WITH **ACOUSTIC WINDOW** TYPE C - 7 FLAT



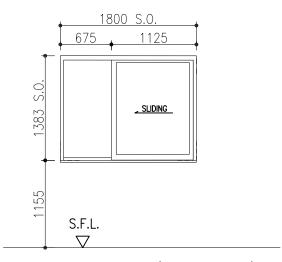
PART PLAN FOR ACOUSTIC WINDOW SCALE 1:25(A3)



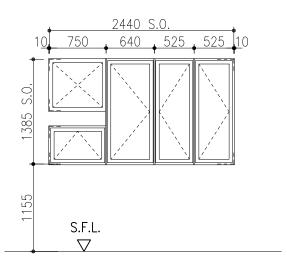
TYPE C-8 FLAT (WITH ACOUSTIC WINDOW) SCALE 1:50(A3)



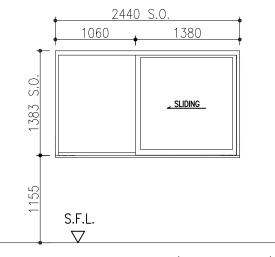
ELEVATION—BEDROOM (OUTER LAYER)
SCALE 1:50(A3)



ELEVATION—BEDROOM (INNER LAYER)
SCALE 1:50(A3)



ELEVATION—LIVING ROOM (OUTER LAYER)
SCALE 1:50(A3)



ELEVATION—LIVING ROOM (INNER LAYER)
SCALE 1:50(A3)

<u>IFA(LZ)</u>
-LIVING: 17.14m²
-BR1: 5.89m²

<u>IFA(HZ)</u>

-LIVING: 17.48m²
-BR1: 5.89m²

NOTE: ELEVATIONS VIEWED FROM INSIDE

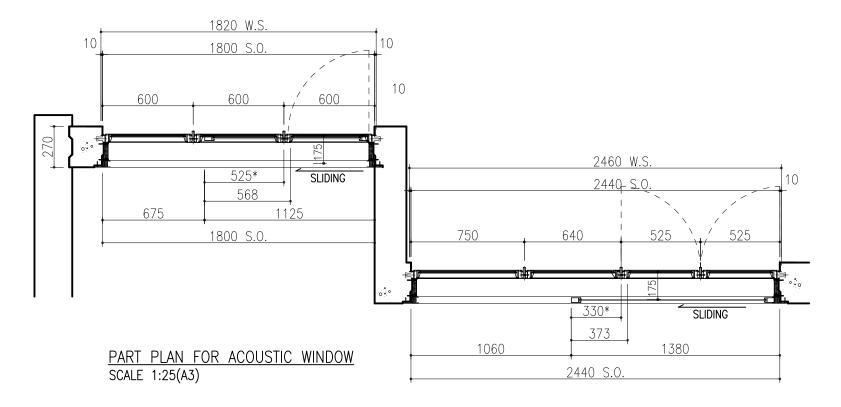
F — FIXED WINDOW

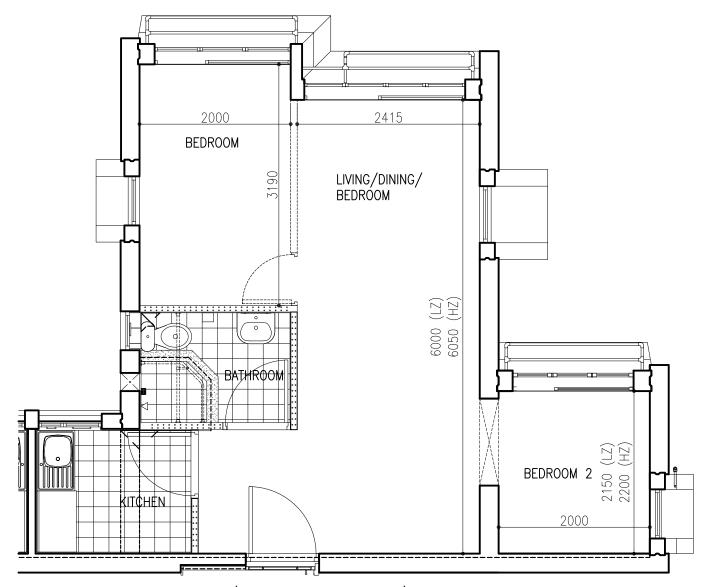
SH - SIDE HUNG WINDOW

S.O. - STRUCTURAL OPENING

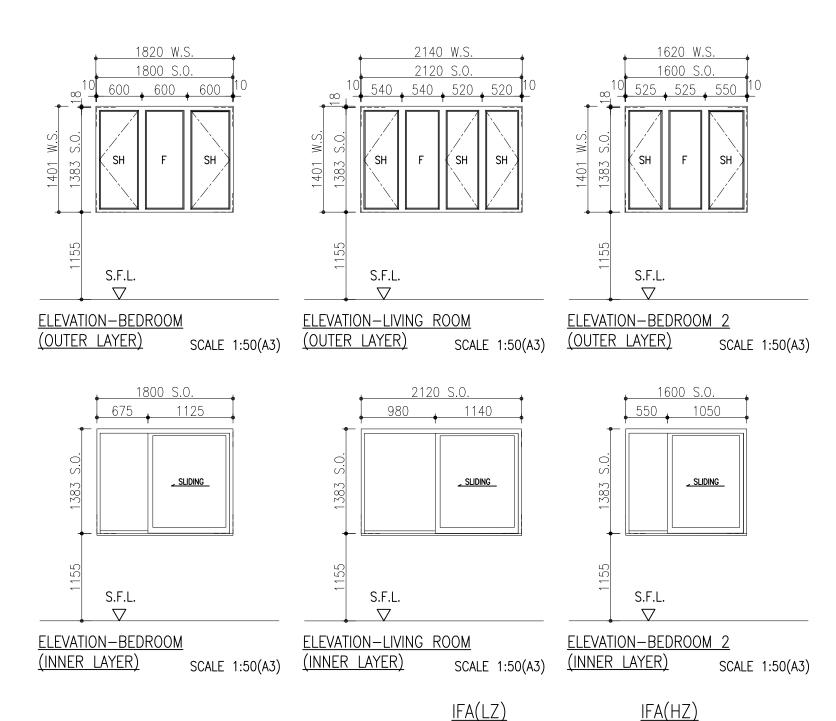
W.S. - WINDOW DIMENSION

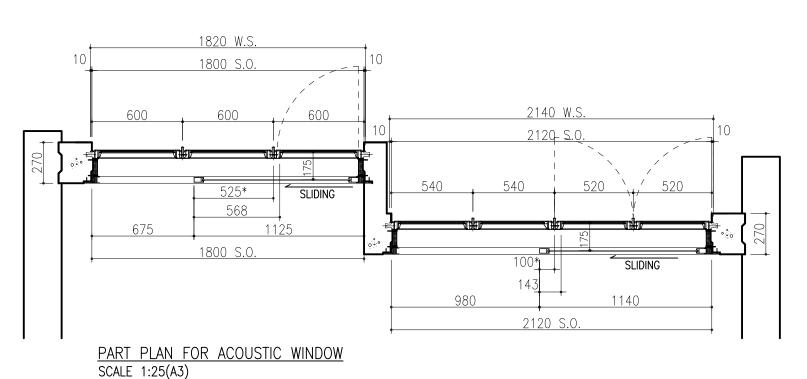
MODULAR FLAT WITH
ACOUSTIC WINDOW
TYPE C - 8 FLAT





TYPE D-6 FLAT (WITH ACOUSTIC WINDOW) SCALE 1:50(A3)





−BR2: 1620 W.S. 1600 S.O 500* SLIDING 543 1600 S.O. PART PLAN FOR ACOUSTIC WINDOW - BEDROOM 2

SCALE 1:25(A3)

NOTE: ELEVATIONS VIEWED FROM INSIDE

IFA(HZ)

−BR1:

−BR2:

-LIVING: 16.83m²

 6.38m^2

 4.59m^2

- FIXED WINDOW

 $-LIVING: 16.64m^2$

 $6.38m^2$

 4.49m^2

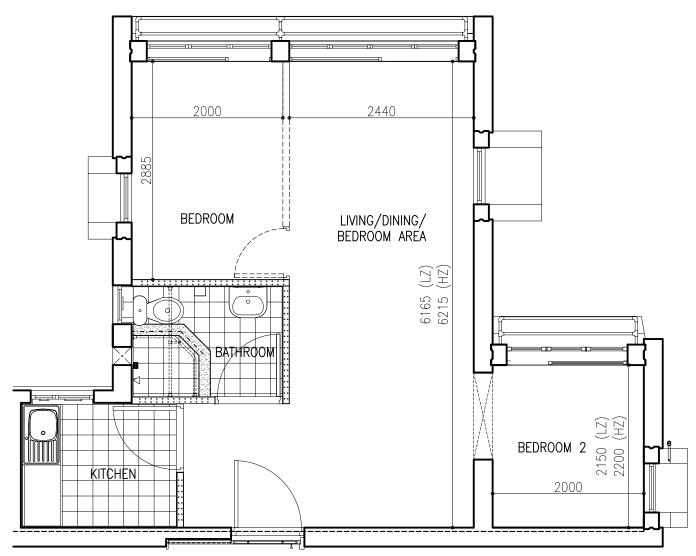
-BR1:

- SIDE HUNG WINDOW

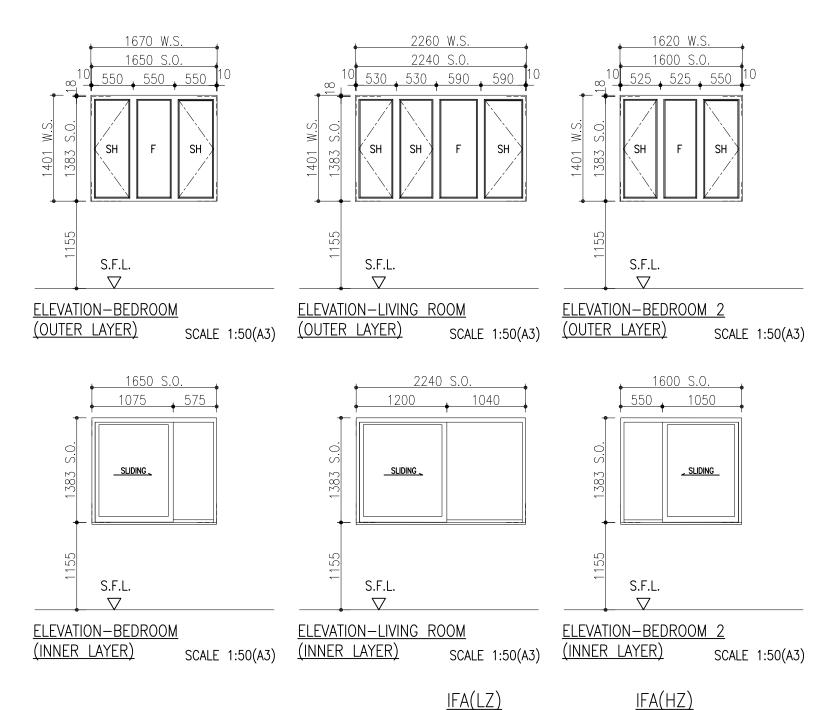
- STRUCTURAL OPENING

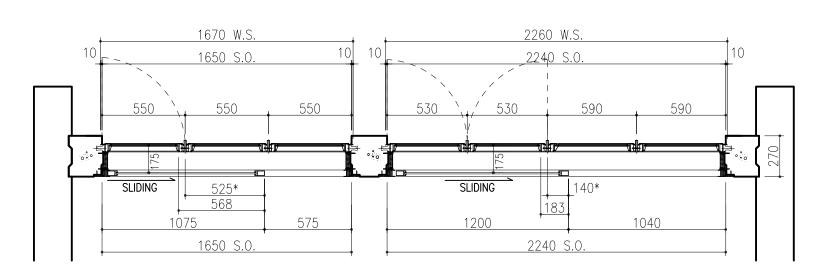
- WINDOW DIMENSION

MODULAR FLAT WITH **ACOUSTIC WINDOW** TYPE D - 6 FLAT

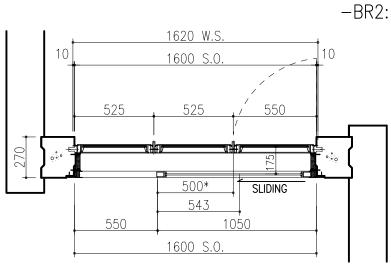


<u>TYPE D-7 FLAT (WITH ACOUSTIC WINDOW)</u> SCALE 1:50(A3)





PART PLAN FOR ACOUSTIC WINDOW SCALE 1:25(A3)



PART PLAN FOR ACOUSTIC WINDOW — BEDROOM 2 SCALE 1:25(A3) NOTE: ELEVATIONS VIEWED FROM INSIDE

−BR1:

−BR2:

-LIVING: 17.38m²

 $5.77m^2$

 4.59m^2

F - FIXED WINDOW

-LIVING: 17.19m²

 $5.77m^2$

 4.49m^2

−BR1:

SH - SIDE HUNG WINDOW

S.O. - STRUCTURAL OPENING

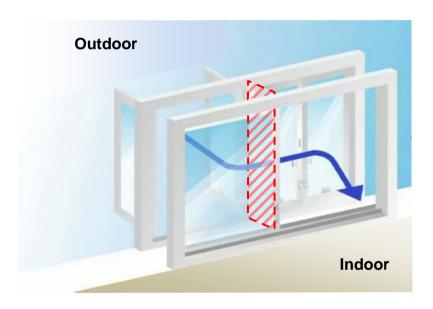
W.S. - WINDOW DIMENSION

MODULAR FLAT WITH ACOUSTIC WINDOW TYPE D - 7 FLAT

6. Acoustic Windows

6.1 For a primary or secondary opening with an acoustic "double glazing" window¹ comprising an outer openable window and an inner sliding glass panel designed for the dual purposes of natural ventilation under the B(P)Rs and noise reduction as shown in Diagrams H and I, the resultant opening after aligning the inner sliding glass panel with the outer openable window will be taken as its openable window area for the purposes of regulations 30 and 31 of the B(P)Rs and Part III of this Appendix.

Diagram H: Acoustic window designed for the dual purposes of natural ventilation under the B(P)R and noise reduction





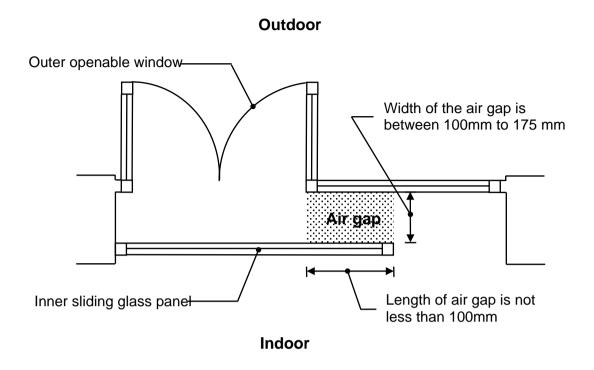
Wind direction



Cross-sectional area of the air gap

¹ This type of window has an inner sliding glass panel behind an outer window, both readily openable, for creating an air gap for the supply of fresh air with noise mitigation effect. For optimum performance, the air gap should have a length of not less than 100mm and a width between 100mm and 175mm, with the inner sliding glass panel in a closed position.

Diagram I: Air gap of an acoustic window



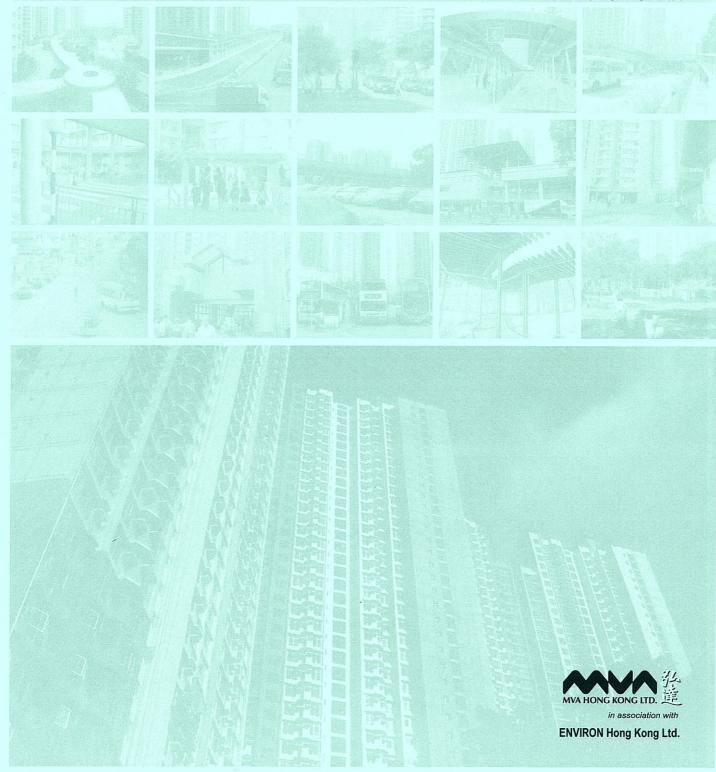
PLAN (NOT TO SCALE)

(Rev. 12/2016)

Annex L Extracted from Final Report of ADPEAW

Annex

Additional Study of Insertion Loss from Installation of Fin



1. Summary

The aim of this study is to estimate the additional insertion loss resulted from the installation of a fin on one side of the ventilation window of 1B flat for the Sun Po Kong (SPK) housing project.

2. Computation Setup

The present study was carried out using the finite element method and the wave equation solver implemented by the software COMSOL. A two-dimensional approach was adopted. In the computation, the planar sound waves incident at 45° to the normal of the ventilation window. All boundaries, except those representing the window, the building façade, the fin and the sound source, were set to "outgoing wave" condition. There were four cases, namely Case 0, 1, 2 and 3, in the computations. Case 0 represented the currently adopted window opening orientation. Case 1 was the situation where the outer opening of the ventilation window was put on the right hand side (viewed from inside of 1B flat), while the inner opening was on the left. This case was shown to be the "inefficient" window orientation in term of insertion loss. Case 2 represents the case with a fin 1.8 m long extruded out of the building façade on the right hand side of the ventilation window of Case 1. Case 3 was the case where the Case 0 ventilation window was used instead of the Case 1 one with the fin of Case 2 installed. Figure 1 gives the schematics of these four cases. Pure tone sounds at 500Hz and 1000Hz were considered.

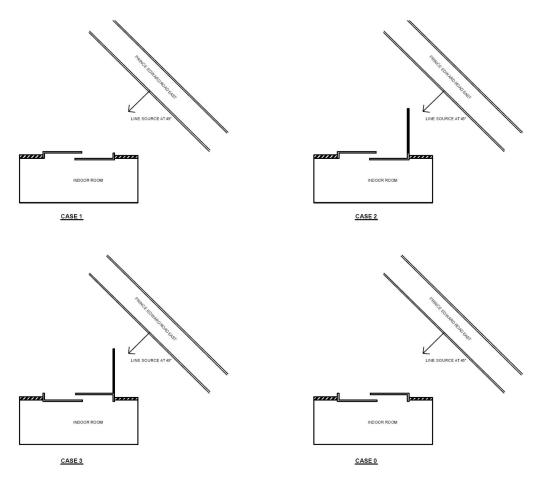


Figure 1 Schematics of the window-fin cases

3. Results and Discussions

The computed sound fields are presented in the Appendix. It can be observed that Case 2 is the best and Case 1 the worst in term of the sound insulation. Case 0, which is the currently adopted model, is taken as the reference in the discussion of the fin's effect. The reduction of the transmitted sound power reflects the effectiveness of the fin. The transmitted sound powers are obtained by integrating the sound intensity along the inner window opening. The corresponding results are tabulated in Table 1.

	Insertion 500Hz	Loss (dB) 1000Hz
Case 1	-0.9	-0.1
Case 2	14.1	17.6
Case 3	2.8	3.8

Table 1 : Insertion losses

A negative sign in Table 1 denotes higher transmitted power than the reference case. This happens in Case 1 as the orientation of the two window openings is to some extent favourable to sound propagation across the ventilation window. It should be noted that reflected sounds from nearby wings of the SPK project has not been taken into account.

Summary of Noise Attenuation Performance for MFD with Acoustic Window

	А	coustic Window	Configurations		Noise Atte	nuation dB(A)
Flat Type	Inner	Outer	Window	Gap Width	With	Without
	Window	Window	Overlapping	between	Sound	Sound
	Opening	Opening	Length	Window	Absorptive	Absorptive
	(mm)	(mm)	(mm)	Panel	Lining	Lining
				(mm)		
Type A-3 (1/2P)	1383mm (H) x 840mm (W)	1383mm (H) x 870mm (W)	340mm	175mm	7.0	5.8
Type B-5 (2/3P)	1383mm (H) x 940mm (W)	1383mm (H) x 1010mm (W)	200mm	175mm	6.6	5.5
Type C-6 (1B) & Type D-6 (28	3)				
Living Room	1383mm (H) x 980mm (W)	1383mm (H) x 1040mm (W)	100mm	175mm	7.0	5.5
Bedroom 1	1383mm (H) x 675mm (W)	1383mm (H) x 600mm (W)	525mm	175mm	7.0	5.5
Type C-7 (1B) & Type D-7 (28	3)				
Living	1383mm (H)	1383mm (H) x				
Room	x 1040mm	1060mm (W)	140mm	175mm		
	(W)	1060111111 (44)			6.9	5.4
Bedroom 1	1383mm (H) x 575mm (W)	1383mm (H) x 550mm (W)	525mm	175mm	6.9	5.4
Type C-8 (1B)					
Living	1383mm (H)	1383mm (H) x				
Room	x 1060mm (W)	1050mm (W)	330mm	175mm	7.1	5.6
Bedroom 1	1383mm (H)	1383mm (H) x	F35	175		
	x 675mm (W)	600mm (W)	525mm	175mm		
Type D-6 (2B) & Type D-7 (2	В)				
Bedroom 2	Bedroom 2 1383mm (H) x 550mm (W)		500mm	175mm	3.9	2.7

For the acoustic window configuration deviated from the above, further discussion with Environmental Protection Department (EPD) is required on project basis.

Appendix F

Predicted Road traffic Noise Results (Mitigated Scenario)



Mitigated Scenario (Implementation of fixed glazing)

Block A - Mitigated Scenario (Implementation of fixed glazing)

Block A	BA_1a	BA_1b	BA_1c	Max	BA_2a	BA_2b	BA_2c	BA_2d	Max	BA_3a	BA_3b	BA_3c	Max	BA_4a	BA_4b	BA_4c	BA_4d	Max	BA_5a	BA_5b	BA_5c	BA_5d	Max	BA_6a	BA_6b	BA_6c	Max	BA_7a	BA_7b	BA_7c	Max
G/F																															
1/F																															
2/F	55.5	59	58.8	59	52.2	59.4	59.4	59.4	59.4	56.8	59.9	59.7	59.9	55.3	60.1	60	59.9	60.1	61.5	69.1	68.9	67.6	69.1	61.6	69.2	69.2	69.2	61.3	69.4	69.2	69.4
3/F	56.4	59.3	59.1	59.3	53.1	59.7	59.8	59.8	59.8	58	60.2	60	60.2	56.6	60.4	60.4	60.3	60.4	63.2	69.2	69.1	67.9	69.2	63.3	69.4	69.3	69.4	63.1	69.5	69.4	69.5
4/F	56.5	59.3	59.2	59.3	53.2	59.7	59.8	59.9	59.9	58.1	60.2	60.1	60.2	56.7	60.4	60.4	60.4	60.4	63.1	69.2	69.1	67.8	69.2	63.3	69.4	69.3	69.4	63	69.5	69.4	69.5
5/F	56.4	59.3	59.1	59.3	53.2	59.7	59.8	59.8	59.8	58	60.2	60.1	60.2	56.7	60.4	60.3	60.3	60.4	63.1	69.2	69.1	67.8	69.2	63.2	69.3	69.3	69.3	62.9	69.4	69.3	69.4
6/F	56.5	59.3	59.1	59.3	53.2	59.7	59.7	59.8	59.8	58	60.2	60	60.2	56.6	60.4	60.3	60.3	60.4	63	69.1	69.1	67.7	69.1	63.2	69.3	69.2	69.3	62.8	69.3	69.2	69.3
7/F	56.5	59.3	59.1	59.3	53.5	59.7	59.7	59.8	59.8	57.9	60.1	60	60.1	56.7	60.3	60.3	60.3	60.3	62.9	69	69	67.6	69	63.1	69.2	69.2	69.2	62.8	69.2	69.2	69.2
8/F	56.5	59.3	59.1	59.3	53.5	59.6	59.7	59.8	59.8	57.8	60.1	60	60.1	56.6	60.3	60.3	60.2	60.3	62.8	69	68.9	67.6	69	63	69.1	69.1	69.1	62.7	69.2	69.1	69.2
9/F	56.5	59.2	59	59.2	53.7	59.6	59.7	59.8	59.8	57.7	60.1	59.9	60.1	56.6	60.2	60.2	60.2	60.2	62.7	68.9	68.8	67.5	68.9	62.9	69	69	69	62.6	69	69	69
10/F	56.5	59.2	59	59.2	53.8	59.5	59.6	59.7	59.7	57.6	60	59.9	60.0	56.6	60.2	60.2	60.1	60.2	62.6	68.8	68.7	67.4	68.8	62.8	68.9	68.9	68.9	62.5	68.9	68.9	68.9
11/F	56.5	59.1	59	59.1	53.9	59.5	59.6	59.7	59.7	57.5	60	59.8	60.0	56.5	60.1	60.1	60.1	60.1	62.5	68.7	68.6	67.3	68.7	62.6	68.8	68.8	68.8	62.4	68.8	68.8	68.8
12/F	56.5	59.1	58.9	59.1	53.8	59.5	59.5	59.6	59.6	57.4	59.9	59.8	59.9	56.4	60.1	60.1	60	60.1	62.4	68.6	68.5	67.2	68.6	62.5	68.7	68.7	68.7	62.3	68.7	68.7	68.7
13/F	56.4	59	58.8	59	53.8	59.4	59.5	59.6	59.6	57.3	59.8	59.7	59.8	56.3	60.1	60.1	60	60.1	62.3	68.5	68.4	67.1	68.5	62.4	68.6	68.6	68.6	62.1	68.6	68.6	68.6
14/F	56.4	58.9	58.7	58.9	53.9	59.3	59.4	59.5	59.5	57.2	59.7	59.7	59.7	56.2	60	60	59.9	60.0	62.2	68.4	68.3	67	68.4	62.3	68.5	68.5	68.5	62	68.5	68.4	68.5
15/F	56.3	58.8	58.6	58.8	53.8	59.2	59.3	59.4	59.4	57.1	59.6	59.6	59.6	56.2	59.9	59.9	59.8	59.9	62.1	68.2	68.2	66.9	68.2	62.2	68.4	68.4	68.4	61.9	68.4	68.3	68.4
16/F	56.3	58.7	58.6 58.5	58.7	53.8	59.2	59.3	59.4	59.4	57	59.6	59.5	59.6 59.5	56.1	59.8	59.8 59.8	59.8	59.8 59.8	62	68.1 68	68.1	66.8	68.1	62.1	68.3	68.2	68.3	61.8	68.3 68.2	68.2	68.3
17/F 18/F	56.2 56.1	58.7 58.6	58.4	58.7 58.6	53.8 53.7	59.1 59	59.2 59	59.2 59.1	59.2 59.1	56.9 56.8	59.5 59.4	59.4 59.3	59.4	55.9 55.8	59.7 59.7	59.8 59.7	59.7 59.6	59.7	61.8 61.7	68	68 67.9	66.7 66.6	68 68	62 61.9	68.1 68	68.1 68	68.1 68	61.7 61.5	68.1	68.1	68.2 68.1
19/F	56	58.5	58.3	58.5	53.6	58.9	58.9	59	59.1	56.7	59.4	59.2	59.3	55.7	59.6	59.6	59.5	59.6	61.6	67.8	67.8	66.5	67.8	61.8	68	67.9	68	61.5	67.9	67.9	67.9
20/F	55.9	58.4	58.2	58.4	53.5	58.8	58.8	58.9	58.9	56.6	59.2	59.1	59.2	55.6	59.5	59.5	59.4	59.5	61.5	67.7	67.7	66.4	67.7	61.7	67.9	67.8	67.9	61.4	67.9	67.8	67.9
21/F	55.8	58.3	58.1	58.3	53.4	58.6	58.7	58.8	58.8	56.5	59.1	59	59.1	55.5	59.4	59.4	59.3	59.4	61.4	67.6	67.6	66.2	67.6	61.6	67.7	67.7	67.7	61.3	67.7	67.7	67.7
22/F	55.7	58.2	58	58.2	53.3	58.5	58.6	58.7	58.7	56.4	59	58.9	59.0	55.4	59.3	59.3	59.2	59.3	61.3	67.6	67.5	66.2	67.6	61.5	67.6	67.6	67.6	61.1	67.6	67.6	67.6
23/F	55.6	58.1	57.9	58.1	53.2	58.4	58.5	58.6	58.6	56.3	58.9	58.8	58.9	55.3	59.2	59.2	59.1	59.2	61.2	67.5	67.4	66.1	67.5	61.3	67.5	67.5	67.5	61	67.5	67.5	67.5
24/F	55.5	58	57.8	58	53.1	58.3	58.4	58.5	58.5	56.2	58.8	58.7	58.8	55.2	59.1	59.1	59	59.1	61	67.4	67.3	66	67.4	61.2	67.5	67.4	67.5	61	67.4	67.4	67.4
25/F	55.4	57.9	57.7	57.9	53	58.2	58.3	58.4	58.4	56.1	58.6	58.6	58.6	55.1	58.9	58.9	58.9	58.9	61	67.3	67.2	65.9	67.3	61.1	67.3	67.3	67.3	60.9	67.3	67.3	67.3
26/F	55.3	57.8	57.6	57.8	52.9	58.1	58.2	58.3	58.3	56	58.5	58.5	58.5	55	58.8	58.8	58.8	58.8	60.9	67.1	67.1	65.8	67.1	61	67.2	67.2	67.2	60.8	67.2	67.2	67.2
27/F	55.2	57.7	57.5	57.7	52.8	58.1	58.1	58.2	58.2	55.9	58.4	58.4	58.4	54.9	58.7	58.7	58.7	58.7	60.8	67.1	67	65.7	67.1	60.9	67.1	67.1	67.1	60.7	67.1	67.1	67.1
28/F	55.1	57.6	57.4	57.6	52.7	58	58	58.1	58.1	55.8	58.3	58.3	58.3	54.8	58.6	58.6	58.6	58.6	60.7	67	66.9	65.6	67	60.8	67.1	67	67.1	60.6	67	67	67
29/F	55	57.5	57.3	57.5	52.6	57.9	57.9	58	58	55.7	58.3	58.2	58.3	54.7	58.5	58.5	58.5	58.5	60.6	66.9	66.9	65.5	66.9	60.8	67	66.9	67	60.5	66.9	66.9	66.9

* Note:

Block A - Mitigated Scenario (Implementation of fixed glazing)

Block A	BA_8a	BA_8b	BA_8c	Max	BA_9a	BA_9b	Max	BA_10a	BA_10b	Max	BA_11a	BA_11b	BA_11c	Max	BA_12a	BA_12b	BA_12c	BA_12d	Max	BA_13a	BA_13b	BA_13c	Max	BA_14a	BA_14b	BA_14c	BA_14d	Max	BA_15a	BA_15b	Max
G/F																															
1/F																															
2/F	61.9	69.5	69.6	69.6	66.4	69.6	69.6	68.5	69.8	69.8	64.5	70.5	69.5	70.5	62.7	70.8	70.7	70.6	70.8	64.1	68.1	67.9	68.1	66.9	67.8	62.6	63.6	67.8	62	69.2	69.2
3/F	63.5	69.6	69.7	69.7	67.9	69.7	69.7	69.1	70.1	70.1	65.8	70.6	70.2	70.6	64.6	71.3	71.6	72.1	72.1	66.9	70.1	71.5	71.5	69.1	69.7	65.9	67.6	69.7	67.1	70.6	70.6
4/F	63.4	69.6	69.6	69.6	67.9	69.6	69.6	69	70	70.0	65.7	70.5	70.1	70.5	64.5	71.3	71.6	71.9	71.9	66.9	70.6	71.6	71.6	69.3	69.8	65.9	68.6	69.8	67.2	70.5	70.5
5/F	63.3	69.5	69.5	69.5	67.8	69.5	69.5	68.9	69.9	69.9	65.6	70.5	69.9	70.5	64.3	71.2	71.5	71.7	71.7	66.7	70.7	71.3	71.3	69.2	69.7	65.7	68.6	69.7	66.9	70.3	70.3
6/F	63.3	69.4	69.4	69.4	67.7	69.5	69.5	68.8	69.8	69.8	65.5	70.3	69.8	70.3	64.2	71.1	71.2	71.4	71.4	66.5	70.5	71	71	69.1	69.7	65.6	68.4	69.7	66.8	70.1	70.1
//F	63.2	69.3	69.3	69.3 69.2	67.6	69.4	69.4 69.3	68.7	69.7	69.7 69.6	65.3	70.2	69.6	70.2 70	64.1	70.9	71	71.1	71.1 70.8	66.3	70.3	70.6	70.6	68.9	69.6	65.4	68.3	69.6	66.6	69.9	69.9
8/F 9/F	63.1 63	69.2 69.1	69.2	69.1	67.5 67.3	69.3 69.2	69.2	68.6 68.5	69.6 69.5	69.5	65.2	70 69.8	69.5 69.3	69.8	64 63.8	70.6	70.8 70.6	70.8 70.6	70.6	66.1 65.9	70 60.7	70.3 70.1	70.3 70.1	68.8	69.4 69.2	65.2 65	68.2 68.1	69.4	66.5 66.4	69.8 69.6	69.8 69.6
10/F	62.9	69.1	69.1 69	69.0	67.2	69.2	69.1	68.3	69.3	69.3	65 64.9	69.7	69.3	69.7	63.7	70.5 70.2	70.8	70.8	70.3	65.7	69.7 69.5	69.8	69.8	68.6 68.4	69.2	64.8	67.9	69.2 69	66.2	69.5	69.5
10/1 11/F	62.8	68.9	68.9	68.9	67.1	68.9	68.9	68.2	69.2	69.2	64.8	69.5	69	69.5	63.6	70.2	70.3	70.3	70.3	65.6	69.2	69.5	69.5	68.3	68.8	64.7	67.7	68.8	66	69.2	69.2
12/F	62.7	68.8	68.8	68.8	66.9	68.8	68.8	68.1	69	69.0	64.7	69.3	68.9	69.3	63.4	69.9	69.9	69.9	69.9	65.4	69	69.3	69.3	68.1	68.6	64.5	67.6	68.6	65.8	69.1	69.1
13/F	62.5	68.7	68.7	68.7	66.8	68.7	68.7	68	68.9	68.9	64.5	69.1	68.7	69.1	63.3	69.7	69.8	69.7	69.8	65.3	68.8	69.1	69.1	67.9	68.4	64.4	67.4	68.4	65.6	68.9	68.9
14/F	62.4	68.6	68.6	68.6	66.7	68.6	68.6	67.8	68.8	68.8	64.3	69	68.6	69	63.1	69.5	69.6	69.5	69.6	65.1	68.7	68.9	68.9	67.7	68.2	64.3	67.3	68.2	65.5	68.7	68.7
15/F	62.3	68.4	68.5	68.5	66.5	68.5	68.5	67.7	68.6	68.6	64.2	68.8	68.4	68.8	63	69.4	69.4	69.3	69.4	65	68.5	68.7	68.7	67.6	68	64.1	67.1	68	65.3	68.5	68.5
16/F	62.2	68.3	68.4	68.4	66.4	68.3	68.3	67.6	68.5	68.5	64.1	68.7	68.3	68.7	62.9	69.2	69.2	69.1	69.2	64.8	68.3	68.5	68.5	67.4	67.8	64	67	67.8	65.1	68.3	68.3
17/F	62.1	68.2	68.2	68.2	66.3	68.2	68.2	67.4	68.3	68.3	63.9	68.5	68.1	68.5	62.7	69	69.1	68.9	69.1	64.7	68.1	68.3	68.3	67.2	67.6	63.9	66.8	67.6	64.9	68.2	68.2
18/F	62	68.1	68.1	68.1	66.1	68.1	68.1	67.3	68.2	68.2	63.8	68.4	68	68.4	62.6	68.9	68.9	68.8	68.9	64.6	67.9	68.1	68.1	67.1	67.5	63.8	66.6	67.5	64.7	68	68
19/F	61.9	68	68	68.0	66	68	68	67.2	68.1	68.1	63.7	68.2	67.9	68.2	62.5	68.7	68.8	68.6	68.8	64.4	67.7	67.9	67.9	66.9	67.3	63.6	66.5	67.3	64.5	67.9	67.9
20/F	61.8	67.9	67.9	67.9	65.9	67.8	67.8	67.1	67.9	67.9	63.5	68.1	67.7	68.1	62.3	68.6	68.6	68.4	68.6	64.3	67.6	67.8	67.8	66.7	67.2	63.5	66.4	67.2	64.4	67.7	67.7
21/F	61.7	67.8	67.8	67.8	65.7	67.7	67.7	67	67.8	67.8	63.4	68	67.6	68	62.2	68.4	68.5	68.3	68.5	64.1	67.4	67.6	67.6	66.6	67	63.4	66.2	67	64.2	67.6	67.6
22/F	61.5	67.6	67.6	67.6	65.6	67.6	67.6	66.8	67.7	67.7	63.3	67.8	67.5	67.8	62.1	68.3	68.3	68.1	68.3	64	67.3	67.4	67.4	66.5	66.8	63.2	66.1	66.8	64.1	67.4	67.4
23/F	61.4	67.5	67.5	67.5	65.5	67.5	67.5	66.7	67.6	67.6	63.2	67.7	67.3	67.7	62	68.2	68.2	68	68.2	63.9	67.1	67.3	67.3	66.3	66.7	63.1	65.9	66.7	63.9	67.2	67.2
24/F	61.3	67.4	67.4	67.4	65.4	67.4	67.4	66.6	67.5	67.5	63	67.6	67.2	67.6	61.8	68	68.1	67.8	68.1	63.7	67	67.2	67.2	66.2	66.6	63	65.8	66.6	63.8	67.1	67.1
25/F	61.2	67.3	67.3	67.3	65.3	67.3	67.3	66.5	67.4	67.4	62.9	67.5	67.1	67.5	61.7	67.9	67.9	67.7	67.9	63.6	66.8	67	67	66	66.4	62.9	65.7	66.4	63.6	67	67
26/F	61.1	67.2	67.2	67.2	65.1	67.2	67.2	66.4	67.2	67.2	62.8	67.3	67	67.3	61.6	67.8	67.8	67.6	67.8	63.5	66.7	66.9	66.9	65.9	66.3	62.8	65.5	66.3	63.5	66.9	66.9
27/F	61.1	67.1	67.1	67.1	65	67.1	67.1	66.3	67.1	67.1	62.7	67.2	66.9	67.2	61.5	67.7	67.7	67.5	67.7	63.4	66.6	66.7	66.7	65.8	66.2	62.7	65.4	66.2	63.4	66.7	66.7
28/F	61	67	67	67.0	64.9	67	67	66.2	67	67.0	62.6	67.1	66.8	67.1	61.4	67.6	67.6	67.4	67.6	63.3	66.5	66.6	66.6	65.7	66	62.6	65.3	66	63.2	66.6	66.6
29/F	60.9	66.9	66.9	66.9	64.9	66.9	66.9	66.1	66.9	66.9	62.5	67	66.7	67	61.3	67.5	67.6	67.3	67.6	63.2	66.3	66.5	66.5	65.6	65.9	62.4	65.2	65.9	63.2	66.5	66.5

* Note

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Block A - Mitigated Scenario (Implementation of fixed glazing)

Block A	BA_16a	BA_16b	BA_16c	Max	BA_17a	BA_17b	BA_17c	Max	BA_18a	BA_18b	BA_18c	Max	BA_19a	BA_19b	BA_19c	BA_19d	BA_19e	Max	BA_20a	BA_20b	BA_20c	BA_20d	BA_20e	Max	BA_21a	BA_21b	BA_21c	BA_21d	Max
G/F																													
1/F											_								_										
2/F	60.2	70.2	67.8	70.2	62.3	70.9	68.4	70.9	62.2	71.5	68.9	71.5	60.6	71.8	69.8	70		71.8	56.7	63.4	62.9	64.2		64.2	58.2	62.2	61.2	60.5	62.2
3/F	67.1	71.3	70.8	71.3	68.1	71.9	71.6	71.9	67.5	72.8	72.0	72.8	66.8	73.2	73.1	73.5		73.5	57	63.9	64.9	66.6	Fixed	66.6	59.4	62.7	62.1	61.6	62.7
4/F	67.5	71.2	70.7	71.2	68.2	71.7	71.6	71.7	68.2	72.6	72.0	72.6	68	73.2	73.3	73.5		73.5	56.8	64.2	65.1	66.5	Window	66.5	59.3	62.7	62.2	61.7	62.7
5/F	67.3	71	70.6	71	68	71.5	71.5	71.5	68.1	72.4	71.9	72.4	68	73.0	73.0	73.2	Fixed	73.2	56.7	64.1	64.9	66.2	Williadw	66.2	59	62.7	62.2	61.7	62.7
6/F	67	70.8	70.4	70.8	67.7	71.3	71.2	71.3	67.9	72.2	71.7	72.2	67.7	72.7	72.7	72.9	Window	72.9	56.5	63.9	64.7	65.9		65.9	58.9	62.5	62.1	61.6	62.5
7/F	66.8	70.6	70.2	70.6	67.4	71.1	71	71.1	67.5	71.9	71.4	71.9	67.4	72.4	72.4	72.6		72.6	56.3	63.7	64.4	65.6	70.4	65.6	58.6	62.4	62	61.5	62.4
8/F	66.5	70.4	70.1	70.4	67.2	70.9	70.8	70.9	67.2	71.6	71.2	71.6	67.1	72.1	72.1	72.2		72.2	56.1	63.4	64.1	65.3	70.1	70.1	58.4	62.2	61.9	61.4	62.2
9/F	66.3	70.2	69.9	70.2	66.9	70.7	70.6	70.7	67	71.4	70.9	71.4	66.8	71.8	71.9	72		72.0	55.9	63.2	63.8	65	69.8	69.8	58.2	62	61.7	61.2	62.0
10/F	66.1	70	69.7	70	66.7	70.5	70.3	70.5	66.7	71.1	70.7	71.1	66.5	71.6	71.6	71.7	70.4	71.7	55.7	62.9	63.6	64.8	69.6	69.6	58	61.8	61.5	61.1	61.8
11/F	65.8	69.8	69.5	69.8	66.5	70.3	70.1	70.3	66.5	70.9	70.4	70.9	66.3	71.3	71.3	71.4	70.1	71.4	55.5	62.7	63.4	64.5	69.3	69.3	57.9	61.6	61.4	60.9	61.6
12/F	65.6	69.7	69.3	69.7	66.2	70	69.9	70	66.2	70.7	70.2	70.7	66	71.1	71.1	71.2	69.8	71.2	55.4	62.5	63.1	64.3	69.1	69.1	57.7	61.4	61.2	60.7	61.4
13/F	65.4	69.4	69.1	69.4	66	69.9	69.7	69.9	66	70.4	70	70.4	65.8	70.9	70.9	70.9	69.6	70.9	55.2	62.3	62.9	64	68.8	68.8	57.5	61.2	61	60.5	61.2
14/F	65.2	69.2	69	69.2	65.8	69.7	69.5	69.7	65.8	70.2	69.8	70.2	65.6	70.6	70.6	70.7	69.4	70.7	55.1	62.1	62.7	63.8	68.6	68.6	57.3	61	60.9	60.4	61.0
15/F	64.9	69.1	68.8	69.1	65.6	69.5	69.3	69.5	65.6	70.0	69.6	70	65.4	70.4	70.4	70.5	69.2	70.5	54.9	61.9	62.5	63.6	68.4	68.4	57.2	60.9	60.7	60.2	60.9
16/F	64.7	68.9	68.6	68.9	65.4	69.3	69.1	69.3	65.4	69.8	69.4	69.8	65.2	70.2	70.2	70.3 70.1	69 68.8	70.3 70.1	54.7	61.7	62.3	63.4	68.2	68.2	57	60.7	60.5	60.1	60.7
17/F	64.6 64.4	68.7	68.4 68.3	68.7 68.5	65.2 65	69.1	68.9	69.1 68.9	65.2 65	69.6 69.4	69.2	69.6 69.4	65 64.8	70.0 69.8	70 69.8	69.9	68.8 68.6	69.9	54.6 54.5	61.5 61.3	62.1 61.9	63.2 63	68 67.8	68.0 67.8	56.8 56.7	60.5 60.3	60.3 60.2	59.9 59.7	60.5 60.3
18/F 19/F	64.2	68.5 68.4	68.1	68.4	64.8	68.9 68.8	68.8 68.6	68.8	64.8	69.2	69 68.9	69.2	64.6	69.7	69.7	69.7	68.4	69.7	54.3	61.2	61.7	62.8	67.6	67.6	56.5	60.2	60.2	59.6	60.2
20/F	64	68.2	67.9	68.2	64.6	68.6	68.4	68.6	64.6	69.1	68.7	69.1	64.4	69.5	69.5	69.5	68.2	69.5	54.2	61.0	61.6	62.7	67.5	67.5	56.4	60	59.9	59.4	60.0
21/F	63.9	68.1	67.8	68.1	64.5	68.4	68.3	68.4	64.4	68.9	68.5	68.9	64.2	69.3	69.3	69.4	68.1	69.4	54	60.8	61.4	62.5	67.3	67.3	56.2	59.9	59.7	59.3	59.9
22/F	63.7	67.9	67.6	67.9	64.3	68.3	68.1	68.3	64.3	68.8	68.4	68.8	64.1	69.1	69.1	69.2	67.9	69.2	53.9	60.7	61.3	62.3	67.1	67.1	56.1	59.7	59.6	59.2	59.7
23/F	63.6	67.8	67.5	67.8	64.2	68.1	68	68.1	64.1	68.6	68.2	68.6	63.9	69.0	69	69	67.7	69.0	53.8	60.5	61.1	62.2	67	67.0	55.9	59.6	59.5	59	59.6
24/F	63.4	67.6	67.3	67.6	64	68	67.8	68	64	68.5	68.1	68.5	63.8	68.8	68.8	68.9	67.6	68.9	53.6	60.4	60.9	62	66.8	66.8	55.8	59.5	59.3	58.9	59.5
25/F	63.3	67.5	67.2	67.5	63.9	67.8	67.7	67.8	63.8	68.3	67.9	68.3	63.6	68.7	68.7	68.7	67.4	68.7	53.5	60.2	60.8	61.9	66.7	66.7	55.7	59.3	59.2	58.8	59.3
26/F	63.2	67.3	67.1	67.3	63.7	67.7	67.5	67.7	63.7	68.2	67.8	68.2	63.5	68.5	68.5	68.6	67.3	68.6	53.4	60.1	60.6	61.7	66.5	66.5	55.5	59.2	59	58.6	59.2
27/F	63	67.3	66.9	67.3	63.6	67.6	67.4	67.6	63.5	68.0	67.6	68	63.3	68.4	68.4	68.5	67.1	68.5	53.3	60.0	60.5	61.6	66.4	66.4	55.4	59.1	58.9	58.5	59.1
28/F	62.9	67.1	66.8	67.1	63.5	67.5	67.3	67.5	63.4	67.9	67.5	67.9	63.2	68.3	68.3	68.3	67	68.3	53.2	59.8	60.4	61.5	66.3	66.3	55.3	58.9	58.8	58.4	58.9
29/F	62.8	67	66.7	67	63.4	67.3	67.2	67.3	63.3	67.8	67.4	67.8	63	68.2	68.1	68.2	66.9	68.2	53	59.7	60.3	61.4	66.1	66.1	55.2	58.8	58.7	58.3	58.8

* Note:

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Block A - Mitigated Scenario (Implementation of fixed glazing)

Block A	BA_22a	BA_22b	BA_22c	Max	BA_23a	BA_23b	BA_23c	Max	BA_24a	BA_24b	BA_24c	Max
G/F												
1/F												
2/F	50.7	60.9	60.7	60.9	56.5	60.4	59.8	60.4	27.5	59.4	59.4	59.4
3/F	50.8	61.2	61.3	61.3	57.1	60.6	60.2	60.6	27.5	59.7	59.9	59.9
4/F	50.7	61.2	61.4	61.4	57	60.5	60.2	60.5	27.5	59.7	59.9	59.9
5/F	50.6	61.2	61.5	61.5	56.9	60.5	60.2	60.5	27.5	59.7	59.9	59.9
6/F	50.5	61.2	61.4	61.4	56.8	60.6	60.2	60.6	27.4	59.6	59.9	59.9
7/F	50.4	61.2	61.4	61.4	56.7	60.5	60.2	60.5	27.4	59.6	59.9	59.9
8/F	50.3	61.1	61.3	61.3	56.6	60.5	60.1	60.5	27.4	59.6	59.8	59.8
9/F	50.2	61	61.2	61.2	56.4	60.4	60.1	60.4	27.4	59.6	59.8	59.8
10/F	50.1	60.9	61.1	61.1	56.3	60.3	60	60.3	27.3	59.5	59.7	59.7
11/F	50	60.8	60.9	60.9	56.2	60.2	59.9	60.2	27.3	59.4	59.6	59.6
12/F	49.9	60.6	60.8	60.8	56.1	60.1	59.8	60.1	27.3	59.3	59.5	59.5
13/F	49.8	60.5	60.6	60.6	55.9	60	59.7	60	27.3	59.3	59.4	59.4
14/F	49.7	60.4	60.4	60.4	55.8	59.9	59.5	59.9	27.3	59.2	59.4	59.4
15/F	49.7	60.2	60.3	60.3	55.7	59.7	59.5	59.7	27.3	59.1	59.2	59.2
16/F	49.6	60.1	60.2	60.2	55.6	59.6	59.3	59.6	27.3	59	59.1	59.1
17/F	49.5	59.9	60	60	55.5	59.5	59.2	59.5	27.3	58.9	59	59
18/F	49.4	59.8	59.8	59.8	55.3	59.4	59.1	59.4	27.2	58.8	58.9	58.9
19/F	49.3	59.6	59.7	59.7	55.2	59.2	59	59.2	27.2	58.7	58.8	58.8
20/F	49.2	59.5	59.6	59.6	55.1	59.1	58.8	59.1	27.2	58.6	58.7	58.7
21/F	49.1	59.4	59.4	59.4	54.9	59	58.7	59	27.2	58.4	58.5	58.5
22/F	49	59.2	59.3	59.3	54.8	58.8	58.6	58.8	27	58.3	58.4	58.4
23/F	48.9	59.1	59.2	59.2	54.7	58.7	58.5	58.7	27.4	58.2	58.3	58.3
24/F	48.8	59	59	59	54.6	58.6	58.4	58.6	27.9	58.1	58.2	58.2
25/F	48.7	58.8	58.9	58.9	54.5	58.5	58.2	58.5	28.5	58	58.1	58.1
26/F	48.6	58.7	58.8	58.8	54.3	58.4	58.1	58.4	29.1	57.9	58	58
27/F	48.5	58.6	58.6	58.6	54.2	58.3	58	58.3	30.2	57.8	57.9	57.9
28/F	48.4	58.5	58.5	58.5	54.1	58.1	57.9	58.1	31.7	57.7	57.8	57.8
29/F	48.4	58.4	58.4	58.4	54.1	58	57.8	58	35.5	57.6	57.7	57.7

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Block B - Mitigated Scenario (Implementation of fixed glazing)

Block B	BB_1a	BB_1b	BB_1c	Max	BB_2a	BB_2b	BB_2c	BB_2d	Max	BB_3a	BB_3b	BB_3c	Max	BB_4a	BB_4b	BB_4c	BB_4d	Max	BB_5a	BB_5b	BB_5c	BB_5d	Max	BB_6a	BB_6b	BB_6c	Max	BB_7a	BB_7b	BB_7c	Max
G/F																															
1/F																															
2/F	55.4	56.5	55.9	56.5	55.4	56.8	56.9	56.5	56.9	54.1	57.6	56.9	57.6	54.6	60.8	62	63.1	63.1	63.2	70.7	70.6	69.8	70.7	63.9	70.2	69.4	70.2	62.3	45.2	45.6	62.3
3/F	56.1	56.5	56.1	56.5	56.1	57	57.1	56.6	57.1	55.2	58.3	57.3	58.3	55.8	61.6	62.6	63.4	63.4	65.3	70.7	70.7	70.4	70.7	65.8	70.3	69.7	70.3	64.3	45.1	45.6	64.3
4/F	56	56.5 56.5	56 55.0	56.5 56.5	56 55.9	57 57	57.1 57	56.6 56.5	57.1 57	55.1	58.3 58.2	57.3 57.2	58.3 58.2	55.7	61.6 61.5	62.5 62.5	63.3 63.2	63.3 63.2	65.2	70.6	70.7	70.3 70.2	70.7	65.7	70.2 70.1	69.7 69.6	70.2	64.2	45.2 45.3	45.5 45.5	64.2
5/F 6/E	55.9 55.9	56.4	55.9 55.8	56.4	55.9 55.8	56.9	56.9	56.4	56.9	55 54.9	58.2	57.2 57.1	58.2	55.6 55.5	61.4	62.4	63.2	63.2	65.1 65	70.5 70.4	70.6	70.2	70.6 70.5	65.7	70.1	69.5	70.1 70	64.1 64	45.3 45.4	45.5 45.5	64.1
0/1 7/F	55.8	56.3	55.7	56.3	55.8	56.8	56.8	56.3	56.8	54.8	58.1	57.1	58.1	55.4	61.4	62.3	63.1	63.1	64.9	70.4	70.5 70.3	70.1 70	70.3	65.6 65.5	69.9	69.4	69.9	63.9	45.4	45.4	63.9
8/F	55.7	56.2	55.6	56.2	55.7	56.7	56.8	56.2	56.8	54.7	58	57	58.0	55.3	61.3	62.2	63	63.0	64.8	70.2	70.2	69.9	70.2	65.4	69.8	69.3	69.8	63.8	45.5	45.4	63.8
9/F	55.6	56.1	55.5	56.1	55.6	56.6	56.7	56.1	56.7	54.6	57.9	56.9	57.9	55.2	61.2	62.1	62.9	62.9	64.6	70.1	70.1	69.8	70.1	65.3	69.7	69.2	69.7	63.7	45.5	45.4	63.7
10/F	55.5	56	55.4	56	55.5	56.5	56.6	56	56.6	54.5	57.9	56.8	57.9	55.1	61.1	62	62.8	62.8	64.5	70	70	69.7	70	65.2	69.6	69.1	69.6	63.6	45.4	45.3	63.6
11/F	55.4	55.9	55.3	55.9	55.4	56.4	56.5	55.9	56.5	54.4	57.8	56.8	57.8	55	61	61.9	62.7	62.7	64.4	69.8	69.9	69.6	69.9	65.1	69.5	69	69.5	63.5	45.4	45.3	63.5
12/F	55.3	55.9	55.3	55.9	55.3	56.3	56.4	55.8	56.4	54.3	57.7	56.7	57.7	54.9	60.9	61.8	62.6	62.6	64.3	69.7	69.8	69.4	69.8	64.9	69.4	68.9	69.4	63.4	45.4	45.3	63.4
13/F	55.2	55.8	55.2	55.8	55.2	56.3	56.3	55.7	56.3	54.2	57.7	56.6	57.7	54.8	60.8	61.7	62.5	62.5	64.2	69.6	69.7	69.3	69.7	64.8	69.2	68.8	69.2	63.2	45.4	45.3	63.2
14/F	55.2	55.8	55.2	55.8	55.2	56.2	56.3	55.7	56.3	54	57.6	56.6	57.6	54.7	60.7	61.6	62.4	62.4	64.1	69.5	69.6	69.2	69.6	64.8	69.1	68.6	69.1	63.2	45.4	45.2	63.2
15/F	55.1	55.7	55.1	55.7	55.1	56.2	56.2	55.6	56.2	53.9	57.6	56.5	57.6	54.6	60.6	61.5	62.3	62.3	63.9	69.4	69.4	69.1	69.4	64.6	69	68.5	69	63	45.3	45.2	63
16/F	55	55.6	55	55.6	55	56.1	56.2	55.6	56.2	53.8	57.5	56.5	57.5	54.5	60.6	61.5	62.2	62.2	63.8	69.3	69.3	69	69.3	64.5	68.9	68.4	68.9	62.9	45.3	45.2	62.9
17/F	55	55.5	54.9	55.5	54.9	56	56.1	55.5	56.1	53.7	57.5	56.4	57.5	54.4	60.5	61.4	62.1	62.1	63.6	69.1	69.2	68.9	69.2	64.4	68.8	68.3	68.8	62.8	45.3	45.1	62.8
18/F	54.9	55.4	54.8	55.4	54.9	55.9	56	55.4	56	53.6	57.4	56.3	57.4	54.2	60.4	61.3	62.1	62.1	63.5	69	69.1	68.8	69.1	64.3	68.7	68.2	68.7	62.7	45.3	45.1	62.7
19/F	54.8	55.3	54.7	55.3	54.8	55.8	55.9	55.3	55.9	53.5	57.3	56.3	57.3	54.2	60.3	61.2	62	62.0	63.4	68.9	69	68.7	69	64.2	68.6	68.1	68.6	62.5	45.2	45.1	62.5
20/F	54.7	55.2	54.6	55.2	54.7	55.8	55.8	55.2	55.8	53.4	57.2	56.2	57.2	54	60.2	61.1	61.9	61.9	63.3	68.8	68.9	68.5	68.9	64.1	68.5	68	68.5	62.4	45.2	45.1	62.4
21/F	54.6	55.2	54.5	55.2	54.5	55.7	55.7	55.2	55.7	53.3	57.2	56.1	57.2	53.9	60.2	61	61.8	61.8	63.2	68.7	68.8	68.4	68.8	64	68.4	67.9	68.4	62.3	45.2	45	62.3
22/F	54.5	55.1	54.4	55.1	54.4	55.6	55.7	55.1	55.7	53.2	57.1	56.1	57.1	53.8	60.1	61	61.7	61.7	63.1	68.6	68.7	68.4	68.7	63.9	68.3	67.8	68.3	62.2	45.2	45	62.2
23/F	54.4	55	54.4	55	54.4	55.5	55.6	55	55.6	53.1	57.1	56	57.1	53.7	60	60.9	61.7	61.7	63	68.5	68.6	68.3	68.6	63.9	68.2	67.7	68.2	62.1	45.1	45	62.1
24/F	54.3	55	54.3	55	54.3	55.5	55.6	55.1	55.6	52.9	57.1	56.1	57.1	53.6	60	60.9	61.7	61.7	62.8	68.4	68.5	68.2	68.5	63.7	68	67.6	68	62	45.1	45	62
25/F 26/F	54.2	55 55 1	54.3	55 55 1	54.1	55.6	55.7	55.2	55.7	52.8	57.3	56.3	57.3	53.5	60.2	61.1	61.8	61.8	62.7	68.3	68.4	68.2	68.4	63.6	68	67.5	68	61.9	46.3	47.3	61.9
26/F	54	55.1	54.5	55.1	54	55.9	56 56 2	55.7	56 56.2	52.7	57.7	56.6	57.7 57.9	53.4	60.3	61.2	62	62.0 62.2	62.6	68.2	68.3	68.1	68.3	63.6	67.9	67.4	67.9	61.8	46.3	47.4	61.8
27/F 28/F	53.9 53.8	55.4 55.8	54.8 55.2	55.4 55.8	53.9 53.8	56.1 56.4	56.3 56.6	56 56.3	56.3 56.6	52.6 52.5	57.9 58.2	56.9 57.2	57.9 58.2	53.3 53.2	60.5 60.7	61.4 61.7	62.2 62.6	62.6	62.5 62.4	68.2 68.1	68.2 68.1	68.1 68	68.2 68.1	63.5 63.4	67.8 67.7	67.3 67.2	67.8 67.7	61.7 61.7	46.8 48.2	47.8 49	61.7 61.7
29/F	53.7	55.8 56	55.4	55.8 56	53.8	56.6	56.8	56.5	56.8	52.5	58.5	57.2 57.5	58.5	53.2	61.1	62.1	62.9	62.9	62.4	68	68	68	68	63.3	67.6	67.1	67.6	61.6	48.2 55.7	55.8	61.6

* Note:

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Noise attenuation follows the table under Technical Note on "Noise Attenuation for Modualr Flat Design (MFD) with Acoustic Window". Noise attenuation 5.4 dB(A) without sound absorptive lining is applied.

Noise attenuation follows the table under Technical Note on "Noise Attenuation for Modualr Flat Design (MFD) with Acoustic Window". Noise attenuation 5.4 dB(A) without sound absorptive lining is applied. Due to unfavourable settings of acoustic window, noice attenuation will be deducted 1.0 dB(A) based on study of the Technical Note-Annex L (Case 1 of Table 1)

Block B - Mitigated Scenario (Implementation of fixed glazing)

Block B	BB_8a	BB_8b	BB_8c	Max	BB_9a	BB_9b	Max	BB_10a	BB_10b	Max	BB_11a	BB_11b	BB_11c	Max	BB_12a	BB_12b	BB_12c	BB_12d	Max	BB_13a	BB_13b	BB_13c	BB_13d	Max	BB_14a	BB_14b	BB_14c	BB_14d	Max	BB_15a	BB_15b	BB_15c	Max
G/F																																	
1/F											_				_										,								
2/F	62.4	47.1	47.5	62.4	66.6	68.7	68.7	65.7	69.1	69.1	62.9	69.1	69.1	69.1	63.2	69	68.9	65.1	69.0	54.4	59.9	60	57.4	60.0	59.6	59.4	58.3	55.6	59.6	32.4	59.9	60	60
3/F	64.5	47	47.4	64.5	67.3	68.9	68.9	67.4	69.4	69.4	64.5	69.3	69.3	69.3	64.8	69.2	69.1	65.7	69.2	54.9	60.1	60.2	58.2	60.2	59.8	59.6	59.2	56.8	59.8	32.3	60.2	60.5	60.5
4/F	64.4	47	47.4	64.4	67.3	68.9	68.9	67.4	69.3	69.3	64.4	69.3	69.3	69.3	64.7	69.2	69.1	65.8	69.2	54.9	60.1	60.2	58.5	60.2	59.8	59.6	59.3	56.8	59.8	32.3	60.3	60.6	60.6
5/F	64.3	47	47.4	64.3	67.2	68.8	68.8	67.3	69.3	69.3	64.4	69.2	69.2	69.2	64.7	69.1	69.1	65.8	69.1	54.8	60.1	60.2	58.6	60.2	59.7	59.5	59.3	56.7	59.7	32.3	60.3	60.7	60.7
6/F	64.3	4/	47.4	64.3	67.1	68.7	68.7	67.2	69.2	69.2	64.3	69.2	69.2	69.2	64.6	69.1	69	65.8	69.1	54.7	60	60.1	58.5	60.1	59.7	59.5	59.3	56.6	59.7	32.2	60.3	60.7	60.7
//F	64.2	46.9	47.4	64.2	67.1	68.7	68.7	67.2	69.1	69.1	64.2	69.1	69.1	69.1	64.6	69	68.9	65.7	69.0	54.7	60	60.1	58.5	60.1	59.7	59.5	59.3	56.6	59.7	32.1	60.3	60.7	60.7
0/F	64.1	46.9	47.3 47.3	64.1 64.0	67	68.6	68.6	67.1	69.1 69	69.1	64.1 64	69 68.9	69 68.9	69	64.5	68.9	68.9	65.7	68.9	54.6	60 60	60.1	58.5 58.5	60.1	59.7	59.5	59.3 59.3	56.5	59.7	32.1	60.4 60.4	60.8	60.8
9/F 10/E	63.9	46.9 46.9	47.3 47.3	63.9	66.9	68.5 68.4	68.5	66.0		69.0 68.9	64	68.8	68.8	68.9	64.4 64.3	68.8 68.7	68.8 68.7	65.6 65.6	68.8 68.7	54.5 54.5	60	60.1	58.5 58.5	60.1 60.1	59.8 59.8	59.6 59.6	59.3 59.3	56.4 56.3	59.8 59.8	32 31.9	60.4	60.8 60.8	60.8 60.8
10/1 11/F	63.7	46.9	47.3	63.7	66.7	68.3	68.4 68.3	66.9 66.8	68.9 68.8	68.8	63.8	68.7	68.7	68.8 68.7	64.2	68.6	68.6	65.5	68.6	54.4	60	60.1 60.1	58.4	60.1	59.8	59.6	59.3	56.2	59.8	31.9	60.3	60.7	60.7
12/F	63.6	46.8	47.2	63.6	66.6	68.2	68.2	66.7	68.7	68.7	63.7	68.6	68.6	68.6	64	68.5	68.5	65.4	68.5	54.3	60	60	58.4	60.0	59.7	59.6	59.3	56.1	59.7	31.8	60.3	60.7	60.7
13/F	63.5	46.8	47.2	63.5	66.5	68.1	68.1	66.6	68.6	68.6	63.6	68.5	68.5	68.5	64	68.5	68.4	65.3	68.5	54.3	59.9	60	58.3	60.0	59.7	59.5	59.3	56	59.7	31.7	60.3	60.6	60.6
14/F	63.4	46.8	47.2	63.4	66.4	68	68	66.5	68.5	68.5	63.5	68.5	68.4	68.5	63.9	68.3	68.3	65.3	68.3	54.2	59.9	59.9	58.3	59.9	59.6	59.5	59.2	55.9	59.6	31.6	60.2	60.5	60.5
15/F	63.2	46.8	47.2	63.2	66.3	67.9	67.9	66.4	68.4	68.4	63.4	68.3	68.3	68.3	63.8	68.2	68.2	65.2	68.2	54.2	59.8	59.9	58.3	59.9	59.6	59.4	59.2	55.8	59.6	31.6	60.1	60.4	60.4
16/F	63.1	46.7	47.2	63.1	66.2	67.8	67.8	66.3	68.3	68.3	63.3	68.2	68.2	68.2	63.7	68.1	68.1	65.1	68.1	54.2	59.7	59.8	58.2	59.8	59.5	59.4	59.2	55.7	59.5	31.5	60	60.3	60.3
17/F	63	46.7	47.2	63.0	66.1	67.7	67.7	66.2	68.2	68.2	63.2	68.1	68.1	68.1	63.5	68.1	68	65	68.1	54.2	59.6	59.7	58.1	59.7	59.5	59.3	59.1	55.6	59.5	31.4	59.9	60.2	60.2
18/F	62.9	46.7	47.1	62.9	66	67.6	67.6	66.1	68.1	68.1	63.1	68	68	68	63.4	67.9	67.9	64.9	67.9	54.1	59.5	59.6	58.1	59.6	59.4	59.2	59	55.5	59.4	31.3	59.8	60.1	60.1
19/F	62.8	46.7	47.1	62.8	65.9	67.5	67.5	66	68	68.0	63	67.9	67.9	67.9	63.3	67.8	67.8	64.8	67.8	54	59.5	59.5	58	59.5	59.3	59.2	59	55.4	59.3	31.3	59.7	60	60
20/F	62.7	46.7	47.1	62.7	65.8	67.4	67.4	65.9	67.9	67.9	62.9	67.8	67.8	67.8	63.2	67.8	67.7	64.8	67.8	53.9	59.4	59.4	58	59.4	59.2	59.1	58.9	55.3	59.2	31.2	59.6	59.9	59.9
21/F	62.6	46.7	47.1	62.6	65.7	67.3	67.3	65.8	67.8	67.8	62.8	67.7	67.7	67.7	63.1	67.7	67.6	64.7	67.7	53.8	59.3	59.3	57.9	59.3	59.2	59	58.8	55.2	59.2	31.1	59.5	59.8	59.8
22/F	62.5	46.7	47.1	62.5	65.6	67.2	67.2	65.7	67.7	67.7	62.7	67.7	67.6	67.7	63	67.6	67.5	64.6	67.6	53.7	59.2	59.2	57.8	59.2	59.1	58.9	58.7	55.1	59.1	31	59.4	59.7	59.7
23/F	62.3	46.6	47.1	62.3	65.5	67.1	67.1	65.6	67.6	67.6	62.5	67.5	67.5	67.5	62.9	67.4	67.5	64.5	67.5	53.6	59.1	59.2	57.7	59.2	59	58.8	58.6	55	59	30.9	59.3	59.6	59.6
24/F	62.2	46.6	47.1	62.2	65.4	67	67	65.5	67.5	67.5	62.4	67.4	67.4	67.4	62.8	67.4	67.4	64.4	67.4	53.5	59	59.1	57.6	59.1	58.9	58.7	58.5	54.9	58.9	30.9	59.2	59.5	59.5
25/F	62.1	49.1	49.8	62.1	65.3	66.9	66.9	65.4	67.4	67.4	62.3	67.4	67.4	67.4	62.7	67.3	67.3	64.3	67.3	53.4	58.9	59	57.5	59.0	58.8	58.6	58.4	54.8	58.8	30.8	59.1	59.4	59.4
26/F	62	49.1	49.8	62.0	65.2	66.8	66.8	65.3	67.3	67.3	62.2	67.3	67.3	67.3	62.6	67.2	67.2	64.2	67.2	53.3	58.8	58.9	57.4	58.9	58.7	58.5	58.3	54.7	58.7	30.7	59	59.3	59.3
27/F	61.9	49.4	50	61.9	65.2	66.7	66.7	65.3	67.3	67.3	62.1	67.2	67.2	67.2	62.5	67.1	67.1	64.1	67.1	53.2	58.7	58.8	57.3	58.8	58.6	58.4	58.2	54.6	58.6	31.4	58.9	59.1	59.1
28/F	61.8	50.2	50.7	61.8	65.1	66.6	66.6	65.1	67.2	67.2	62	67.1	67.1	67.1	62.4	67	67	64.1	67.0	53.2	58.6	58.6	57.3	58.6	58.4	58.3	58.1	54.5	58.4	33.1	58.8	59	59
29/F	61.8	56.1	56.1	61.8	65	66.6	66.6	65	67.1	67.1	61.9	67	67	67	62.3	66.9	66.9	64	66.9	53.1	58.5	58.5	57.2	58.5	58.3	58.2	58	54.4	58.3	39.4	58.7	58.9	58.9

Block B - Mitigated Scenario (Implementation of fixed glazing)

Block B	BB_16a		BB_16c	Max	-	BB_17b	BB_17c	Max	BB_18a	BB_18b	BB_18c	Max	BB_19a	BB_19b	BB_19c	BB_19d	BB_19e	Max	BB_20a	BB_20b	BB_20c	BB_20d	BB_20e	Max	BB_21a	BB_21b	BB_21c	BB_21d	Max
G/F																													
1/F																													
2/F	56.4	61.4	60.3	61.4	55.2	62.4	62.2	62.4	60.1	64.4	63.6	64.4	60.1	64.7	63.7	66.3	68.0	68.0	31.3	61.8	61.5	62.8	67.5	67.5	31.4	61.2	60.4	59.6	61.2
3/F	57.1	61.6	61	61.6	55.9	62.6	62.9	62.9	60.5	64.7	64	64.7	60.3	65.2	66.0	67.1	67.7	67.7	31.3	63.0	63.9	65.6	67.5	67.5	31.4	62.2	61.7	61.0	62.2
4/F	57.4	61.6	61.1	61.6	56.3	62.7	63	63.0	60.4	64.8	64.2	64.8	60.2	65.7	66.2	66.8	67.4	67.4	31.3	63.6	64.2	65.5	67.1	67.1	31.4	62.4	61.9	61.5	62.4
5/F	57.6	61.7	61.1	61.7	56.6	62.8	63	63.0	60.3	64.8	64.2	64.8	60.1	65.6	65.9	66.5	67.0	67.0	31.3	63.6	64	65.2	66.8	66.8	31.4	62.6	62.1	61.7	62.6
6/F	57.8	61.7	61.2	61.7	57	62.8	63.1	63.1	60.1	64.8	64.2	64.8	59.9	65.4	65.7	66.2	66.7	66.7	31.2	63.5	63.9	64.9	66.4	66.4	31.4	62.6	62.2	61.7	62.6
7/F	58	61.7	61.2	61.7	57.3	62.8	63.1	63.1	59.9	64.7	64.1	64.7	59.8	65.2	65.4	65.9	66.4	66.4	31.2	63.4	63.7	64.6	66.1	66.1	31.3	62.6	62.1	61.7	62.6
8/F	58.2	61.7	61.2	61.7	57.5	62.8	63	63.0	59.8	64.5	64	64.5	59.6	65.0	65.2	65.6	66.1	66.1	31.2	63.2	63.5	64.4	65.8	65.8	31.3	62.4	62	61.5	62.4
9/F	58.2	61.7	61.2	61.7	57.6	62.7	63	63.0	59.6	64.3	63.8	64.3	59.4	64.8	64.9	65.3	65.8	65.8	31.2	63.0	63.3	64.1	65.5	65.5	31.3	62.3	61.9	61.4	62.3
10/F	58.2	61.6	61.2	61.6	57.6	62.7	62.9	62.9	59.5	64.1	63.7	64.1	59.3	64.6	64.7	65.1	65.5	65.5	31.1	62.8	63.1	63.9	65.2	65.2	31.3	62.1	61.7	61.3	62.1
11/F	58.1	61.6	61.1	61.6	57.5	62.6	62.7	62.7	59.3	64.0	63.5	64.0	59.1	64.3	64.5	64.8	65.2	65.2	31.1	62.7	63	63.6	64.9	64.9	31.3	61.9	61.6	61.2	61.9
12/F	58.1	61.5	61.1	61.5	57.5	62.4	62.6	62.6	59.1	63.8	63.3	63.8	59	64.2	64.3	64.6	65.0	65.0	31.1	62.5	62.8	63.4	64.7	64.7	31.2	61.8	61.5	61.0	61.8
13/F	58 57.9	61.4	61	61.4	57.4	62.3	62.4 62.3	62.4	59	63.6	63.2	63.6	58.8	63.9	64.1	64.4	64.7	64.7	31.1	62.3	62.6	63.2	64.4	64.4	31.2	61.6	61.3	60.9	61.6
14/F	57.9 57.8	61.3	60.9 60.8	61.3 61.2	57.3	62.2	62.3	62.3	58.9	63.4	63	63.4	58.7	63.8	63.9	64.2 64	64.6	64.6	31	62.2	62.5	63.0	64.2	64.2 64.0	31.2	61.5	61.2	60.8	61.5
15/F	57.8 57.7	61.2 61	60.7	61.2	57.2 57.1	62.1 61.9	62.2	62.2 62.0	58.7 58.6	63.3 63.1	62.8 62.7	63.3 63.1	58.6 58.4	63.6 63.5	63.7 63.5	63.8	64.3 64.1	64.3 64.1	31.2 31.4	62.0 61.9	62.3 62.2	62.8 62.6	64 63.8	63.8	31.4 31.7	61.4 61.2	61.1 60.9	60.7 60.5	61.4 61.2
10/F 17/F	57.6	60.9	60.6	60.9	57.1	61.8	61.9	61.9	58.5	63.0	62.6	63.0	58.3	63.3	63.3	63.7	63.9	63.9	31.4	61.8	62	62.5	63.6	63.6	32.2	61.1	60.8	60.4	61.1
17/1 18/F	57.5	60.8	60.5	60.8	56.9	61.7	61.8	61.8	58.3	62.9	62.4	62.9	58.2	63.1	63.2	63.5	63.8	63.8	32.6	61.6	61.9	62.3	63.4	63.4	32.7	61.0	60.7	60.3	61.0
19/F	57.4	60.7	60.3	60.7	56.8	61.6	61.6	61.6	58.2	62.7	62.3	62.7	58.1	63.0	63.0	63.3	63.6	63.6	33.4	61.5	61.8	62.1	63.2	63.2	33.4	60.9	60.6	60.2	60.9
20/F	57.3	60.6	60.2	60.6	56.8	61.4	61.5	61.5	58.1	62.6	62.1	62.6	57.9	62.8	62.9	63.2	63.4	63.4	34.4	61.4	61.6	62.0	63	63.0	34.2	60.8	60.5	60.1	60.8
21/F	57.2	60.4	60.1	60.4	56.6	61.3	61.4	61.4	58	62.4	62	62.4	57.8	62.7	62.8	63	63.2	63.2	35.5	61.3	61.5	61.8	62.8	62.8	35.1	60.7	60.4	60.0	60.7
22/F	57.1	60.3	60	60.3	56.5	61.2	61.3	61.3	57.9	62.3	61.9	62.3	57.7	62.6	62.6	62.9	63.1	63.1	36.7	61.1	61.4	61.7	62.6	62.6	36	60.6	60.3	59.8	60.6
23/F	57	60.2	59.9	60.2	56.5	61.1	61.1	61.1	57.7	62.2	61.8	62.2	57.6	62.4	62.5	62.8	63.0	63.0	38.2	61.1	61.3	61.5	62.5	62.5	37.1	60.5	60.2	59.8	60.5
24/F	56.9	60.1	59.8	60.1	56.3	60.9	61	61.0	57.6	62.1	61.6	62.1	57.5	62.3	62.4	62.6	62.8	62.8	39.8	60.9	61.2	61.5	62.4	62.4	38.3	60.4	60.1	59.7	60.4
25/F	56.8	60	59.7	60	56.2	60.8	60.9	60.9	57.5	61.9	61.5	61.9	57.3	62.2	62.2	62.5	62.7	62.7	41.7	60.9	61.1	61.3	62.2	62.2	39.6	60.3	60	59.6	60.3
26/F	56.7	59.9	59.5	59.9	56.1	60.7	60.8	60.8	57.4	61.8	61.4	61.8	57.2	62.1	62.1	62.4	62.5	62.5	44.1	60.8	61	61.2	62.1	62.1	41.2	60.3	60	59.6	60.3
27/F	56.6	59.8	59.4	59.8	56	60.6	60.7	60.7	57.3	61.7	61.3	61.7	57.1	61.9	62.0	62.3	62.4	62.4	46.7	60.8	61	61.1	62	62.0	43.5	60.3	60	59.6	60.3
28/F	56.5	59.6	59.3	59.6	55.9	60.4	60.6	60.6	57.1	61.6	61.2	61.6	57	61.9	61.9	62.1	62.3	62.3	48.8	60.8	61	61.2	61.8	61.8	46.1	60.3	60.1	59.7	60.3
29/F	56.4	59.5	59.2	59.5	55.8	60.4	60.5	60.5	57.1	61.5	61	61.5	56.9	61.7	61.8	62	62.2	62.2	50.6	60.9	61.1	61.2	61.8	61.8	48.3	60.4	60.2	59.8	60.4

* Noto:

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Block B - Mitigated Scenario (Implementation of fixed glazing)

Block B	BB_22a	BB_22b	BB_22c	Max	BB_23a	BB_23b	BB_23c	Max	BB_24a	BB_24b	Max
G/F											
1/F											
2/F	55	60.1	59.9	60.1	50.2	58.7	57	58.7	29.6	55.5	55.5
3/F	55.9	61	61.1	61.1	50.4	60.1	59.2	60.1	29.6	57.7	57.7
4/F	56.9	61.3	61.5	61.5	50.4	60.6	59.7	60.6	29.5	58.3	58.3
5/F	57.2	61.4	61.6	61.6	50.3	60.7	59.8	60.7	29.5	58.4	58.4
6/F	57.2	61.4	61.6	61.6	50.3	60.6	59.7	60.6	29.5	58.3	58.3
7/F	57.1	61.3	61.6	61.6	50.2	60.5	59.6	60.5	29.5	58.2	58.2
8/F	57	61.3	61.5	61.5	50.1	60.4	59.5	60.4	29.5	58.1	58.1
9/F	57	61.2	61.4	61.4	50.1	60.3	59.4	60.3	29.5	58.1	58.1
10/F	56.9	61.1	61.3	61.3	50	60.2	59.3	60.2	29.5	58	58
11/F	56.8	61	61.2	61.2	50	60.2	59.3	60.2	29.4	57.9	57.9
12/F	56.7	60.9	61	61	49.9	60.1	59.2	60.1	29.4	57.8	57.8
13/F	56.6	60.7	60.9	60.9	49.8	59.9	59.1	59.9	29.4	57.7	57.7
14/F	56.5	60.6	60.8	60.8	49.7	59.8	59	59.8	29.3	57.6	57.6
15/F	56.4	60.5	60.7	60.7	49.7	59.7	58.9	59.7	29.3	57.5	57.5
16/F	56.4	60.4	60.5	60.5	49.6	59.6	58.8	59.6	29.2	57.4	57.4
17/F	56.3	60.3	60.4	60.4	49.6	59.5	58.6	59.5	29.3	57.3	57.3
18/F	56.2	60.1	60.3	60.3	49.5	59.4	58.5	59.4	29.3	57.2	57.2
19/F	56.1	60	60.2	60.2	49.5	59.3	58.4	59.3	29.4	57.1	57.1
20/F	56.1	59.9	60.1	60.1	49.4	59.2	58.3	59.2	29.5	57	57
21/F	56	59.8	60	60	49.4	59.1	58.2	59.1	29.5	56.9	56.9
22/F	55.9	59.7	59.9	59.9	49.4	59	58.1	59	29.5	56.9	56.9
23/F	55.8	59.6	59.8	59.8	49.4	58.9	58.1	58.9	29.6	56.8	56.8
24/F	55.8	59.5	59.7	59.7	49.4	58.8	58	58.8	29.6	56.7	56.7
25/F	55.7	59.5	59.6	59.6	49.5	58.7	57.9	58.7	29.6	56.7	56.7
26/F	55.7	59.4	59.6	59.6	49.8	58.7	57.9	58.7	31	56.7	56.7
27/F	55.7	59.5	59.6	59.6	50.1	58.7	58	58.7	33.6	56.9	56.9
28/F	55.8	59.5	59.7	59.7	50.6	58.7	58	58.7	37.3	56.9	56.9
29/F	56	59.6	59.8	59.8	51.4	58.7	58	58.7	44.1	57	57

* Note:

Summary of the Predicted Ro	oad Traffic No	ise Compli	ance Rate	
	Blo	ck A	Blo	ck B
dB(A)	Unit	%	Unit	%
<= 70	614	91%	667	99%
>=70	58.0	9%	5	0.7%
Total	672		672	
Compliance Rate (%)	91%		99%	
Maxmuim Noise Level dB(A)	73.5		70.7	

Mitigated Scenario (Implementation of fixed glazing and acoustic window)

KO4:Proposed Public Housing Development at Tung Chung Area 109- Environmental Assessment Study Predicted Road Traffic Noise Level Results for Residential Unit (Year 2045 AM Peak Traffic Flow)

Block A - Mitigated Scenario (Implementation of fixed glazing)

Block A	BA_1a	BA_1b	BA_1c	Max	BA_2a	BA_2b	BA_2c	BA_2d	Max	BA_3a	BA_3b	BA_3c	Max	BA_4a	BA_4b	BA_4c	BA_4d	Max	BA_5a	BA_5b	BA_5c	BA_5d	Max	BA_6a	BA_6b	BA_6c	Max	BA_7a	BA_7b	BA_7c	Max
G/F																															
1/F																															
2/F	55.5	59	58.8	59	52.2	59.4	59.4	59.4	59.4	56.8	59.9	59.7	59.9	55.3	60.1	60	59.9	60.1	61.5	69.1	68.9	67.6	69.1	61.6	69.2	69.2	69.2	61.3	69.4	69.2	69.4
3/F	56.4	59.3	59.1	59.3	53.1	59.7	59.8	59.8	59.8	58	60.2	60	60.2	56.6	60.4	60.4	60.3	60.4	63.2	69.2	69.1	67.9	69.2	63.3	69.4	69.3	69.4	63.1	69.5	69.4	69.5
4/F	56.5	59.3	59.2	59.3	53.2	59.7	59.8	59.9	59.9	58.1	60.2	60.1	60.2	56.7	60.4	60.4	60.4	60.4	63.1	69.2	69.1	67.8	69.2	63.3	69.4	69.3	69.4	63	69.5	69.4	69.5
5/F	56.4	59.3	59.1	59.3	53.2	59.7	59.8	59.8	59.8	58	60.2	60.1	60.2	56.7	60.4	60.3	60.3	60.4	63.1	69.2	69.1	67.8	69.2	63.2	69.3	69.3	69.3	62.9	69.4	69.3	69.4
6/F	56.5	59.3	59.1	59.3	53.2	59.7	59.7	59.8	59.8	58	60.2	60	60.2	56.6	60.4	60.3	60.3	60.4	63	69.1	69.1	67.7	69.1	63.2	69.3	69.2	69.3	62.8	69.3	69.2	69.3
7/F	56.5	59.3	59.1	59.3	53.5	59.7	59.7	59.8	59.8	57.9	60.1	60	60.1	56.7	60.3	60.3	60.3	60.3	62.9	69	69	67.6	69	63.1	69.2	69.2	69.2	62.8	69.2	69.2	69.2
8/F	56.5	59.3	59.1	59.3	53.5	59.6	59.7	59.8	59.8	57.8	60.1	60	60.1	56.6	60.3	60.3	60.2	60.3	62.8	69	68.9	67.6	69	63	69.1	69.1	69.1	62.7	69.2	69.1	69.2
9/F	56.5	59.2	59	59.2	53.7	59.6	59.7	59.8	59.8	57.7	60.1	59.9	60.1	56.6	60.2	60.2	60.2	60.2	62.7	68.9	68.8	67.5	68.9	62.9	69	69	69	62.6	69	69	69
10/F	56.5	59.2	59	59.2	53.8	59.5	59.6	59.7	59.7	57.6	60	59.9	60.0	56.6	60.2	60.2	60.1	60.2	62.6	68.8	68.7	67.4	68.8	62.8	68.9	68.9	68.9	62.5	68.9	68.9	68.9
11/F	56.5	59.1	59	59.1	53.9	59.5	59.6	59.7	59.7	57.5	60	59.8	60.0	56.5	60.1	60.1	60.1	60.1	62.5	68.7	68.6	67.3	68.7	62.6	68.8	68.8	68.8	62.4	68.8	68.8	68.8
12/F	56.5	59.1	58.9	59.1	53.8	59.5	59.5	59.6	59.6	57.4	59.9	59.8	59.9	56.4	60.1	60.1	60	60.1	62.4	68.6	68.5	67.2	68.6	62.5	68.7	68.7	68.7	62.3	68.7	68.7	68.7
13/F	56.4	59 50.0	58.8	59	53.8	59.4	59.5	59.6	59.6	57.3	59.8	59.7	59.8 59.7	56.3	60.1	60.1	60	60.1	62.3	68.5	68.4	67.1	68.5	62.4	68.6	68.6	68.6	62.1	68.6	68.6	68.6
14/F 15/F	56.4	58.9	58.7 58.6	58.9 58.8	53.9 53.8	59.3 59.2	59.4	59.5 59.4	59.5 59.4	57.2 57.1	59.7	59.7 59.6	59.6	56.2	60 59.9	60 59.9	59.9	60.0 59.9	62.2 62.1	68.4 68.2	68.3 68.2	67 66.9	68.4 68.2	62.3 62.2	68.5 68.4	68.5 68.4	68.5 68.4	62 61.9	68.5 68.4	68.4 68.3	68.5 68.4
16/F	56.3 56.3	58.8 58.7	58.6	58.7	53.8	59.2	59.3 59.3	59.4	59.4 59.4	57.1	59.6 59.6	59.5	59.6	56.2 56.1	59.8	59.8	59.8 59.8	59.8	62	68.1	68.1	66.8	68.1	62.1	68.3	68.2	68.3	61.8	68.3	68.2	68.3
10/1 17/F	56.2	58.7	58.5	58.7	53.8	59.1	59.2	59.4	59.4 59.2	56.9	59.5	59.4	59.5	55.9	59.7	59.8	59.7	59.8	61.8	68	68	66.7	68	62	68.1	68.1	68.1	61.7	68.2	68.1	68.2
18/F	56.1	58.6	58.4	58.6	53.7	59	59	59.1	59.1	56.8	59.4	59.3	59.4	55.8	59.7	59.7	59.6	59.7	61.7	68	67.9	66.6	68	61.9	68	68	68	61.5	68.1	68	68.1
19/F	56	58.5	58.3	58.5	53.6	58.9	58.9	59	59	56.7	59.3	59.2	59.3	55.7	59.6	59.6	59.5	59.6	61.6	67.8	67.8	66.5	67.8	61.8	68	67.9	68	61.5	67.9	67.9	67.9
20/F	55.9	58.4	58.2	58.4	53.5	58.8	58.8	58.9	58.9	56.6	59.2	59.1	59.2	55.6	59.5	59.5	59.4	59.5	61.5	67.7	67.7	66.4	67.7	61.7	67.9	67.8	67.9	61.4	67.9	67.8	67.9
21/F	55.8	58.3	58.1	58.3	53.4	58.6	58.7	58.8	58.8	56.5	59.1	59	59.1	55.5	59.4	59.4	59.3	59.4	61.4	67.6	67.6	66.2	67.6	61.6	67.7	67.7	67.7	61.3	67.7	67.7	67.7
, 22/F	55.7	58.2	58	58.2	53.3	58.5	58.6	58.7	58.7	56.4	59	58.9	59.0	55.4	59.3	59.3	59.2	59.3	61.3	67.6	67.5	66.2	67.6	61.5	67.6	67.6	67.6	61.1	67.6	67.6	67.6
23/F	55.6	58.1	57.9	58.1	53.2	58.4	58.5	58.6	58.6	56.3	58.9	58.8	58.9	55.3	59.2	59.2	59.1	59.2	61.2	67.5	67.4	66.1	67.5	61.3	67.5	67.5	67.5	61	67.5	67.5	67.5
24/F	55.5	58	57.8	58	53.1	58.3	58.4	58.5	58.5	56.2	58.8	58.7	58.8	55.2	59.1	59.1	59	59.1	61	67.4	67.3	66	67.4	61.2	67.5	67.4	67.5	61	67.4	67.4	67.4
25/F	55.4	57.9	57.7	57.9	53	58.2	58.3	58.4	58.4	56.1	58.6	58.6	58.6	55.1	58.9	58.9	58.9	58.9	61	67.3	67.2	65.9	67.3	61.1	67.3	67.3	67.3	60.9	67.3	67.3	67.3
26/F	55.3	57.8	57.6	57.8	52.9	58.1	58.2	58.3	58.3	56	58.5	58.5	58.5	55	58.8	58.8	58.8	58.8	60.9	67.1	67.1	65.8	67.1	61	67.2	67.2	67.2	60.8	67.2	67.2	67.2
27/F	55.2	57.7	57.5	57.7	52.8	58.1	58.1	58.2	58.2	55.9	58.4	58.4	58.4	54.9	58.7	58.7	58.7	58.7	60.8	67.1	67	65.7	67.1	60.9	67.1	67.1	67.1	60.7	67.1	67.1	67.1
28/F	55.1	57.6	57.4	57.6	52.7	58	58	58.1	58.1	55.8	58.3	58.3	58.3	54.8	58.6	58.6	58.6	58.6	60.7	67	66.9	65.6	67	60.8	67.1	67	67.1	60.6	67	67	67
29/F	55	57.5	57.3	57.5	52.6	57.9	57.9	58	58	55.7	58.3	58.2	58.3	54.7	58.5	58.5	58.5	58.5	60.6	66.9	66.9	65.5	66.9	60.8	67	66.9	67	60.5	66.9	66.9	66.9

* Note:

Block A - Mitigated Scenario (Implementation of fixed glazing)

Block A	BA_8a	BA_8b	BA_8c	Max	BA_9a	BA_9b	Max	BA_10a	BA_10b	Max	BA_11a	BA_11b	BA_11c	Max	BA_12a	BA_12b	BA_12c	BA_12d	Max	BA_13a	BA_13b	BA_13c	Max	BA_14a	BA_14b	BA_14c	BA_14d	Max	BA_15a	BA_15b	Max
G/F																															
1/F					,										,																
2/F	61.9	69.5	69.6	69.6	66.4	69.6	69.6	68.5	69.8	69.8	64.5	<u>65.1</u>	<u>64.1</u>	65.1	62.7	<u>65.4</u>	<u>66.3</u>	<u>67.9</u>	67.9	64.1	68.1	67.9	68.1	66.9	67.8	62.6	63.6	67.8	62	69.2	69.2
3/F	63.5	69.6	69.7	69.7	67.9	69.7	69.7	69.1	70.1	70.1	65.8	<u>65.2</u>	<u>64.8</u>	65.8	64.6	<u>65.9</u>	<u>67.2</u>	<u>69.4</u>	69.4	66.9	<u>64.7</u>	<u>67.1</u>	67.1	69.1	69.7	65.9	67.6	69.7	67.1	<u>65.1</u>	67.1
4/F	63.4	69.6	69.6	69.6	67.9	69.6	69.6	69	70	70.0	65.7	<u>65.1</u>	<u>64.7</u>	65.7	64.5	<u>65.9</u>	<u>67.2</u>	<u>69.2</u>	69.2	66.9	<u>65.2</u>	<u>67.2</u>	67.2	69.3	69.8	65.9	68.6	69.8	67.2	<u>65</u>	67.2
5/F	63.3	69.5	69.5	69.5	67.8	69.5	69.5	68.9	69.9	69.9	65.6	<u>65.1</u>	<u>64.5</u>	65.6	64.3	<u>65.8</u>	<u>67.1</u>	<u>69</u>	69.0	66.7	<u>65.3</u>	<u>66.9</u>	66.9	69.2	69.7	65.7	68.6	69.7	66.9	70.3	70.3
6/F	63.3	69.4	69.4	69.4	67.7	69.5	69.5	68.8	69.8	69.8	65.5	70.3	69.8	70.3	64.2	<u>65.7</u>	<u>66.8</u>	<u>68.7</u>	68.7	66.5	<u>65.1</u>	<u>66.6</u>	66.6	69.1	69.7	65.6	68.4	69.7	66.8	70.1	70.1
//F	63.2	69.3	69.3	69.3	67.6	69.4	69.4	68.7	69.7	69.7	65.3	70.2	69.6	70.2	64.1	<u>65.5</u>	<u>66.6</u>	<u>68.4</u>	68.4	66.3	<u>64.9</u>	<u>66.2</u>	66.3	68.9	69.6	65.4	68.3	69.6	66.6	69.9	69.9
8/F	63.1	69.2	69.2	69.2	67.5	69.3	69.3	68.6	69.6	69.6	65.2	70	69.5	70	64	<u>65.2</u>	<u>66.4</u>	<u>68.1</u>	68.1	66.1	70	70.3	70.3	68.8	69.4	65.2	68.2	69.4	66.5	69.8	69.8
9/F	63	69.1	69.1	69.1	67.3	69.2	69.2	68.5	69.5	69.5	65	69.8	69.3	69.8	63.8	<u>65.1</u>	66.2	<u>67.9</u>	67.9	65.9	69.7	70.1	70.1	68.6	69.2	65	68.1	69.2	66.4	69.6	69.6
10/F	62.9	69	69	69.0 68.9	67.2	69.1 68.9	69.1 68.9	68.3	69.3	69.3 69.2	64.9	69.7	69.2	69.7 69.5	63.7	70.2	70.3	70.3	70.3 70.1	65.7	69.5	69.8	69.8	68.4	69 68.8	64.8	67.9	69	66.2	69.5 69.2	69.5
11/F 12/F	62.8 62.7	68.9 68.8	68.9 68.8	68.8	67.1 66.9	68.8	68.8	68.2 68.1	69.2 69	69.2	64.8 64.7	69.5 69.3	69 68.9	69.3	63.6 63.4	70.1 69.9	70.1 69.9	70.1 69.9	69.9	65.6 65.4	69.2 69	69.5 69.3	69.5 69.3	68.3 68.1	68.6	64.7 64.5	67.7 67.6	68.8 68.6	66 65.8	69.2	69.2 69.1
13/F	62.7	68.7	68.7	68.7	66.8	68.7	68.7	68	68.9	68.9	64.7	69.1	68.7	69.1	63.3	69.7	69.8	69.7	69.8	65.3	68.8	69.3	69.1	67.9	68.4	64.4	67.4	68.4	65.6	68.9	68.9
14/F	62.4	68.6	68.6	68.6	66.7	68.6	68.6	67.8	68.8	68.8	64.3	69	68.6	69	63.1	69.5	69.6	69.5	69.6	65.1	68.7	68.9	68.9	67.7	68.2	64.3	67.3	68.2	65.5	68.7	68.7
15/F	62.3	68.4	68.5	68.5	66.5	68.5	68.5	67.7	68.6	68.6	64.2	68.8	68.4	68.8	63	69.4	69.4	69.3	69.4	65	68.5	68.7	68.7	67.6	68	64.1	67.1	68	65.3	68.5	68.5
16/F	62.2	68.3	68.4	68.4	66.4	68.3	68.3	67.6	68.5	68.5	64.1	68.7	68.3	68.7	62.9	69.2	69.2	69.1	69.2	64.8	68.3	68.5	68.5	67.4	67.8	64	67	67.8	65.1	68.3	68.3
17/F	62.1	68.2	68.2	68.2	66.3	68.2	68.2	67.4	68.3	68.3	63.9	68.5	68.1	68.5	62.7	69	69.1	68.9	69.1	64.7	68.1	68.3	68.3	67.2	67.6	63.9	66.8	67.6	64.9	68.2	68.2
18/F	62	68.1	68.1	68.1	66.1	68.1	68.1	67.3	68.2	68.2	63.8	68.4	68	68.4	62.6	68.9	68.9	68.8	68.9	64.6	67.9	68.1	68.1	67.1	67.5	63.8	66.6	67.5	64.7	68	68
19/F	61.9	68	68	68.0	66	68	68	67.2	68.1	68.1	63.7	68.2	67.9	68.2	62.5	68.7	68.8	68.6	68.8	64.4	67.7	67.9	67.9	66.9	67.3	63.6	66.5	67.3	64.5	67.9	67.9
20/F	61.8	67.9	67.9	67.9	65.9	67.8	67.8	67.1	67.9	67.9	63.5	68.1	67.7	68.1	62.3	68.6	68.6	68.4	68.6	64.3	67.6	67.8	67.8	66.7	67.2	63.5	66.4	67.2	64.4	67.7	67.7
21/F	61.7	67.8	67.8	67.8	65.7	67.7	67.7	67	67.8	67.8	63.4	68	67.6	68	62.2	68.4	68.5	68.3	68.5	64.1	67.4	67.6	67.6	66.6	67	63.4	66.2	67	64.2	67.6	67.6
22/F	61.5	67.6	67.6	67.6	65.6	67.6	67.6	66.8	67.7	67.7	63.3	67.8	67.5	67.8	62.1	68.3	68.3	68.1	68.3	64	67.3	67.4	67.4	66.5	66.8	63.2	66.1	66.8	64.1	67.4	67.4
23/F	61.4	67.5	67.5	67.5	65.5	67.5	67.5	66.7	67.6	67.6	63.2	67.7	67.3	67.7	62	68.2	68.2	68	68.2	63.9	67.1	67.3	67.3	66.3	66.7	63.1	65.9	66.7	63.9	67.2	67.2
24/F	61.3	67.4	67.4	67.4	65.4	67.4	67.4	66.6	67.5	67.5	63	67.6	67.2	67.6	61.8	68	68.1	67.8	68.1	63.7	67	67.2	67.2	66.2	66.6	63	65.8	66.6	63.8	67.1	67.1
25/F	61.2	67.3	67.3	67.3	65.3	67.3	67.3	66.5	67.4	67.4	62.9	67.5	67.1	67.5	61.7	67.9	67.9	67.7	67.9	63.6	66.8	67	67	66	66.4	62.9	65.7	66.4	63.6	67	67
26/F	61.1	67.2	67.2	67.2	65.1	67.2	67.2	66.4	67.2	67.2	62.8	67.3	67	67.3	61.6	67.8	67.8	67.6	67.8	63.5	66.7	66.9	66.9	65.9	66.3	62.8	65.5	66.3	63.5	66.9	66.9
27/F	61.1	67.1	67.1	67.1	65	67.1	67.1	66.3	67.1	67.1	62.7	67.2	66.9	67.2	61.5	67.7	67.7	67.5	67.7	63.4	66.6	66.7	66.7	65.8	66.2	62.7	65.4	66.2	63.4	66.7	66.7
28/F	61	67	67	67.0	64.9	67	67	66.2	67	67.0	62.6	67.1	66.8	67.1	61.4	67.6	67.6	67.4	67.6	63.3	66.5	66.6	66.6	65.7	66	62.6	65.3	66	63.2	66.6	66.6
29/F	60.9	66.9	66.9	66.9	64.9	66.9	66.9	66.1	66.9	66.9	62.5	67	66.7	67	61.3	67.5	67.6	67.3	67.6	63.2	66.3	66.5	66.5	65.6	65.9	62.4	65.2	65.9	63.2	66.5	66.5

* Note

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

X Noise attenuation follows the table under Technical Note on "Noise Attenuation for Modualr Flat Design (MFD) with Acoustic Window". Noise attenuation 5.4 dB(A) without sound absorptive lining is applied.

Noise attenuation follows the table under Technical Note on "Noise Attenuation for Modualr Flat Design (MFD) with Acoustic Window". Noise attenuation 2.7 dB(A) without sound absorptive lining is applied.

Noise attenuation follows the table under Technical Note on "Noise Attenuation for Modualr Flat Design (MFD) with Acoustic Window". Noise attenuation 5.5 dB(A) without sound absorptive lining is applied.

Noise attenuation follows the table under Technical Note on "Noise Attenuation for Moduair Flat Design (MFD) with Acoustic Window". Noise attenuation 5.4 dB(A) without sound absorptive lining is applied. Due to unfavourable settings of acoustic window, noice attenuation will be deducted 1.0 dB(A) based on study of the Technical Note-Annex L (Case 1 of Table 1)

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Block A - Mitigated Scenario (Implementation of fixed glazing)

			piementati																										
Block A	BA_16a	BA_16b	BA_16c	Max	BA_17a	BA_17b	BA_17c	Max	BA_18a	BA_18b	BA_18c	Max	BA_19a	BA_19b	BA_19c	BA_19d	BA_19e	Max	BA_20a	BA_20b	BA_20c	BA_20d	BA_20e	Max	BA_21a	BA_21b	BA_21c	BA_21d	Max
G/F																													
1/F																													
2/F	60.2	70.2	67.8	70.2	62.3	<u>65.5</u>	<u>64</u>	65.5	62.2	<u>66.1</u>	<u>63.5</u>	66.1	60.6	<u>66.4</u>	<u>65.4</u>	70		70.0	56.7	63.4	62.9	64.2		64.2	58.2	62.2	61.2	60.5	62.2
3/F	67.1	<u>65.9</u>	<u>65.4</u>	67.1	68.1	<u>66.5</u>	<u>67.2</u>	68.1	67.5	<u>67.4</u>	66.6	67.5	66.8	<u>67.8</u>	<u>68.7</u>	69.6		69.6	57	63.9	64.9	66.6	Fixed	66.6	59.4	62.7	62.1	61.6	62.7
4/F	67.5	<u>65.8</u>	<u>65.3</u>	67.5	68.2	<u>66.3</u>	<u>67.2</u>	68.2	68.2	<u>67.2</u>	<u>66.6</u>	68.2	68	<u>67.8</u>	<u>68.9</u>	69.6		69.6	56.8	64.2	65.1	66.5	Window	66.5	59.3	62.7	62.2	61.7	62.7
5/F	67.3	<u>65.6</u>	<u>65.2</u>	67.3	68	<u>66.1</u>	<u>67.1</u>	68	68.1	<u>67.0</u>	<u>66.5</u>	68.1	68	<u>67.6</u>	<u>68.6</u>	69.3	Fixed	69.3	56.7	64.1	64.9	66.2	WIIIUUW	66.2	59	62.7	62.2	61.7	62.7
6/F	67	<u>65.4</u>	<u>65</u>	67	67.7	<u>65.9</u>	<u>66.8</u>	67.7	67.9	66.8	<u>66.3</u>	67.9	67.7	<u>67.3</u>	<u>68.3</u>	<u>70.2</u>	Window	70.2	56.5	63.9	64.7	65.9		65.9	58.9	62.5	62.1	61.6	62.5
7/F	66.8	<u>65.2</u>	64.8	66.8	67.4	<u>65.7</u>	<u>66.6</u>	67.4	67.5	66.5	66.0	67.5	67.4	<u>67.0</u>	<u>68.0</u>	<u>69.9</u>		69.9	56.3	63.7	64.4	65.6	70.4	65.6	58.6	62.4	62	61.5	62.4
8/F	66.5	70.4	70.1	70.4	67.2	<u>65.5</u>	<u>66.4</u>	67.2	67.2	<u>66.2</u>	<u>65.8</u>	67.2	67.1	66.7	<u>67.7</u>	<u>69.5</u>		69.5	56.1	63.4	64.1	65.3	70.1	70.1	58.4	62.2	61.9	61.4	62.2
9/F	66.3	70.2	69.9	70.2	66.9	<u>65.3</u>	<u>66.2</u>	66.9	67	66.0	<u>65.5</u>	67	66.8	<u>66.4</u>	<u>67.5</u>	<u>69.3</u>		69.3	55.9	63.2	63.8	65	69.8	69.8	58.2	62	61.7	61.2	62.0
10/F	66.1	70	69.7	70	66.7	<u>65.1</u>	<u>65.9</u>	66.7	66.7	<u>65.7</u>	<u>65.3</u>	66.7	66.5	66.2	<u>67.2</u>	<u>69</u>	70.4	70.4	55.7	62.9	63.6	64.8	69.6	69.6	58	61.8	61.5	61.1	61.8
11/F	65.8	69.8	69.5	69.8	66.5	70.3	70.1	70.3	66.5	<u>65.5</u>	<u>65.0</u>	66.5	66.3	<u>65.9</u>	<u>66.9</u>	<u>68.7</u>	70.1	70.1	55.5	62.7	63.4	64.5	69.3	69.3	57.9	61.6	61.4	60.9	61.6
12/F	65.6	69.7	69.3	69.7	66.2	70	69.9	70	66.2	<u>65.3</u>	64.8	66.2	66	<u>65.7</u>	<u>66.7</u>	<u>68.5</u>	69.8	69.8	55.4	62.5	63.1	64.3	69.1	69.1	57.7	61.4	61.2	60.7	61.4
13/F	65.4	69.4	69.1	69.4	66	69.9	69.7	69.9	66	70.4	70	70.4	65.8	<u>65.5</u>	<u>66.5</u>	<u>68.2</u>	69.6	69.6	55.2	62.3	62.9	64	68.8	68.8	57.5	61.2	61	60.5	61.2
14/F	65.2	69.2	69	69.2	65.8	69.7	69.5	69.7	65.8	70.2	69.8	70.2	65.6	<u>65.2</u>	<u>66.2</u>	<u>68</u>	69.4	69.4	55.1	62.1	62.7	63.8	68.6	68.6	57.3	61	60.9	60.4	61.0
15/F	64.9	69.1	68.8	69.1	65.6	69.5	69.3	69.5	65.6	70.0	69.6	70	65.4	70.4	70.4	<u>67.8</u>	69.2	70.4	54.9	61.9	62.5	63.6	68.4	68.4	57.2	60.9	60.7	60.2	60.9
16/F	64.7	68.9	68.6	68.9	65.4	69.3	69.1	69.3	65.4	69.8	69.4	69.8	65.2	70.2	70.2	70.3	69	70.3	54.7	61.7	62.3	63.4	68.2	68.2	57	60.7	60.5	60.1	60.7
17/F	64.6	68.7	68.4	68.7	65.2	69.1	68.9	69.1	65.2	69.6	69.2	69.6	65	70.0	70	70.1	68.8	70.1	54.6	61.5	62.1	63.2	68	68.0	56.8	60.5	60.3	59.9	60.5
18/F	64.4	68.5	68.3	68.5	65	68.9	68.8	68.9	65	69.4	69	69.4	64.8	69.8	69.8	69.9	68.6	69.9	54.5	61.3	61.9	63	67.8	67.8	56.7	60.3	60.2	59.7	60.3
19/F	64.2	68.4	68.1	68.4	64.8	68.8	68.6	68.8	64.8	69.2	68.9	69.2	64.6	69.7	69.7	69.7	68.4	69.7	54.3	61.2	61.7	62.8	67.6	67.6	56.5	60.2	60	59.6	60.2
20/F	64	68.2	67.9	68.2	64.6	68.6	68.4	68.6	64.6	69.1	68.7	69.1	64.4	69.5	69.5	69.5	68.2	69.5	54.2	61.0	61.6	62.7	67.5	67.5	56.4	60	59.9	59.4	60.0
21/F	63.9	68.1	67.8	68.1	64.5	68.4	68.3	68.4	64.4	68.9	68.5	68.9	64.2	69.3	69.3	69.4	68.1	69.4	54	60.8	61.4	62.5	67.3	67.3	56.2	59.9	59.7	59.3	59.9
22/F	63.7	67.9	67.6	67.9	64.3	68.3	68.1	68.3	64.3	68.8	68.4	68.8	64.1	69.1	69.1	69.2	67.9	69.2	53.9	60.7	61.3	62.3	67.1	67.1	56.1	59.7	59.6	59.2	59.7
23/F	63.6	67.8	67.5	67.8	64.2	68.1	68	68.1	64.1	68.6	68.2	68.6	63.9	69.0	69	69	67.7	69.0	53.8	60.5	61.1	62.2	67	67.0	55.9	59.6	59.5	59	59.6
24/F	63.4	67.6	67.3	67.6	64	68	67.8	68	64	68.5	68.1	68.5	63.8	68.8	68.8	68.9	67.6	68.9	53.6	60.4	60.9	62	66.8	66.8	55.8	59.5	59.3	58.9	59.5
25/F	63.3	67.5	67.2	67.5	63.9	67.8	67.7	67.8	63.8	68.3	67.9	68.3	63.6	68.7	68.7	68.7	67.4	68.7	53.5	60.2	60.8	61.9	66.7	66.7	55.7	59.3	59.2	58.8	59.3
26/F	63.2	67.3	67.1	67.3	63.7	67.7	67.5	67.7	63.7	68.2	67.8	68.2	63.5	68.5	68.5	68.6	67.3	68.6	53.4	60.1	60.6	61.7	66.5	66.5	55.5	59.2	59	58.6	59.2
27/F	63	67.3	66.9	67.3	63.6	67.6	67.4	67.6	63.5	68.0	67.6	68	63.3	68.4	68.4	68.5	67.1	68.5	53.3	60.0	60.5	61.6	66.4	66.4	55.4	59.1	58.9	58.5	59.1
28/F	62.9	67.1	66.8	67.1	63.5	67.5	67.3	67.5	63.4	67.9	67.5	67.9	63.2	68.3	68.3	68.3	67	68.3	53.2	59.8	60.4	61.5	66.3	66.3	55.3	58.9	58.8	58.4	58.9
29/F	62.8	67	66.7	67	63.4	67.3	67.2	67.3	63.3	67.8	67.4	67.8	63	68.2	68.1	68.2	66.9	68.2	53	59.7	60.3	61.4	66.1	66.1	55.2	58.8	58.7	58.3	58.8

* Note:

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Noise attenuation follows the table under Technical Note on "Noise Attenuation for Modualr Flat Design (MFD) with Acoustic Window". Noise attenuation 5.4 dB(A) without sound absorptive lining is applied.

Noise attenuation follows the table under Technical Note on "Noise Attenuation for Modual Flat Design (MFD) with Acoustic Window". Noise attenuation 2.7 dB(A) without sound absorptive lining is applied.

Noise attenuation follows the table under Technical Note on "Noise Attenuation for Modual Flat Design (MFD) with Acoustic Window". Noise attenuation 2.7 dB(A) without sound absorptive lining is applied.

Noise attenuation follows the table under Technical Note on "Noise Attenuation for Modualr Flat Design (MFD) with Acoustic Window". Noise attenuation 3.9 dB(A) with sound absorptive lining is applied.

Noise attenuation follows the table under Technical Note on "Noise Attenuation for Modualr Flat Design (MFD) with Acoustic Window". Noise attenuation 5.4 dB(A) without sound absorptive lining is applied. Due to unfavourable settings of acoustic window, noice attenuation will be deducted 1.0 dB(A) based on study of the Technical Note-Annex L (Case 1 of Table 1)

Block A - Mitigated Scenario (Implementation of fixed glazing)

Block A	BA_22a	BA_22b	BA_22c	Max	BA_23a	BA_23b	BA_23c	Max	BA_24a	BA_24b	BA_24c	Max
G/F												
1/F												
2/F	50.7	60.9	60.7	60.9	56.5	60.4	59.8	60.4	27.5	59.4	59.4	59.4
3/F	50.8	61.2	61.3	61.3	57.1	60.6	60.2	60.6	27.5	59.7	59.9	59.9
4/F	50.7	61.2	61.4	61.4	57	60.5	60.2	60.5	27.5	59.7	59.9	59.9
5/F	50.6	61.2	61.5	61.5	56.9	60.5	60.2	60.5	27.5	59.7	59.9	59.9
6/F	50.5	61.2	61.4	61.4	56.8	60.6	60.2	60.6	27.4	59.6	59.9	59.9
7/F	50.4	61.2	61.4	61.4	56.7	60.5	60.2	60.5	27.4	59.6	59.9	59.9
8/F	50.3	61.1	61.3	61.3	56.6	60.5	60.1	60.5	27.4	59.6	59.8	59.8
9/F	50.2	61	61.2	61.2	56.4	60.4	60.1	60.4	27.4	59.6	59.8	59.8
10/F	50.1	60.9	61.1	61.1	56.3	60.3	60	60.3	27.3	59.5	59.7	59.7
11/F	50	60.8	60.9	60.9	56.2	60.2	59.9	60.2	27.3	59.4	59.6	59.6
12/F	49.9	60.6	60.8	60.8	56.1	60.1	59.8	60.1	27.3	59.3	59.5	59.5
13/F	49.8	60.5	60.6	60.6	55.9	60	59.7	60	27.3	59.3	59.4	59.4
14/F	49.7	60.4	60.4	60.4	55.8	59.9	59.5	59.9	27.3	59.2	59.4	59.4
15/F	49.7	60.2	60.3	60.3	55.7	59.7	59.5	59.7	27.3	59.1	59.2	59.2
16/F	49.6	60.1	60.2	60.2	55.6	59.6	59.3	59.6	27.3	59	59.1	59.1
17/F	49.5	59.9	60	60	55.5	59.5	59.2	59.5	27.3	58.9	59	59
18/F	49.4	59.8	59.8	59.8	55.3	59.4	59.1	59.4	27.2	58.8	58.9	58.9
19/F	49.3	59.6	59.7	59.7	55.2	59.2	59	59.2	27.2	58.7	58.8	58.8
20/F	49.2	59.5	59.6	59.6	55.1	59.1	58.8	59.1	27.2	58.6	58.7	58.7
21/F	49.1	59.4	59.4	59.4	54.9	59	58.7	59	27.2	58.4	58.5	58.5
22/F	49	59.2	59.3	59.3	54.8	58.8	58.6	58.8	27	58.3	58.4	58.4
23/F	48.9	59.1	59.2	59.2	54.7	58.7	58.5	58.7	27.4	58.2	58.3	58.3
24/F	48.8	59	59	59	54.6	58.6	58.4	58.6	27.9	58.1	58.2	58.2
25/F	48.7	58.8	58.9	58.9	54.5	58.5	58.2	58.5	28.5	58	58.1	58.1
26/F	48.6	58.7	58.8	58.8	54.3	58.4	58.1	58.4	29.1	57.9	58	58
27/F	48.5	58.6	58.6	58.6	54.2	58.3	58	58.3	30.2	57.8	57.9	57.9
28/F	48.4	58.5	58.5	58.5	54.1	58.1	57.9	58.1	31.7	57.7	57.8	57.8
29/F	48.4	58.4	58.4	58.4	54.1	58	57.8	58	35.5	57.6	57.7	57.7

* Note:

Block B - Mitigated Scenario (Implementation of fixed glazing)

Block B	BB_1a	BB_1b	BB_1c	Max	BB_2a	BB_2b	BB_2c	BB_2d	Max	BB_3a	BB_3b	BB_3c	Max	BB_4a	BB_4b	BB_4c	BB_4d	Max	BB_5a	BB_5b	BB_5c	BB_5d	Max	BB_6a	BB_6b	BB_6c	Max	BB_7a	BB_7b	BB_7c	Max
G/F																															
1/F																															
2/F	55.4	56.5	55.9	56.5	55.4	56.8	56.9	56.5	56.9	54.1	57.6	56.9	57.6	54.6	60.8	62	63.1	63.1	63.2	<u>65.3</u>	<u>66.2</u>	69.8	69.8	63.9	70.2	69.4	70.2	62.3	45.2	45.6	62.3
3/F	56.1	56.5	56.1	56.5	56.1	57	57.1	56.6	57.1	55.2	58.3	57.3	58.3	55.8	61.6	62.6	63.4	63.4	65.3	<u>65.3</u>	<u>66.3</u>	70.4	70.4	65.8	70.3	69.7	70.3	64.3	45.1	45.6	64.3
4/F	56	56.5 56.5	56 55.0	56.5 56.5	56 55.9	57 57	57.1 57	56.6 56.5	57.1 57	55.1	58.3 58.2	57.3 57.2	58.3 58.2	55.7	61.6 61.5	62.5 62.5	63.3 63.2	63.3 63.2	65.2 65.1	65.2	66.3	70.3 70.2	70.3	65.7	70.2 70.1	69.7 69.6	70.2 70.1	64.2	45.2 45.3	45.5 45.5	64.2
6/F	55.9 55.9	56.4	55.9 55.8	56.4	55.8	56.9	56.9	56.4	56.9	55 54.9	58.2	57.2	58.2	55.6 55.5	61.4	62.4	63.2	63.2	65	65.1 65	66.1	70.2	70.2 70.1	65.7 65.6	70.1	69.5	70.1	64.1 64	45.4	45.5	64.1
7/F	55.8	56.3	55.7	56.3	55.8	56.8	56.8	56.3	56.8	54.8	58.1	57.1	58.1	55.4	61.4	62.3	63.1	63.1	64.9	70.3	70.3	70.1	70.1	65.5	69.9	69.4	69.9	63.9	45.4	45.4	63.9
8/F	55.7	56.2	55.6	56.2	55.7	56.7	56.8	56.2	56.8	54.7	58	57	58.0	55.3	61.3	62.2	63	63.0	64.8	70.2	70.2	69.9	70.2	65.4	69.8	69.3	69.8	63.8	45.5	45.4	63.8
9/F	55.6	56.1	55.5	56.1	55.6	56.6	56.7	56.1	56.7	54.6	57.9	56.9	57.9	55.2	61.2	62.1	62.9	62.9	64.6	70.1	70.1	69.8	70.1	65.3	69.7	69.2	69.7	63.7	45.5	45.4	63.7
10/F	55.5	56	55.4	56	55.5	56.5	56.6	56	56.6	54.5	57.9	56.8	57.9	55.1	61.1	62	62.8	62.8	64.5	70	70	69.7	70	65.2	69.6	69.1	69.6	63.6	45.4	45.3	63.6
11/F	55.4	55.9	55.3	55.9	55.4	56.4	56.5	55.9	56.5	54.4	57.8	56.8	57.8	55	61	61.9	62.7	62.7	64.4	69.8	69.9	69.6	69.9	65.1	69.5	69	69.5	63.5	45.4	45.3	63.5
12/F	55.3	55.9	55.3	55.9	55.3	56.3	56.4	55.8	56.4	54.3	57.7	56.7	57.7	54.9	60.9	61.8	62.6	62.6	64.3	69.7	69.8	69.4	69.8	64.9	69.4	68.9	69.4	63.4	45.4	45.3	63.4
13/F	55.2	55.8	55.2	55.8	55.2	56.3	56.3	55.7	56.3	54.2	57.7	56.6	57.7	54.8	60.8	61.7	62.5	62.5	64.2	69.6	69.7	69.3	69.7	64.8	69.2	68.8	69.2	63.2	45.4	45.3	63.2
14/F	55.2	55.8	55.2	55.8	55.2	56.2	56.3	55.7	56.3	54	57.6	56.6	57.6	54.7	60.7	61.6	62.4	62.4	64.1	69.5	69.6	69.2	69.6	64.8	69.1	68.6	69.1	63.2	45.4	45.2	63.2
15/F	55.1	55.7	55.1	55.7	55.1	56.2	56.2	55.6	56.2	53.9	57.6	56.5	57.6	54.6	60.6	61.5	62.3	62.3	63.9	69.4	69.4	69.1	69.4	64.6	69	68.5	69	63	45.3	45.2	63
16/F	55	55.6	55	55.6	55	56.1	56.2	55.6	56.2	53.8	57.5	56.5	57.5	54.5	60.6	61.5	62.2	62.2	63.8	69.3	69.3	69	69.3	64.5	68.9	68.4	68.9	62.9	45.3	45.2	62.9
17/F	55	55.5	54.9	55.5	54.9	56	56.1	55.5	56.1	53.7	57.5	56.4	57.5	54.4	60.5	61.4	62.1	62.1	63.6	69.1	69.2	68.9	69.2	64.4	68.8	68.3	68.8	62.8	45.3	45.1	62.8
18/F	54.9	55.4	54.8	55.4	54.9	55.9	56	55.4	56	53.6	57.4	56.3	57.4	54.2	60.4	61.3	62.1	62.1	63.5	69	69.1	68.8	69.1	64.3	68.7	68.2	68.7	62.7	45.3	45.1	62.7
19/F	54.8	55.3	54.7	55.3	54.8	55.8	55.9	55.3	55.9	53.5	57.3	56.3	57.3	54.2	60.3	61.2	62	62.0	63.4	68.9	69	68.7	69	64.2	68.6	68.1	68.6	62.5	45.2	45.1	62.5
20/F	54.7	55.2	54.6	55.2	54.7	55.8	55.8	55.2	55.8	53.4	57.2	56.2	57.2	54	60.2	61.1	61.9	61.9	63.3	68.8	68.9	68.5	68.9	64.1	68.5	68	68.5	62.4	45.2	45.1	62.4
21/F	54.6 54.5	55.2 EE 1	54.5 54.4	55.2 55.1	54.5 54.4	55.7 55.6	55.7 55.7	55.2 55.1	55.7 55.7	53.3 53.2	57.2 57.1	56.1 56.1	57.2 57.1	53.9 53.8	60.2 60.1	61 61	61.8 61.7	61.8 61.7	63.2	68.7 68.6	68.8	68.4 68.4	68.8 68.7	64	68.4 68.3	67.9 67.8	68.4 68.3	62.3 62.2	45.2 45.2	45 45	62.3 62.2
22/I 22/E	54.4	55.1 55	54.4	55	54.4	55.5	55.6	55.1	55.6	53.2	57.1	56	57.1	53.7	60.1	61 60.9	61.7	61.7	63.1 63	68.5	68.7 68.6	68.3	68.6	63.9 63.9	68.2	67.7	68.2	62.1	45.2	45	62.1
23/1 24/F	54.3	55	54.3	55	54.3	55.5	55.6	55.1	55.6	52.9	57.1	56.1	57.1	53.6	60	60.9	61.7	61.7	62.8	68.4	68.5	68.2	68.5	63.7	68	67.6	68	62	45.1	45	62.1
25/F	54.2	55	54.3	55	54.1	55.6	55.7	55.2	55.7	52.8	57.3	56.3	57.3	53.5	60.2	61.1	61.8	61.8	62.7	68.3	68.4	68.2	68.4	63.6	68	67.5	68	61.9	46.3	47.3	61.9
26/F	54	55.1	54.5	55.1	54	55.9	56	55.7	56	52.7	57.7	56.6	57.7	53.4	60.3	61.2	62	62.0	62.6	68.2	68.3	68.1	68.3	63.6	67.9	67.4	67.9	61.8	46.3	47.4	61.8
27/F	53.9	55.4	54.8	55.4	53.9	56.1	56.3	56	56.3	52.6	57.9	56.9	57.9	53.3	60.5	61.4	62.2	62.2	62.5	68.2	68.2	68.1	68.2	63.5	67.8	67.3	67.8	61.7	46.8	47.8	61.7
28/F	53.8	55.8	55.2	55.8	53.8	56.4	56.6	56.3	56.6	52.5	58.2	57.2	58.2	53.2	60.7	61.7	62.6	62.6	62.4	68.1	68.1	68	68.1	63.4	67.7	67.2	67.7	61.7	48.2	49	61.7
29/F	53.7	56	55.4	56	53.7	56.6	56.8	56.5	56.8	52.4	58.5	57.5	58.5	53.1	61.1	62.1	62.9	62.9	62.4	68	68	68	68	63.3	67.6	67.1	67.6	61.6	55.7	55.8	61.6

* Note:

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Noise attenuation follows the table under Technical Note on "Noise Attenuation for Modualr Flat Design (MFD) with Acoustic Window". Noise attenuation 5.4 dB(A) without sound absorptive lining is applied.

Noise attenuation follows the table under Technical Note on "Noise Attenuation for Modualr Flat Design (MFD) with Acoustic Window". Noise attenuation 5.4 dB(A) without sound absorptive lining is applied. Due to unfavourable settings of acoustic window, noice attenuation will be deducted 1.0 dB(A) based on study of the Technical Note-Annex L (Case 1 of Table 1)

Block B - Mitigated Scenario (Implementation of fixed glazing)

Block B	BB_8a	BB_8b	BB_8c	Max	BB_9a	BB_9b	Max	BB_10a	BB_10b	Max	BB_11a	BB_11b	BB_11c	Max	BB_12a	BB_12b	BB_12c	BB_12d	Max	BB_13a	BB_13b	BB_13c	BB_13d	Max	BB_14a	BB_14b	BB_14c	BB_14d	Max	BB_15a	BB_15b	BB_15c	Max
G/F																																	
1/F																																	
2/F	62.4	47.1	47.5	62.4	66.6	68.7	68.7	65.7	69.1	69.1	62.9	69.1	69.1	69.1	63.2	69	68.9	65.1	69.0	54.4	59.9	60	57.4	60.0	59.6	59.4	58.3	55.6	59.6	32.4	59.9	60	60
3/F	64.5	47	47.4	64.5	67.3	68.9	68.9	67.4	69.4	69.4	64.5	69.3	69.3	69.3	64.8	69.2	69.1	65.7	69.2	54.9	60.1	60.2	58.2	60.2	59.8	59.6	59.2	56.8	59.8	32.3	60.2	60.5	60.5
4/F	64.4	47	47.4	64.4	67.3	68.9	68.9	67.4	69.3	69.3	64.4	69.3	69.3	69.3	64.7	69.2	69.1	65.8	69.2	54.9	60.1	60.2	58.5	60.2	59.8	59.6	59.3	56.8	59.8	32.3	60.3	60.6	60.6
5/F	64.3	47	47.4	64.3	67.2	68.8	68.8	67.3	69.3	69.3	64.4	69.2	69.2	69.2	64.7	69.1	69.1	65.8	69.1	54.8	60.1	60.2	58.6	60.2	59.7	59.5	59.3	56.7	59.7	32.3	60.3	60.7	60.7
6/F	64.3	47	47.4	64.3	67.1	68.7	68.7	67.2	69.2	69.2	64.3	69.2	69.2	69.2	64.6	69.1	69	65.8	69.1	54.7	60	60.1	58.5	60.1	59.7	59.5	59.3	56.6	59.7	32.2	60.3	60.7	60.7
7/F	64.2	46.9	47.4	64.2	67.1	68.7	68.7	67.2	69.1	69.1	64.2	69.1	69.1	69.1	64.6	69	68.9	65.7	69.0	54.7	60	60.1	58.5	60.1	59.7	59.5	59.3	56.6	59.7	32.1	60.3	60.7	60.7
8/F	64.1	46.9	47.3	64.1	67	68.6	68.6	67.1	69.1	69.1	64.1	69	69	69	64.5	68.9	68.9	65.7	68.9	54.6	60	60.1	58.5	60.1	59.7	59.5	59.3	56.5	59.7	32.1	60.4	60.8	60.8
9/F	64	46.9	47.3	64.0	66.9	68.5	68.5	6/	69	69.0	64	68.9	68.9	68.9	64.4	68.8	68.8	65.6	68.8	54.5	60	60.1	58.5	60.1	59.8	59.6	59.3	56.4	59.8	32	60.4	60.8	60.8
10/F	63.9	46.9	47.3	63.9	66.8	68.4	68.4	66.9	68.9	68.9	64	68.8	68.8	68.8	64.3	68.7	68.7	65.6	68.7	54.5	60	60.1	58.5	60.1	59.8	59.6	59.3	56.3	59.8	31.9	60.4	60.8	60.8
11/F	63.7	46.9 46.8	47.2 47.2	63.7	66.7	68.3 68.2	68.3	66.8	68.8 68.7	68.8 68.7	63.8 63.7	68.7 68.6	68.7	68.7	64.2	68.6	68.6	65.5	68.6	54.4	60	60.1	58.4 58.4	60.1	59.8 59.7	59.6	59.3	56.2	59.8	31.9	60.3	60.7 60.7	60.7
12/F 12/E	63.6		47.2 47.2	63.6	66.6		68.2	66.7				68.5	68.6 68.5	68.6	64	68.5	68.5	65.4	68.5	54.3 54.3	60	60	58.3	60.0	I	59.6	59.3 59.3	56.1 56	59.7 59.7	31.8	60.3	60.6	60.7 60.6
13/F 1/F	63.5 63.4	46.8 46.8	47.2 47.2	63.5 63.4	66.5 66.4	68.1 68	68.1 68	66.6 66.5	68.6 68.5	68.6 68.5	63.6 63.5	68.5	68.4	68.5 68.5	64 63.9	68.5 68.3	68.4 68.3	65.3 65.3	68.5 68.3	54.3	59.9 59.9	60 59.9	58.3	60.0 59.9	59.7 59.6	59.5 59.5	59.3 59.2	55.9	59.7 59.6	31.7 31.6	60.3 60.2	60.5	60.5
14/1 15/F	63.2	46.8	47.2	63.2	66.3	67.9	67.9	66.4	68.4	68.4	63.4	68.3	68.3	68.3	63.8	68.2	68.2	65.2	68.2	54.2	59.8	59.9	58.3	59.9	59.6	59.4	59.2	55.8	59.6	31.6	60.1	60.4	60.4
16/F	63.1	46.7	47.2	63.1	66.2	67.8	67.8	66.3	68.3	68.3	63.3	68.2	68.2	68.2	63.7	68.1	68.1	65.1	68.1	54.2	59.7	59.8	58.2	59.8	59.5	59.4	59.2	55.7	59.5	31.5	60.1	60.3	60.3
17/F	63	46.7	47.2	63.0	66.1	67.7	67.7	66.2	68.2	68.2	63.2	68.1	68.1	68.1	63.5	68.1	68	65	68.1	54.2	59.6	59.7	58.1	59.7	59.5	59.3	59.1	55.6	59.5	31.4	59.9	60.2	60.2
18/F	62.9	46.7	47.1	62.9	66	67.6	67.6	66.1	68.1	68.1	63.1	68	68	68	63.4	67.9	67.9	64.9	67.9	54.1	59.5	59.6	58.1	59.6	59.4	59.2	59	55.5	59.4	31.3	59.8	60.1	60.1
19/F	62.8	46.7	47.1	62.8	65.9	67.5	67.5	66	68	68.0	63	67.9	67.9	67.9	63.3	67.8	67.8	64.8	67.8	54	59.5	59.5	58	59.5	59.3	59.2	59	55.4	59.3	31.3	59.7	60	60
20/F	62.7	46.7	47.1	62.7	65.8	67.4	67.4	65.9	67.9	67.9	62.9	67.8	67.8	67.8	63.2	67.8	67.7	64.8	67.8	53.9	59.4	59.4	58	59.4	59.2	59.1	58.9	55.3	59.2	31.2	59.6	59.9	59.9
21/F	62.6	46.7	47.1	62.6	65.7	67.3	67.3	65.8	67.8	67.8	62.8	67.7	67.7	67.7	63.1	67.7	67.6	64.7	67.7	53.8	59.3	59.3	57.9	59.3	59.2	59	58.8	55.2	59.2	31.1	59.5	59.8	59.8
22/F	62.5	46.7	47.1	62.5	65.6	67.2	67.2	65.7	67.7	67.7	62.7	67.7	67.6	67.7	63	67.6	67.5	64.6	67.6	53.7	59.2	59.2	57.8	59.2	59.1	58.9	58.7	55.1	59.1	31	59.4	59.7	59.7
23/F	62.3	46.6	47.1	62.3	65.5	67.1	67.1	65.6	67.6	67.6	62.5	67.5	67.5	67.5	62.9	67.4	67.5	64.5	67.5	53.6	59.1	59.2	57.7	59.2	59	58.8	58.6	55	59	30.9	59.3	59.6	59.6
24/F	62.2	46.6	47.1	62.2	65.4	67	67	65.5	67.5	67.5	62.4	67.4	67.4	67.4	62.8	67.4	67.4	64.4	67.4	53.5	59	59.1	57.6	59.1	58.9	58.7	58.5	54.9	58.9	30.9	59.2	59.5	59.5
25/F	62.1	49.1	49.8	62.1	65.3	66.9	66.9	65.4	67.4	67.4	62.3	67.4	67.4	67.4	62.7	67.3	67.3	64.3	67.3	53.4	58.9	59	57.5	59.0	58.8	58.6	58.4	54.8	58.8	30.8	59.1	59.4	59.4
26/F	62	49.1	49.8	62.0	65.2	66.8	66.8	65.3	67.3	67.3	62.2	67.3	67.3	67.3	62.6	67.2	67.2	64.2	67.2	53.3	58.8	58.9	57.4	58.9	58.7	58.5	58.3	54.7	58.7	30.7	59	59.3	59.3
27/F	61.9	49.4	50	61.9	65.2	66.7	66.7	65.3	67.3	67.3	62.1	67.2	67.2	67.2	62.5	67.1	67.1	64.1	67.1	53.2	58.7	58.8	57.3	58.8	58.6	58.4	58.2	54.6	58.6	31.4	58.9	59.1	59.1
28/F	61.8	50.2	50.7	61.8	65.1	66.6	66.6	65.1	67.2	67.2	62	67.1	67.1	67.1	62.4	67	67	64.1	67.0	53.2	58.6	58.6	57.3	58.6	58.4	58.3	58.1	54.5	58.4	33.1	58.8	59	59
29/F	61.8	56.1	56.1	61.8	65	66.6	66.6	65	67.1	67.1	61.9	67	67	67	62.3	66.9	66.9	64	66.9	53.1	58.5	58.5	57.2	58.5	58.3	58.2	58	54.4	58.3	39.4	58.7	58.9	58.9

Block B - Mitigated Scenario (Implementation of fixed glazing)

Block B	BB_16a	BB_16b	BB_16c	Max	BB_17a	BB_17b	BB_17c	Max	BB_18a	BB_18b	BB_18c	Max	BB_19a	BB_19b	BB_19c	BB_19d	BB_19e	Max	BB_20a	BB_20b	BB_20c	BB_20d	BB_20e	Max	BB_21a	BB_21b	BB_21c	BB_21d	Max
G/F																													
1/F																													
2/F	56.4	61.4	60.3	61.4	55.2	62.4	62.2	62.4	60.1	64.4	63.6	64.4	60.1	64.7	63.7	66.3	68.0	68.0	31.3	61.8	61.5	62.8	67.5	67.5	31.4	61.2	60.4	59.6	61.2
3/F	57.1	61.6	61	61.6	55.9	62.6	62.9	62.9	60.5	64.7	64	64.7	60.3	65.2	66.0	67.1	67.7	67.7	31.3	63.0	63.9	65.6	67.5	67.5	31.4	62.2	61.7	61.0	62.2
4/F	57.4	61.6	61.1	61.6	56.3	62.7	63	63.0	60.4	64.8	64.2	64.8	60.2	65.7	66.2	66.8	67.4	67.4	31.3	63.6	64.2	65.5	67.1	67.1	31.4	62.4	61.9	61.5	62.4
5/F	57.6	61.7	61.1	61.7	56.6	62.8	63	63.0	60.3	64.8	64.2	64.8	60.1	65.6	65.9	66.5	67.0	67.0	31.3	63.6	64	65.2	66.8	66.8	31.4	62.6	62.1	61.7	62.6
6/F	57.8	61.7	61.2	61.7	57	62.8	63.1	63.1	60.1	64.8	64.2	64.8	59.9	65.4	65.7	66.2	66.7	66.7	31.2	63.5	63.9	64.9	66.4	66.4	31.4	62.6	62.2	61.7	62.6
7/F	58	61.7	61.2	61.7	57.3	62.8	63.1	63.1	59.9	64.7	64.1	64.7	59.8	65.2	65.4	65.9	66.4	66.4	31.2	63.4	63.7	64.6	66.1	66.1	31.3	62.6	62.1	61.7	62.6
8/F	58.2	61.7	61.2	61.7	57.5	62.8	63	63.0	59.8	64.5	64	64.5	59.6	65.0	65.2	65.6	66.1	66.1	31.2	63.2	63.5	64.4	65.8	65.8	31.3	62.4	62	61.5	62.4
9/F	58.2	61.7	61.2	61.7	57.6	62.7	63	63.0	59.6	64.3	63.8	64.3	59.4	64.8	64.9	65.3	65.8	65.8	31.2	63.0	63.3	64.1	65.5	65.5	31.3	62.3	61.9	61.4	62.3
10/F	58.2	61.6	61.2	61.6	57.6	62.7	62.9	62.9	59.5	64.1	63.7	64.1	59.3	64.6	64.7	65.1	65.5	65.5	31.1	62.8	63.1	63.9	65.2	65.2	31.3	62.1	61.7	61.3	62.1
11/F	58.1	61.6	61.1	61.6	57.5	62.6	62.7	62.7	59.3	64.0	63.5	64.0	59.1	64.3	64.5	64.8	65.2	65.2	31.1	62.7	63	63.6	64.9	64.9	31.3	61.9	61.6	61.2	61.9
12/F	58.1	61.5	61.1	61.5	57.5	62.4	62.6	62.6	59.1	63.8	63.3	63.8	59	64.2	64.3	64.6	65.0	65.0	31.1	62.5	62.8	63.4	64.7	64.7	31.2	61.8	61.5	61.0	61.8
13/F	58	61.4	61	61.4	57.4	62.3	62.4	62.4	59	63.6	63.2	63.6	58.8	63.9	64.1	64.4	64.7	64.7	31.1	62.3	62.6	63.2	64.4	64.4	31.2	61.6	61.3	60.9	61.6
14/F	57.9	61.3	60.9	61.3	57.3	62.2	62.3	62.3	58.9	63.4	63	63.4	58.7	63.8	63.9	64.2	64.6	64.6	31	62.2	62.5	63.0	64.2	64.2	31.2	61.5	61.2	60.8	61.5
15/F	57.8	61.2	60.8	61.2	57.2	62.1	62.2	62.2	58.7	63.3	62.8	63.3	58.6	63.6	63.7	64	64.3	64.3	31.2	62.0	62.3	62.8	64	64.0	31.4	61.4	61.1	60.7	61.4
16/F	57.7	61	60.7	61	57.1	61.9	62	62.0	58.6	63.1	62.7	63.1	58.4	63.5	63.5	63.8	64.1	64.1	31.4	61.9	62.2	62.6	63.8	63.8	31.7	61.2	60.9	60.5	61.2
17/F	57.6	60.9	60.6	60.9	57	61.8	61.9	61.9	58.5	63.0	62.6	63.0	58.3	63.3	63.3	63.7	63.9	63.9	31.9	61.8	62	62.5	63.6	63.6	32.2	61.1	60.8	60.4	61.1
18/F	57.5	60.8	60.5	60.8	56.9	61.7	61.8	61.8	58.3	62.9	62.4	62.9	58.2	63.1	63.2	63.5	63.8	63.8	32.6	61.6	61.9	62.3	63.4	63.4	32.7	61.0	60.7	60.3	61.0
19/F	57.4 57.3	60.7	60.3 60.2	60.7 60.6	56.8	61.6	61.6 61.5	61.6 61.5	58.2	62.7 62.6	62.3	62.7 62.6	58.1 57.9	63.0 62.8	63.0 62.9	63.3 63.2	63.6 63.4	63.6 63.4	33.4	61.5 61.4	61.8 61.6	62.1 62.0	63.2	63.2 63.0	33.4 34.2	60.9 60.8	60.6 60.5	60.2	60.9 60.8
20/F	57.3 57.2	60.6	60.1	60.4	56.8	61.4	61.4	61.4	58.1 58	62.4	62.1 62	62.4	57.8	62.7	62.8	63	63.2	63.2	34.4 35.5	61.3	61.5	61.8	63 62.8	62.8	35.1	60.7	60.4	60.1	60.7
21/F	57.2 57.1	60.4 60.3	60.1	60.4	56.6 56.5	61.3 61.2	61.3	61.3	57.9	62.3	61.9	62.3	57.7	62.6	62.6	62.9	63.1	63.1	36.7	61.1	61.4	61.7	62.6	62.6	36	60.6	60.4	60.0 59.8	60.6
22/F 23/F	57.1 57	60.2	59.9	60.2	56.5	61.1	61.1	61.1	57.9 57.7	62.2	61.8	62.2	57.6	62.4	62.5	62.8	63.0	63.0	38.2	61.1	61.3	61.5	62.5	62.5	37.1	60.5	60.2	59.8	60.5
24/F	56.9	60.1	59.8	60.1	56.3	60.9	61	61.0	57.6	62.1	61.6	62.1	57.5	62.3	62.4	62.6	62.8	62.8	39.8	60.9	61.2	61.5	62.4	62.4	38.3	60.4	60.1	59.7	60.4
25/5	56.8	60	59.7	60	56.2	60.8	60.9	60.9	57.5	61.9	61.5	61.9	57.3	62.2	62.2	62.5	62.7	62.7	41.7	60.9	61.1	61.3	62.2	62.2	39.6	60.3	60	59.6	60.3
26/F	56.7	59.9	59.5	59.9	56.1	60.7	60.8	60.8	57.4	61.8	61.4	61.8	57.2	62.1	62.1	62.4	62.5	62.5	44.1	60.8	61	61.2	62.1	62.1	41.2	60.3	60	59.6	60.3
27/F	56.6	59.8	59.4	59.8	56	60.6	60.7	60.7	57.3	61.7	61.3	61.7	57.1	61.9	62.0	62.3	62.4	62.4	46.7	60.8	61	61.1	62	62.0	43.5	60.3	60	59.6	60.3
28/F	56.5	59.6	59.3	59.6	55.9	60.4	60.6	60.6	57.1	61.6	61.2	61.6	57	61.9	61.9	62.1	62.3	62.3	48.8	60.8	61	61.2	61.8	61.8	46.1	60.3	60.1	59.7	60.3
29/F	56.4	59.5	59.2	59.5	55.8	60.4	60.5	60.5	57.1	61.5	61	61.5	56.9	61.7	61.8	62	62.2	62.2	50.6	60.9	61.1	61.2	61.8	61.8	48.3	60.4	60.2	59.8	60.4
23/1	50.7	55.5	JJ.2	33.3	55.0	00.4	00.5	00.5	57.1	01.5	01	01.5	30.3	01.7	01.0	02	02.2	02.2	30.0	00.5	01.1	01.2	01.0	01.0	40.5	00.4	00.2	33.0	00.7

* * . .

XX Individual receiver with traffic noise level exceeding the standard of 70 dB(A) as stipulated in HKPSG are highlighed.

Block B - Mitigated Scenario (Implementation of fixed glazing)

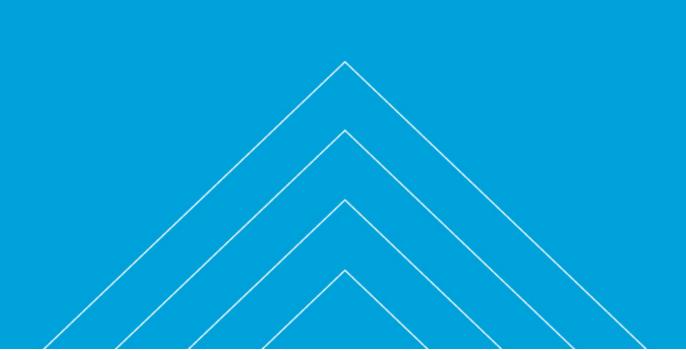
Block B	BB_22a	BB_22b	BB_22c	Max	BB_23a	BB_23b	BB_23c	Max	BB_24a	BB_24b	Max
G/F											
1/F											
2/F	55	60.1	59.9	60.1	50.2	58.7	57	58.7	29.6	55.5	55.5
3/F	55.9	61	61.1	61.1	50.4	60.1	59.2	60.1	29.6	57.7	57.7
4/F	56.9	61.3	61.5	61.5	50.4	60.6	59.7	60.6	29.5	58.3	58.3
5/F	57.2	61.4	61.6	61.6	50.3	60.7	59.8	60.7	29.5	58.4	58.4
6/F	57.2	61.4	61.6	61.6	50.3	60.6	59.7	60.6	29.5	58.3	58.3
7/F	57.1	61.3	61.6	61.6	50.2	60.5	59.6	60.5	29.5	58.2	58.2
8/F	57	61.3	61.5	61.5	50.1	60.4	59.5	60.4	29.5	58.1	58.1
9/F	57	61.2	61.4	61.4	50.1	60.3	59.4	60.3	29.5	58.1	58.1
10/F	56.9	61.1	61.3	61.3	50	60.2	59.3	60.2	29.5	58	58
11/F	56.8	61	61.2	61.2	50	60.2	59.3	60.2	29.4	57.9	57.9
12/F	56.7	60.9	61	61	49.9	60.1	59.2	60.1	29.4	57.8	57.8
13/F	56.6	60.7	60.9	60.9	49.8	59.9	59.1	59.9	29.4	57.7	57.7
14/F	56.5	60.6	60.8	60.8	49.7	59.8	59	59.8	29.3	57.6	57.6
15/F	56.4	60.5	60.7	60.7	49.7	59.7	58.9	59.7	29.3	57.5	57.5
16/F	56.4	60.4	60.5	60.5	49.6	59.6	58.8	59.6	29.2	57.4	57.4
17/F	56.3	60.3	60.4	60.4	49.6	59.5	58.6	59.5	29.3	57.3	57.3
18/F	56.2	60.1	60.3	60.3	49.5	59.4	58.5	59.4	29.3	57.2	57.2
19/F	56.1	60	60.2	60.2	49.5	59.3	58.4	59.3	29.4	57.1	57.1
20/F	56.1	59.9	60.1	60.1	49.4	59.2	58.3	59.2	29.5	57	57
21/F	56	59.8	60	60	49.4	59.1	58.2	59.1	29.5	56.9	56.9
22/F	55.9	59.7	59.9	59.9	49.4	59	58.1	59	29.5	56.9	56.9
23/F	55.8	59.6	59.8	59.8	49.4	58.9	58.1	58.9	29.6	56.8	56.8
24/F	55.8	59.5	59.7	59.7	49.4	58.8	58	58.8	29.6	56.7	56.7
25/F	55.7	59.5	59.6	59.6	49.5	58.7	57.9	58.7	29.6	56.7	56.7
26/F	55.7	59.4	59.6	59.6	49.8	58.7	57.9	58.7	31	56.7	56.7
27/F	55.7	59.5	59.6	59.6	50.1	58.7	58	58.7	33.6	56.9	56.9
28/F	55.8	59.5	59.7	59.7	50.6	58.7	58	58.7	37.3	56.9	56.9
29/F	56	59.6	59.8	59.8	51.4	58.7	58	58.7	44.1	57	57

* Note:

Summary of the Predicted Road Traffic Noise Compliance Rate							
	Blo	Block A		ck B			
dB(A)	Unit	%	Unit	%			
<= 70	614	91%	672	100%			
>=70	58.0	9%	0	0.0%			
Total	672		672				
Compliance Rate (%)	91%		100%				
Maxmuim Noise Level dB(A)	73.5		70.4				

Appendix G

Relevant Information of the Planned District Cooling System



The District Cooling System for Tung Chung New Town Extension (East)

PURPOSE

This paper seeks members' advice and support for the proposed provision of a District Cooling System (DCS) at the Tung Chung New Town Extension (East) (TCNTE(E)).

BACKGROUND

- 2. TCNTE(E) is one of the major initiatives for land supply in medium-term. The 2018 Policy Address, stated that the feasibility of providing DCS in TCNTE(E) would be studied to align with the Government's commitment to low-carbon development. As commercial buildings, hotels, schools and sports hall etc. are planned in TCNTE(E), it is anticipated that the cooling load demand would be sufficient to support the development of DCS.
- 3. DCS is a large-scale centralized air-conditioning system. It produces chilled water at central chiller plants and distributes the chilled water to user buildings for air-conditioning purpose. DCS is an energy-efficient air-conditioning system when compared with traditional air-cooled air-conditioning systems and individual water-cooled air-conditioning systems using cooling towers. Apart from energy conservation, DCS will bring benefits for individual users such as reduction of heat island effects in TCNTE(E), avoidance of noise and vibration nuisances arising from the operation of heat rejection equipment and chillers of air-conditioning plants, and more flexible building designs for user buildings to incorporate green features and renewable energy systems such as photovoltaic panels systems, since such heat rejection equipment and chillers will be unnecessary in user buildings using district cooling services.

PROPOSED SITE FOR DCS PLANT

- 4. The proposed DCS plant is located at the north western part of Area 120. The proposed location plan is shown in **Annex**.
- 5. The proposed site as indicated in the Outline Zoning Plan (OZP) for Tung Chung New Town Extension S/I-TCE/2 was designated as Government, Institution or Community (G/IC) use. According to the aforementioned OZP, the proposed DCS plant falls within Public Utility Installation in Column 1 of G/IC.

PROPOSAL

6. The proposed DCS comprises chiller plant cum seawater pump house, seawater pipes, chilled water distribution pipes and connection facilities at user buildings. The proposed DCS will

supply chilled water serving the public and private non-domestic developments including commercial buildings, hotels, schools and sports hall, etc. The proposed DCS at TCNTE(E) is planned to serve a total of about 700 000 square meters of non-domestic air-conditioned gross floor areas with about 123 megawatt of refrigeration cooling capacity. The proposed conceptual plan is shown in the **Annex**.

PROJECT IMPLEMENTATION

- 7. The scope of the proposed DCS at the TCNTE(E) comprises of chiller plant cum seawater pump house, seawater pipes, chilled water distribution pipes and connection facilities at user buildings.
- 8. EMSD plans to consult the Panel on Development of the Legislative Council (LegCo) in the fourth quarter of 2020. If the funding proposal is approved in the first quarter of 2021, the proposed works will commence subsequently and will be completed in phases. The entire project is anticipated for completion by 2034.

ADVICE SOUGHT

9. Members are invited to comment on the proposed DCS for TCNTE(E) and support the project.

Electrical and Mechanical Services Department October 2020

Annex Proposed Conceptual Plan of the DCS for TCNTE(E)

Annex Proposed Conceptual Plan of the DCS for TCNTE(E)



Appendix H

Not Use



Appendix I

Correspondence with TD and CEDD on Road Type of New Roads in Area 109



Kwok, Glory

From: Fanny Shuk Yee HUI <shukyeehui@td.gov.hk>

Sent: Friday, February 26, 2021 10:33 AM

To: Kwok, Glory

Cc: Himmy LH WONG; Shuk Man WONG

Subject: RE: Request for the information of road type in Tung Chung New Town Extension

Dear Glory,

I have no further comment please. Thanks.

Regards,

Fanny HUI E/Is2, TD

Tel: 2399 2423

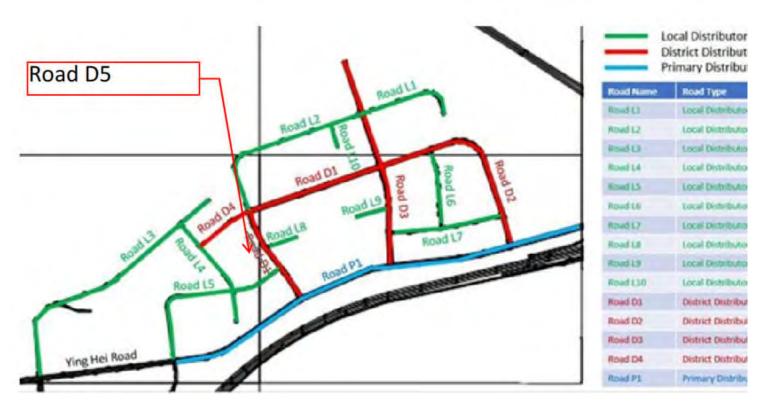
From: "Kwok, Glory" <Glory.Kwok@atkinsglobal.com>
To: Fanny Shuk Yee HUI <shukyeehui@td.gov.hk>

Date: 26/02/2021 10:32 AM

Subject: RE: Request for the information of road type in Tung Chung New Town Extension

Dear Fanny,

Thanks for your response. The road link between Road D1 and Road P1 is Road D5, which is 'district distributor'. Please see the below figure:



Grateful if you can comment on the road type on Road D5. Thanks!

Regards, Glory

From: Fanny Shuk Yee HUI <shukyeehui@td.gov.hk>

Sent: Thursday, February 25, 2021 8:01 PM

To: Kwok, Glory <Glory.Kwok@atkinsglobal.com>

Cc: Himmy LH WONG himmy LH WONG kimmy LH WONG <a href="mailto:kimmy.wong.wong.kimmy.wong.wong.kimmy.wong.

Subject: RE: Request for the information of road type in Tung Chung New Town Extension

Dear Glory,

I refer to your email.

I have no comment on the road types indicated.

Please be advised that the road link between Road P1 and Road D1 shall be named as Road D5.

Please clarify.

Thanks.

Regards,

Fanny HUI E/Is2, TD

Tel: 2399 2423

From: "Kwok, Glory" <<u>Glory.Kwok@atkinsglobal.com</u>>
To: Fanny Shuk Yee HUI <shukyeehui@td.gov.hk>

Cc: Shuk Man WONG <shukmanwong@td.gov.hk>, Himmy LH WONG <himmy.wong@housingauthority.gov.hk>

Date: 25/02/2021 11:38 AM

Subject: RE: Request for the information of road type in Tung Chung New Town Extension

Dear Fanny,

I am yet to get your response as regards the information of road type in Tung Chung East. Kindly give your reply, as your response is very important to us. Should you have any questions, please feel free to contact me at 2972-1257. Thank you for your kind assistance.

Regards, Glory

From: Shuk Man WONG <<u>shukmanwong@td.gov.hk</u>>

Sent: Wednesday, February 3, 2021 9:11 AM **To:** Fanny Shuk Yee HUI <shukyeehui@td.gov.hk>

Cc: Kwok, Glory <Glory.Kwok@atkinsglobal.com>

Subject: Fw: Request for the information of road type in Tung Chung New Town Extension

Dear Fanny,

Please handle.

Regards, Suman WONG E/LD, TD

Tel.: 2399 2730

----- Forwarded by Shuk Man WONG/TD/HKSARG on 2021/02/03 上午 09:09 -----

From: "Kwok, Glory" < Glory.Kwok@atkinsglobal.com > Shuk Man WONG < shukmanwong@td.gov.hk >

Cc: Himmy LH WONG himmy LH WONG himmy LH WONG himmy LH WONG himmy LH WONG himmy.wong@housingauthority.gov.hk>, "Law, Ruby" Ruby.Law@atkinsglobal.com>

Date: 2021/02/02 下午 05:50

Subject: FW: Request for the information of road type in Tung Chung New Town Extension

Dear Suman,

We are the consultant commissioned by the Hong Kong Housing Authority (HKHA) to carry out the Environmental Assessment Study (EAS) in Tung Chung Areas 103 and 109. According to Environmental Protector Department (EPD)'s comment, we need a confirmation of the road type on the concerned road by Transport Department. Grateful if you can comment on the road type of the below email (from Patrick Lam (AECOM)) at your earliest convenience.

Should you have any questions, please feel free to contact me at 2972 1257. Thank you for your kind assistance.

Regards,

Glory

From: Lam, Yin Leung Patrick < patrick.lam@aecom.com >

Sent: Wednesday, January 27, 2021 11:11 AM **To:** Kwok, Glory < Glory. Kwok@atkinsglobal.com >

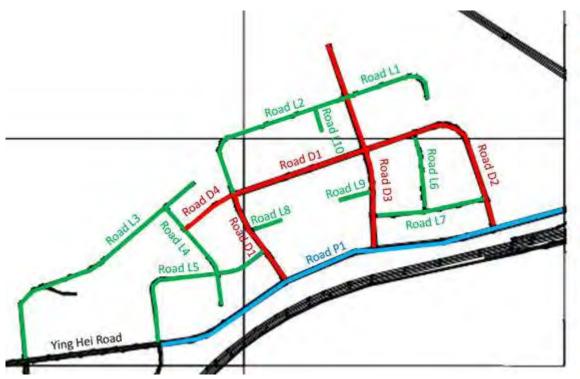
Cc: Himmy LH WONG < himmy.wong@housingauthority.gov.hk >; stlam@cedd.gov.hk; Law, Ruby < Ruby.Law@atkinsglobal.com >; Tse, Pandora < Pandora.Tse@atkinsglobal.com >; Wong, Wing

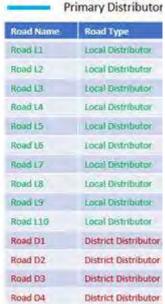
<Wing.Wong@atkinsglobal.com>

Subject: RE: Request for the information of road type in Tung Chung New Town Extension

Dear Glory,

Please see below figure for road type at TCE for your information.





Primary Distributor

Road P1

Local Distributor District Distributor

Best regards,

Patrick Lam, MICE CEng
Project Engineer, Transportation
D +852-3922-8428
patrick .lam@aecom.com

AECOM

11/F, Tower 2, Grand Central Plaza 138 Shatin Rural Committee Road Shatin, New Territories, Hong Kong T +852-3922-9000 aecom.com

Imagine it. Delivered.

微信 WeChat LinkedIn Twitter Facebook Instagram





From: Kwok, Glory < Glory. Kwok@atkinsglobal.com >

Sent: Wednesday, 27 January 2021 10:57 am

To: Lam, Yin Leung Patrick patrick.lam@aecom.com

Cc: Himmy LH WONG < himmy.wong@housingauthority.gov.hk >; stlam@cedd.gov.hk; Law, Ruby < Ruby.Law@atkinsglobal.com >; Tse, Pandora < Pandora.Tse@atkinsglobal.com >; Wong, Wing

<Wing.Wong@atkinsglobal.com>

Subject: [EXTERNAL] RE: Request for the information of road type in Tung Chung New Town Extension

Dear Patrick,

I am yet to get your response as regards the information of road type in Tung Chung East. Kindly give your reply, as your response is very important to us. Should you have any questions, please feel free to contact me at 2972 1257. Thank you for your kind assistance.

Regards, Glory

From: Kwok, Glory

Sent: Monday, December 14, 2020 5:11 PM

To: Lam, Yin Leung Patrick <patrick.lam@aecom.com>

Cc: Himmy LH WONG < himmy.wong@housingauthority.gov.hk; stlam@cedd.gov.hk; Law, Ruby < Ruby.Law@atkinsglobal.com; Tse, Pandora < Pandora.Tse@atkinsglobal.com; Wong, Wing

<Wing.Wong@atkinsglobal.com>

Subject: Request for the information of road type in Tung Chung New Town Extension

Dear Patrick,

We are the consultant commissioned by the Hong Kong Housing Authority (HKHA) to carry out the Environmental Assessment Study (EAS) in Tung Chung Areas 103 and 109. As AECOM commissioned by CEDD is conducting the Preliminary Environmental Study (PER) for the entire Tung Chung New Town Extension, it has been acquired the correspondence/confirmation with Transport Department (TD) on the road type in Tung Chung New Town Extension.

It would be highly appreciated if you can provide the required information for our study, preferably by **22 December 2020** if possible. The location plan for our study is attached for your reference. Should you have any questions, please feel free to contact me at 2972 1257. Thank you for your kind assistance.

Regards,

Glory Kwok

Environmental Consultant, Environment Design Engineering Services

+852 2972 1257

13th Floor Wharf T&T Centre Harbour City Tsim Sha Tsui Kowloon, Hong Kong

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Fax: +852 2890 6343Tel: +852 2972 1000

Fax: +852 2890 6343

香港房屋委員會 Hong Kong Housing Authority

Our Ref. HD(P) 8/3/IS21 Your Ref. A/I-TCE/2 Tel No. 2761 5316

Fax No. 2761 5870

Date: 26th January 2022

By Email

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

Dear Sir/ Madam,

Section 16 Planning Application for Proposed Minor Relaxation of Plot Ratio Restriction for Public Housing Development at Area 109, Tung Chung, Lantau Island

We submit herewith Further Information in response to comments from **Lands Department** to substantiate the captioned application.

Item (i)

The design population for Tung Chung Area 109 is 3,763, while the population adopted in the Sewerage Impact Assessment (SIA) is 4,113 which is for assessment purposes only; therefore, the population adopted in the SIA is correct and serves as a design buffer for assessment purposes.

Item (ii)

Para 1.1.1 in the Sewerage Impact Assessment has been amended (*Appendix 1*).

Should you have any queries or need further information, please do not hesitate to contact me at 2761 5316. Thank you for your attention.

Yours faithfully,

(Y.S. CHAN)
Planning Officer/ 16
for Director of Housing

Encl.

Hong Kong Housing Authority

Agreement No. CB20180310 HKHA Term Engineering Consultancy Services 2018-2020

1.0 Introduction

1.1 Background

- 1.1.1 Civil Engineering and Development Department (CEDD) is carrying out reclamation and infrastructure works for the development of Tung Chung New Town Extension (TCNTE) East. In response to the policy on site optimisation and intensification, CEDD has carried out studies to assess the potential increase of housing provision in Tung Chung East. Tung Chung Area 109 (hereinafter refer as "the Subject Site") at Tung Chung East is being explored (See Appendix A). Tentatively, the proposed public housing development at the Subject Site is targeted to complete in year 2025/26.
- 1.1.2 Mannings (Asia) Consultants Ltd has been commissioned by the Hong Kong Housing Authority (HKHA) under the Agreement No. CB20180310 HKHA Term Engineering Consultancy Services 2018-2020 to undertake the Sewerage Impact Assessment (SIA) (hereinafter refer as "the Subject Study") to support the s.16 planning application for the proposed public housing development at the Subject Site.

1.2 Study Objective

- 1.2.1 The objective of the study is:
 - To assess the sewerage impact to the proposed gravity sewers and the pumping station.
- 1.2.2 The major tasks to achieve these objectives include:
 - To evaluate the Average Dry Weather Flow (ADWF) generated from the increased population of Area 109; and
 - Assess the impacts of increased population in Area 109 to the proposed sewerage system.

香港房屋委員會 Hong Kong Housing Authority

Our Ref. HD(P) 8/3/IS21

Tel No. 2761 5316

Your Ref. A/I-TCE/2

Fax No. 2761 5870

Date: 14th February 2022

By Email

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

Dear Sir/ Madam,

Section 16 Planning Application for Proposed Minor Relaxation of Plot Ratio Restriction for Public Housing Development at Area 109, Tung Chung, Lantau Island

We submit herewith Further Information in response to public comments from Ms Mary Mulvihill and Civil Aviation Department to substantiate the captioned application.

(A) Ms Mary Mulvihill

Vehicles

Parking facility is provided based on the latest HKPSG parking requirements which require more parking spaces for public housing development as compared with previous HKPSG standard. Underground carpark is designed to maximize greenery on ground level.

Shops

Shops with alfresco dining would be determined by management and market considerations at a later stage.

(B) Civil Aviation Department

Acoustic windows have been incorporated for the flat units as necessary according to Environmental Assessment Study.

Please be advised that this Further Information supersedes our previous Further Information dated 10 February 2022.

Should you have any queries or need further information, please do not hesitate to contact me at 2761 5316. Thank you for your attention.

香港九龍何文田佛光街33號房屋委員會總辦事處

Housing Authority Headquarters, 33, Fat Kwong Street, Ho Man Tin, Kowloon, Hong Kong.

互聯網網址

Internet Homepage Address: http://www.housingauthority.gov.hk

Yours faithfully,

(Y.S. CHAN)
Planning Officer/ 16
for Director of Housing

Similar Application

Application No.	Location	Zoning	Date of Consideration	Decision of the RNTPC	Approval Condition
A/I-TCE/1 Proposed Minor Relaxation of PR Restriction for Permitted Public Housing Development and Proposed Public Vehicle Park	Government Land at Area 99, Tung Chung, Lantau Island	"R(A)3"	6.11.2020	Approved with condition	(a)

Approval Condition:

(a) the design and provision of vehicular access, car parking and loading/ unloading facilities to the satisfaction of the Commissioner for Transport or of the Town Planning Board.

tpbpd@pland.gov.hk

寄件者:

寄件日期:

2022年01月22日星期六 2:24

收件者:

tobod

主旨:

A/I-TCE/2 Area 109 Tung Chung PH

5-1

A/I-TCE/2

Government Land at Area 109, Tung Chung

Site area: About 12,000sq.m

Zoning: "Res (Group A) 5"

Applied development: MR PR / 2 Towers / 1,344 Units / 3.763sq.m OS / 195 Vehicle Parking

Dear TPB Members,

The comparison between the new PH estates and older ones is shocking when one looks at the significant diminution in the open space and recreational facilities. The only active recreation is Tai Chi and that can be done indoors.

Far too much space given to Item 8 – vehicles. The parking is underground so this should be via a ramp. All that should be required for ambulance, disabled, etc is one wide drive through lane.

NO GIC services even though the HKPSG shows that there is a deficit of 9 Neighbourhood Elderly Centres. Note that these are intended to serve not only PH tenants but also the growing numbers of elderly in private residences.

There is also a deficit of 250 Child Day Care places.

Outline Zoning Plan No. S/I-TCTC/23 29 Jan 2021

https://www.info.gov.hk/tpb/en/whats_new/S_I-TCTC_23/R_S_I-TCTC_23~Annex.pdf

Members should not accept the usual PlanD waffle that community services will be provided at some undetermined date. They are needed now and new developments, both public and private, should play a part in resolving the shortfalls.

Members should also ask if the shops will be allowed alfresco frontage so that patrons can relax in proximity to the DOS. The very popular alfresco facilities at The Pulse, Repulse Bay are an example of how how popular open air refreshment options are with the community.

Mary Mulvihill

Advisory Clauses

(a) to note the comments of the Chief Architect/CMD2, Architectural Services Department (CA/CMD2, ArchSD) that:

it is noted that some of the façade area at Block B are facing west, solar control devises should be considered to reduce solar heat gain and avoid glare as far as practicable.

(b) to note the comments of the Director-General of Civil Aviation (DG of CA) that:

the aircraft approaching and departing from the Hong Kong International Airport (HKIA) is one of the key existing noise sources which affects the Site. Although the Site falls outside the coverage of the Noise Exposure Forecast (NEF) 25 contour of the HKIA under the Three-Runway System operations, the Site is in close proximity to the HKIA which is a very busy airport operating 24 hours a day. Aircraft noise due to the overflights of approaching and departing aircraft is anticipated. In addition, the Site is in proximity to the helicopter holding areas and helicopter flight paths, which might also contribute to the noise environment. It is therefore recommended that appropriate noise mitigation measures, for example, the use of acoustic insulation to improve the indoor noise environment of future development, should be devised.

(c) to note the comments of the Director of Fire Services (D of FS) that:

detailed fire safety requirements will be formulated upon receipt of formal submission of general building plans. Furthermore, the emergency vehicular access provision in the Site shall comply with the standard as stipulated in Section 6, Part D of the Code of Practice for Fire Safety in Buildings 2011 under the Building (Planning) Regulation 41D which is administered by the Buildings Department.