2025 9月 12日
此文件在 收到，城市規劃委員會
只會在收到所有必要的資料及文件後才正式確認收到
申請的日期。

This document is received on 12 -09- 2025
The Town Planning Board will formally acknowledge
the date of receipt of the application only upon receipt
of all the required information and documents.

Form No. S16-I
表格第 S16-I 號

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

根據《城市規劃條例》(第131章)第16條遞交的許可申請

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

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

(ii) Temporary use/development of land and/or building not exceeding 3 years in rural areas or Regulated Areas; and
位於鄉郊地區或受規管地區土地上及/或建築物內進行為期不超過三年的臨時用途/發展;及

(iii) Renewal of permission for temporary use or development in rural areas or Regulated Areas
位於鄉郊地區或受規管地區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.tpb.gov.hk/en/plan_application/apply.html

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

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

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

& Please attach documentary proof 請夾附證明文件

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

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

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

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

7502088 11/9 By Hand

For Official Use Only 請勿填寫此欄	Application No. 申請編號	A/I-TC6/6
	Date Received 收到日期	2025-09-12

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

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

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

1. Name of Applicant 申請人姓名/名稱

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

Hong Kong Police Force

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

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

Townland Consultants Limited

3. Application Site 申請地點

(a) Full address / location / demarcation district and lot number (if applicable) 詳細地址／地點／丈量約份及地段號碼（如適用）	Tung Chung Areas 134 and 135, Lantau Island
(b) Site area and/or gross floor area involved 涉及的地盤面積及／或總樓面面積	☑Site area 地盤面積 4,876 sq.m 平方米 ☑About 約 ☑Gross floor area 總樓面面積 31,694 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）	4,876 sq.m 平方米 ☑About 約

(d) Name and number of the related statutory plan(s) 有關法定圖則的名稱及編號	Approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2
(e) Land use zone(s) involved 涉及的土地用途地帶	"Government, Institution or Community (1)" and "Government, Institution or Community" Zones
(f) Current use(s) 現時用途	Vacant (If there are any Government, institution or community facilities, please illustrate on plan and specify the use and gross floor area) (如有任何政府、機構或社區設施，請在圖則上顯示，並註明用途及總樓面面積)

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

The applicant 申請人 –

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

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

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

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

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

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

(b) The applicant 申請人 –

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

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

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

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

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

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

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

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

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

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

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

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

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

Others 其他

☐ others (please specify)
其他（請指明）

_____

_____

_____

_____

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

6. Type(s) of Application 申請類別

☐ Type (i) 第(i)類 Change of use within existing building or part thereof 更改現有建築物或其部分內的用途

☐ Type (ii) 第(ii)類 Diversion of stream / excavation of land / filling of land / filling of pond as required under Notes of Statutory Plan(s) 根據法定圖則《註釋》內所要求的河道改道／挖土／填土／填塘工程

☐ Type (iii) 第(iii)類 Public utility installation / Utility installation for private project 公用事業設施裝置/私人發展計劃的公用設施裝置

☑ Type (iv) 第(iv)類 Minor relaxation of stated development restriction(s) as provided under Notes of Statutory Plan(s) 略為放寬於法定圖則《註釋》內列明的發展限制

☑ 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

Note 1: May insert more than one「✓」.
註 1： 可在多於一個方格內加上「✓」號
Note 2: For Development involving columbarium use, please complete the table in the Appendix.
註 2： 如發展涉及靈灰安置所用途，請填妥於附件的表格。

(i) For Type (i) application 供第(i)類申請

(a) Total floor area involved 涉及的總樓面面積	sq.m 平方米		
(b) Proposed use(s)/development 擬議用途/發展	(If there are any Government, institution or community facilities, please illustrate on plan and specify the use and gross floor area) (如有任何政府、機構或社區設施，請在圖則上顯示，並註明用途及總樓面面積)		
(c) Number of storeys involved 涉及層數		Number of units involved 涉及單位數目	
(d) Proposed floor area 擬議樓面面積	Domestic part 住用部分 ..... sq.m 平方米 ☐About 約		
	Non-domestic part 非住用部分..... sq.m 平方米 ☐About 約		
	Total 總計 ..... sq.m 平方米 ☐About 約		

(e) Proposed uses of different 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)	Floor(s) 樓層	Current use(s) 現時用途	Proposed use(s) 擬議用途

(ii) For Type (ii) application 供第(ii)類申請

(a) Operation involved 涉及工程	☐ Diversion of stream 河道改道 ☐ Filling of pond 填塘 Area of filling 填塘面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填塘深度 ..... m 米 ☐About 約 ☐ Filling of land 填土 Area of filling 填土面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填土厚度 ..... m 米 ☐About 約 ☐ Excavation of land 挖土 Area of excavation 挖土面積 ..... sq.m 平方米 ☐About 約 Depth of excavation 挖土深度 ..... m 米 ☐About 約 (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) (請用圖則顯示有關土地、池塘界線，以及河道改道、填塘、填土及／或挖土的細節及/或範圍))
(b) Intended use/development 有意進行的用途／發展	

(iii) For Type (iii) application 供第(iii)類申請

(a) Nature and scale
性質及規模

☐ Public utility installation 公用事業設施裝置

☐ Utility installation for private project 私人發展計劃的公用設施裝置

Please specify the type and number of utility to be provided as well as the dimensions of each building/structure, where appropriate
請註明有關裝置的性質及數量，包括每座建築物/構築物(倘有)的長度、高度和闊度

Name/type of installation 裝置名稱／種類	Number of provision 數量	Dimension of each installation /building/structure (m) (LxWxH) 每個裝置／建築物／構築物的尺寸 (米) (長 x 闊 x 高)

(Please illustrate on plan the layout of the installation 請用圖則顯示裝置的布局)

(iv) For Type (iv) application 供第(iv)類申請

(a) Please specify the proposed minor relaxation of stated development restriction(s) and **also fill in the proposed use/development and development particulars in part (v) below** –
請列明擬議略為放寬的發展限制**並填妥於第(v)部分的擬議用途/發展及發展細節** –

☐	Plot ratio restriction 地積比率限制	From 由 ..... to 至 .....
☐	Gross floor area 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 -.....m 米 to 至 -..... m 米 From 由 70..... mPD 米 (主水平基準上) to 至 105.....mPD 米 (主水平基準上) From 由 -..... storeys 層 to 至 -..... storeys 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) For Type (v) application 供第(v)類申請

(a) Proposed use(s)/development 擬議用途/發展	Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone (Please illustrate the details of the proposal on a layout plan 請用平面圖說明建議詳情)

(b) Development Schedule 發展細節表

Proposed gross floor area (GFA) 擬議總樓面面積	31,694 sq.m 平方米	☑About 約
Proposed plot ratio 擬議地積比率	6.5	☑About 約
Proposed site coverage 擬議上蓋面積	above 15m: 37.5 / below 15m: 80 %	☑About 約
Proposed no. of blocks 擬議座數	2	
Proposed no. of storeys of each block 每座建築物的擬議層數	30 storeys 層 ☐ include 包括.....storeys of basements 層地庫 ☐ exclude 不包括.....storeys of basements 層地庫	
Proposed building height of each block 每座建築物的擬議高度	105 mPD 米(主水平基準上) ..... m 米	☑About 約 ☐About 約

☑ Domestic part 住用部分

GFA 總樓面面積	31,694 sq. m 平方米	☑About 約
number of Units 單位數目	432	
average unit size 單位平均面積	60.63 (in SFA) sq. m 平方米	☑About 約
estimated number of residents 估計住客數目	1,167	

☐ Non-domestic part 非住用部分

	GFA 總樓面面積	
☐ 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 concerned land area(s)/GFA(s) 請註明用途及有關的地面面積／總樓面面積)

.....

.....

.....

☐ 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地面面積／總樓面面積)

.....

.....

.....

☑ Open space 休憩用地 (please specify land area(s) 請註明地面面積)

☑ private open space 私人休憩用地	1,167 sq. m 平方米	☑ Not less than 不少於
☐ public open space 公眾休憩用地	..... sq. m 平方米	☐ Not less than 不少於

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

[Block number] [座數]	[Floor(s)] [層數]	[Proposed use(s)] [擬議用途]
1 and 2	G/F	Lobby, Carpark, Loading/ Unloading Bays, E&M Facilities
	1/F	Carpark
	2/F	Podium Garden
	3/F - 29/F	Flat

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

Landscaped areas, open space and internal road.

7. Anticipated Completion Time of the Development Proposal
擬議發展計劃的預計完成時間

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

Q4 2031

8. Vehicular Access Arrangement of the Development Proposal
擬議發展計劃的行車通道安排

Any vehicular access to the site/subject building? 是否有車路通往地盤／有關建築物？	Yes 是	☐ There is an existing access. (please indicate the street name, where appropriate) 有一條現有車路。(請註明車路名稱(如適用)) ..... ☑ There is a proposed access. (please illustrate on plan and specify the width) 有一條擬議車路。（請在圖則顯示，並註明車路的闊度）	
	No 否	☐	
Any provision of parking space for the proposed use(s)? 是否有為擬議用途提供停車位？	Yes 是	☑ (Please specify type(s) and number(s) and illustrate on plan) 請註明種類及數目並於圖則上顯示)	87 (including 2 nos. of accessible parking)
		Private Car Parking Spaces 私家車車位	
		Motorcycle Parking Spaces 電單車車位	13
		Light Goods Vehicle Parking Spaces 輕型貨車泊車位	
		Medium Goods Vehicle Parking Spaces 中型貨車泊車位	
		Heavy Goods Vehicle Parking Spaces 重型貨車泊車位	
		Others (Please Specify) 其他 (請列明)	
		_____	
		_____	
	No 否	☐	
Any provision of loading/unloading space for the proposed use(s)? 是否有為擬議用途提供上落客貨車位？	Yes 是	☑ (Please specify type(s) and number(s) and illustrate on plan) 請註明種類及數目並於圖則上顯示)	
		Taxi Spaces 的士車位	
		Coach Spaces 旅遊巴車位	
		Light Goods Vehicle Spaces 輕型貨車車位	
		Medium Goods Vehicle Spaces 中型貨車車位	
		Heavy Goods Vehicle Spaces 重型貨車車位	2
		Others (Please Specify) 其他 (請列明)	
		Refuse Collection Vehicle Space	1
		_____	
	No 否	☐	

9. Impacts of Development Proposal 擬議發展計劃的影響

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

Does the development proposal involve alteration of existing building? 擬議發展計劃是否包括現有建築物的改動?	Yes 是	☐ Please provide details 請提供詳情 ....
	No 否	☑
Does the development proposal involve the operation on the right? 擬議發展是否涉及右列的工程? (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	☑ (Please indicate on site plan the boundary of concerned land/pond(s), and particulars of stream diversion, the extent of filling of land/pond(s) and/or excavation of land) (請用地盤平面圖顯示有關土地／池塘界線，以及河道改道、填塘、填土及／或挖土的細節及/或範圍) ☐ Diversion of stream 河道改道 ☐ Filling of pond 填塘 Area of filling 填塘面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填塘深度 ..... m 米 ☐About 約 ☐ Filling of land 填土 Area of filling 填土面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填土厚度 ..... m 米 ☐About 約 ☑ Excavation of land 挖土 Area of excavation 挖土面積.....3,254..... sq.m 平方米 ☑About 約 Depth of excavation 挖土深度 .....4.5.....m 米 ☑About 約
	No 否	☐
Would the development proposal cause any adverse impacts? 擬議發展計劃會否造成不良影響？	On environment 對環境	Yes 會 ☐ No 不會 ☑
	On traffic 對交通	Yes 會 ☐ No 不會 ☑
	On water supply 對供水	Yes 會 ☐ No 不會 ☑
	On drainage 對排水	Yes 會 ☐ No 不會 ☑
	On slopes 對斜坡	Yes 會 ☐ No 不會 ☑
	Affected by slopes 受斜坡影響	Yes 會 ☐ No 不會 ☑
	Landscape Impact 構成景觀影響	Yes 會 ☐ No 不會 ☑
	Tree Felling 砍伐樹木	Yes 會 ☐ No 不會 ☑
	Visual Impact 構成視覺影響	Yes 會 ☐ No 不會 ☑
	Others (Please Specify) 其他 (請列明)	Yes 會 ☐ No 不會 ☐
	_____ _____	
	Please state measure(s) to minimise the impact(s). For tree felling, please state the number, diameter at breast height and species of the affected trees (if possible) 請註明盡量減少影響的措施。如涉及砍伐樹木，請說明受影響樹木的數目、及胸高度的樹幹直徑及品種(倘可) N/A	

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 Supplementary Planning Statement.

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

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

LAU, VINCENT CHI KING
Name in Block Letters 姓名（請以正楷填寫）

ASSOCIATE DIRECTOR
Position (if applicable) 職位 （如適用）

Professional Qualification(s) 專業資格
☑ Member 會員 / ☐ Fellow of 資深會員
☑ HKIP 香港規劃師學會 / ☐ HKIA 香港建築師學會 /
☐ HKIS 香港測量師學會 / ☐ HKIE 香港工程師學會 /
☐ HKILA 香港園境師學會/ ☐ HKIUD 香港城市設計學會
☑ RPP 註冊專業規劃師 (RPP No. 378)
Others 其他 ..... MRTPI .....

on behalf of 代表 ..... Townland Consultants Limited .....
☑ Company 公司 / ☐ Organisation Name and Chop (if applicable) 機構名稱及蓋章（如適用）

Date 日期 ..... 11/09/2025 ..... (DD/MM/YYYY 日/月/年)

Remark 備註

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

Warning 警告

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

Statement on Personal Data 個人資料的聲明

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

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

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

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

Ash interment capacity 骨灰安放容量@

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

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

Total number of niches 龕位總數 _____

Total number of single niches
單人龕位總數 _____

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

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

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

Total number of double niches
雙人龕位總數 _____

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

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

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

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

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

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

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

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

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

Proposed operating hours 擬議營運時間 _____

_____

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

Gist of Application 申請摘要

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

Application No. 申請編號	(For Official Use Only) (請勿填寫此欄)
Location/address 位置／地址	Tung Chung Areas 134 and 135, Lantau Island 大嶼山東涌第134及135區
Site area 地盤面積	4,876 sq. m 平方米 ☑ About 約 (includes Government land of 包括政府土地 4,876 sq. m 平方米 ☑ About 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	"Government, Institution or Community (1)" and "Government, Institution or Community" 「政府、機構或社區（1）」及「政府、機構或社區」
Applied use/ development 申請用途/發展	Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone 擬議略為放寬建築物高度限制以於「政府、機構或社區（1）」地帶作准許分層住宅（已婚警務人員宿舍）用途及擬議於「政府、機構或社區」地帶作分層住宅（已婚警務人員宿舍）用途

		sq.m 平方米	Plot Ratio 地積比率
(i) Gross floor area and/or plot ratio 總樓面面積及／或地積比率	Domestic 住用	31,694 ☑ About 約 ☐ Not more than 不多於	6.5 ☑About 約 ☐Not more than 不多於
	Non-domestic 非住用	☐ About 約 ☐ Not more than 不多於	☐About 約 ☐Not more than 不多於
(ii) No. of blocks 幢數	Domestic 住用	2	
	Non-domestic 非住用	-	
	Composite 綜合用途	-	

(iii)	Building height/No. of storeys 建築物高度／層數	Domestic 住用	- m 米 ☐ (Not more than 不多於)
			105 mPD 米(主水平基準上) ☑ (Not more than 不多於)
			30 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* ☐ *Podium 平台)*
		Composite 綜合用途	- m 米 ☐ (Not more than 不多於)
			- mPD 米(主水平基準上) ☐ (Not more than 不多於)
			- Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☐ Exclude 不包括* ☐ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
(iv)	Site coverage 上蓋面積	above 15m: 37.5% / below 15m: 80 % ☑ About 約	
(v)	No. of units 單位數目	432	
(vi)	Open space 休憩用地	Private 私人	1,167 sq.m 平方米 ☑ Not less than 不少於
		Public 公眾	- sq.m 平方米 ☐ Not less than 不少於

(vii) No. of parking spaces and loading / unloading spaces 停車位及上落客貨車位數目	Total no. of vehicle parking spaces 停車位總數	100
	Private Car Parking Spaces 私家車車位	87 (including 2 nos. of accessible parking)
	Motorcycle Parking Spaces 電單車車位	13
	Light Goods Vehicle Parking Spaces 輕型貨車泊車位	
	Medium Goods Vehicle Parking Spaces 中型貨車泊車位	
	Heavy Goods Vehicle Parking Spaces 重型貨車泊車位	
	Others (Please Specify) 其他 (請列明)	
	Total no. of vehicle loading/unloading bays/lay-bys 上落客貨車位／停車處總數	3
	Taxi Spaces 的士車位	
	Coach Spaces 旅遊巴車位	
	Light Goods Vehicle Spaces 輕型貨車車位	
	Medium Goods Vehicle Spaces 中型貨車位	
	Heavy Goods Vehicle Spaces 重型貨車車位	2
	Others (Please Specify) 其他 (請列明)	
	Refuse Collection Vehicle Space 垃圾收集車車位	1

Submitted Plans, Drawings and Documents 提交的圖則、繪圖及文件

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

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

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

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

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SECTION 16 PLANNING APPLICATION TOWN PLANNING ORDINANCE (CAP. 131)

PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY(1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

- Supplementary Planning Statement -

TOWNLAND CONSULTANTS LIMITED

PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY(1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

SECTION 16 PLANNING APPLICATION

Supplementary Planning Statement

Applicant	Hong Kong Police Force
Planning Consultant and Submitting Agent	Townland Consultants Limited
Architect	Ivanho Architect Limited
Landscape Architect and Visual Impact Specialist	Stephen Lai Studio Limited
Environmental and Infrastructural Consultant	Allied Environmental Consultants Limited
Traffic Consultant	CKM Asia Limited

File Reference: ASD/TCNTE

For and on behalf of Townland Consultants Limited

Approved by : _____

Position : Associate Director

Date : 11 September 2025

11 September 2025

CONTENTS

EXECUTIVE SUMMARY

1. INTRODUCTION

2. SITE AND PLANNING CONTEXT

2.1 Site Location and Delineation of Site Boundary
2.2 Surrounding Land Uses
2.3 Land Status
2.4 Accessibility

3. PLANNING CONTEXT

3.1 Statutory Planning Context
3.2 Non-Statutory Planning Context
3.3 Planning Precedents

4. THE DEVELOPMENT PROPOSAL

4.1 The Proposed JPOMQ with Minor Relaxation of BH Restriction
4.2 The Proposed Development
4.3 Internal Transport Arrangement
4.4 Conceptual Landscape Design
4.5 Development Programme

5. PLANNING JUSTIFICATIONS

5.1 In Line with Government Policy and Initiatives
5.2 Meeting the Strong Demand for DQs and Housing Needs
5.3 The Proposed BH is Compatible with TCE's Design Intent
5.4 No Adverse Environmental Impact
5.5 No Adverse Visual Impact
5.6 No Adverse Traffic Impact
5.7 No Adverse Infrastructural Impact
5.8 No Undesirable Precedent

6. CONCLUSION

APPENDICES

Appendix 1 Architectural Drawings
Appendix 2 Preliminary Environmental Review
Appendix 3 Visual Impact Assessment
Appendix 4 Traffic Impact Assessment
Appendix 5 Sewerage Impact Assessment
Appendix 6 Drainage Impact Assessment

EXECUTIVE SUMMARY

This Section 16 ("**S16**") Planning Application is submitted on behalf of Hong Kong Police Force ("**HKPF**" / the "**Applicant**"), to seek permission from the Town Planning Board ("**TPB**"/ "the **BOARD)** for the Proposed Junior Police Officers Married Quarters ("**Proposed JPOMQ**") with Minor Relaxation of Building Height ("**BH**") Restriction at Tung Chung ("**TC**") Areas 134 and 135, Lantau Island ("**Application Site**"/ the "**Site**").

The Application Site is predominantly zoned "Government, Institution or Community (1)" ("**G/IC(1)**") with minor encroachment into the "Government, Institution or Community" ("**G/IC**") zone on the Approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2 ("**Approved OZP**"). The "G/IC" and "G/IC(1)" zones are subject to BH restrictions of 50mPD and 70mPD respectively. The Application Site is not subject to Plot Ratio ("**PR**") / Gross Floor Area ("**GFA**") restrictions. Whilst 'Flat (Government Staff Quarters only)' is a Column 1 use always permitted within the "G/IC(1)" zone, permission for 'Flat (not elsewhere specified)' within the "G/IC" zone is required.

To address HKPF's demand for departmental quarters ("**DQs**") for married junior police officers ("**JPOs**"), minor relaxation of BH Restriction of the "G/IC (1)" zone from 70mPD to 105mPD is hereby sought to optimise the site potential to increase DQ units supply and to facilitate the adoption of Modular Integrated Construction ("**MiC**") method. Permission for 'Flat (not elsewhere specified)' use within the "G/IC" zone is also being sought under the current S16 Planning Application.

The Proposed JPOMQ is justified on the following grounds:

- The Proposed JPOMQ with minor relaxation of BH Restriction is in line with the Statutory Planning Intention of the "G/IC" zone and Government Policy and Initiatives to fully utilise the development potential of the Application Site and facilitate the adoption of MiC method;

- The Proposed JPOMQ helps meet the pressing demand for DQs units and allow for more efficient use of available land supply for housing supply;

- The Proposed BH is compatible with the surrounding development context and will not jeopardise the stepped building height profile in the TC East;

- The Proposed JPOMQ will not set an undesirable precedent; and

- The Proposed JPOMQ will not induce adverse infrastructural, environmental and visual impacts.

Based on the above justifications and as detailed in this Supplementary Planning Statement, we respectfully request the BOARD to give favourable consideration to this Application.

行政摘要

（內文如有差異，以英文版本為準）

根據《城市規劃條例》第十六條，我司代表香港警務處（下稱「**警務處**」或「**申請人**」）向城市規劃委員會（下稱「**城規會**」）呈交規劃申請書，請求批准於大嶼山東涌第 134 及 135 區（下稱「**申請地點**」或「**地盤**」）興建擬議已婚初級警務人員宿舍（下稱「**擬議警察宿舍**」）並略為放寬建築物高度限制。

申請地點主要座落於《東涌擴展區分區計劃大綱核准圖編號 S / I-TCE / 2》（下稱「**核准圖**」）中的「政府、機構或社區（1）」地帶並略微延伸至毗連「政府、機構或社區」地帶。「政府、機構或社區」及「政府、機構或社區（1）」地帶的建築物高度限制分別為主水平基準以上 50 米及主水平基準以上 70 米。申請地點不受任何地積比率或總樓面面積限制。儘管「分層住宅 （只限政府員工宿舍）」屬「政府、機構或社區（1）」地帶第一欄經常准許的用途，但「分層住宅 (未另有列明者) 」屬「政府、機構或社區」地帶中須先向城規會申請的用途。

為滿足警務處已婚初級警務人員對部門宿舍的需求，此申請擬議把「政府、機構或社區（1）」地帶的建築物高度限制由主水平基準以上 70 米略為放寬至主水平基準以上 105 米，以釋放地盤發展潛力、增加部門宿舍單位供應和推展採用「組裝合成」建築法。申請人亦會就「政府、機構或社區」地帶中的「分層住宅 (未另有列明者) 」作出申請。

擬議警察宿舍具備以下充分理據的支持：

- 擬議警察宿舍並略為放寬建築物高度限制符合「政府、機構或社區」地帶的法定規劃意向及政府政策和措施，旨在充分釋放申請地點的發展潛力並推展採用「組裝合成」建築法；
- 擬議警察宿舍有助滿足部門宿舍單位的迫切需求，並能更有效地運用現有土地資源以增加房屋供應；
- 擬議建築高度與周邊發展相容，並且不會破壞東涌東的梯級式建築設計；
- 擬議警察宿舍將不會立下不良先例；及
- 擬議警察宿舍將不會造成負面基礎建設、環境和視覺影響。

基於上述支持理據及此補充規劃文件內的詳述資料，懇請城規會委員對是項申請作出正面的考慮。

Reference: ASD/TCNTE
Date: 11 September 2025

TO THE TOWN PLANNING BOARD:

SECTION 16 PLANNING APPLICATION
THE TOWN PLANNING ORDINANCE (CHAPTER 131)

PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

1. INTRODUCTION

1.1 We are instructed by the Hong Kong Police Force ("**HKPF**" / the "**Applicant**") to submit this Section 16 ("**S16**") Planning Application to seek permission from the Town Planning Board ("**TPB**"/ the "**BOARD**") for the Proposed Junior Police Officers Married Quarters ("**Proposed JPOMQ**") with Minor Relaxation of Building Height ("**BH**") Restriction at Tung Chung ("**TC**") Areas 134 and 135, Lantau Island ("**Application Site**"/ the "**Site**").

1.2 The Application Site is located in Tung Chung East ("**TCE**") of Tung Chung New Town Extension ("**TCNTE**") and is reserved for the development of a Police Married Quarters ("**PMQ**") per the Adopted Tung Chung Extension Area Outline Development Plan No. D/I-TCE/1 ("**Adopted ODP**"). According to the Approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2 ("**Approved OZP**") gazetted on 17 February 2017, the Application Site is predominantly zoned "Government, Institution or Community (1)" ("**G/IC(1)**") with minor encroachment into the "Government, Institution or Community" ("**G/IC**") zone. The "G/IC" and "G/IC(1)" zones are subject to BH restrictions of 50mPD and 70mPD respectively.

1.3 To address HKPF's demand for departmental quarters ("**DQs**") for married junior police officers ("**JPOs**"), minor relaxation of BH Restriction of the "G/IC (1)" zone from 70mPD to 105mPD is hereby sought to optimise the site potential to increase DQ units supply and to facilitate the adoption of Modular Integrated Construction ("**MiC**") method. Whilst 'Flat (Government Staff Quarters only)' is a Column 1 use always permitted within the "G/IC(1)" zone, permission for 'Flat (not elsewhere specified)' within the "G/IC" zone is required and is also being sought under the current S16 Planning Application.

1.4 This Supplementary Planning Statement ("**SPS**") provides information on the Application to facilitate the BOARD's consideration. The following Sections will provide a description of the Application Site and its surroundings, the planning context, details of the Proposed JPOMQ and justifications in support of the Application.

2. SITE AND PLANNING CONTEXT

2.1 Site Location and Delineation of Site Boundary

2.1.1 The Application Site is located on newly reclaimed land in TC Areas 134 and 135 at the junction of planned Road D2 and Road L7, north of the North Lantau Highway and railway tracks of the MTR Tung Chung and Airport Express Lines (***Figures 2.1 and 2.2*** refers). The Application Site is also located in proximity to the Hong Kong International Airport and falls within the Airport Height Restriction ("**AHR**") band of 145mPD to 180mPD. Per the Adopted ODP, the Application Site abuts a site planned for other educational uses at TC Area 135 to the north and a planned public housing site at TC Area 133C to the west. As agreed with Education Bureau ("**EDB**"), a minor northward adjustment to the northern boundary abutting TC Area 135 (involving an area of about 289m^2) has been made to optimise the developable area for the Proposed JPOMQ. Furthermore, a corner splay (lead to a reduction in site area of about 76m^2) facing the junction of the planned Road D2 and Road L7 has been incorporated to improve the sightline of drivers and the pedestrian environment. In this regard, the Proposed Site Boundary is approx. 4,876m^2 (about 4,587m^2 and 289m^2 of the Site is zoned "G/IC(1)" and "G/IC" respectively).

2.1.2 The Application Site is currently undergoing site formation works coordinated by Civil Engineering and Development Department ("**CEDD**").

2.2 Surrounding Land Uses

2.2.1 The land use pattern around the Application Site is characterised by a mix of planned high-rise residential and commercial developments and Government, Institution and Community ("**GIC**") facilities (***Figure 2.2*** refers):

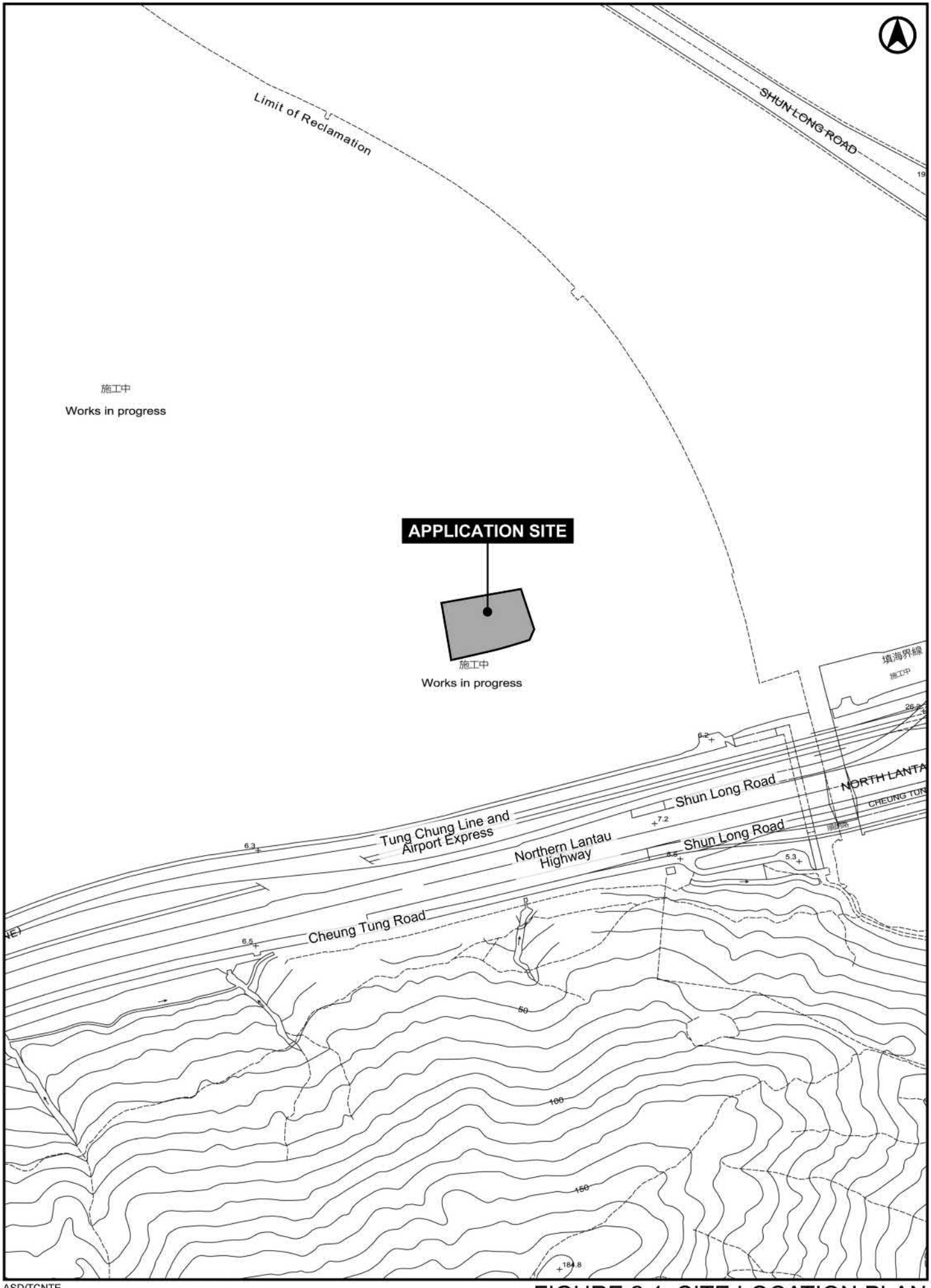
- Areas to the northeast, east and south of Site are mainly reserved for GIC facilities, including a sports ground at TC Area 138, a post-secondary institution and other educational uses at TC Area 137, a fire station at TC Area 136, a police station at TC Area 131 and a sewage pumping station at TC Area 132, while the site directly abutting the northern boundary of the Application Site is also reserved for other educational uses at TC Area 135. A planned waterfront promenade that runs in north-south direction is located to the further east of the Site.
- Two (2) planned commercial developments are located to the southwest of the Site at TC Areas 129 and 130. Along with the planned commercial and residential development cum public transport interchange ("**PTI**") at TC Area 113B located in close proximity to the planned MTR TCE Station at TC Area 112 to the further southwest of the Site, a commercial belt is envisioned along the North Lantau Highway to provide regional office/retail facilities.
- Three (3) planned public housing developments with local commercial and community facilities (e.g. kindergarten and social welfare facilities) at TC Areas 133A, 133B and 133C are located to the west and northwest of the Site. A S16 Planning Application (Application No. A/I-TCE/4) for Minor Relaxation of Plot Ratio ("**PR**") and BH Restrictions was approved on 21 June 2024 for the planned public housing sites. A PTI is also planned at TC Area 133B.

2.3 Land Status

2.3.1 The Application Site is situated within the Simplified Temporary Land Allocation No. GLA-TIS 117/2017 which is currently allocated to CEDD for the reclamation, site formation and infrastructural works for TCE. The Site will be handed over upon completion of site formation works.

2.4 Accessibility

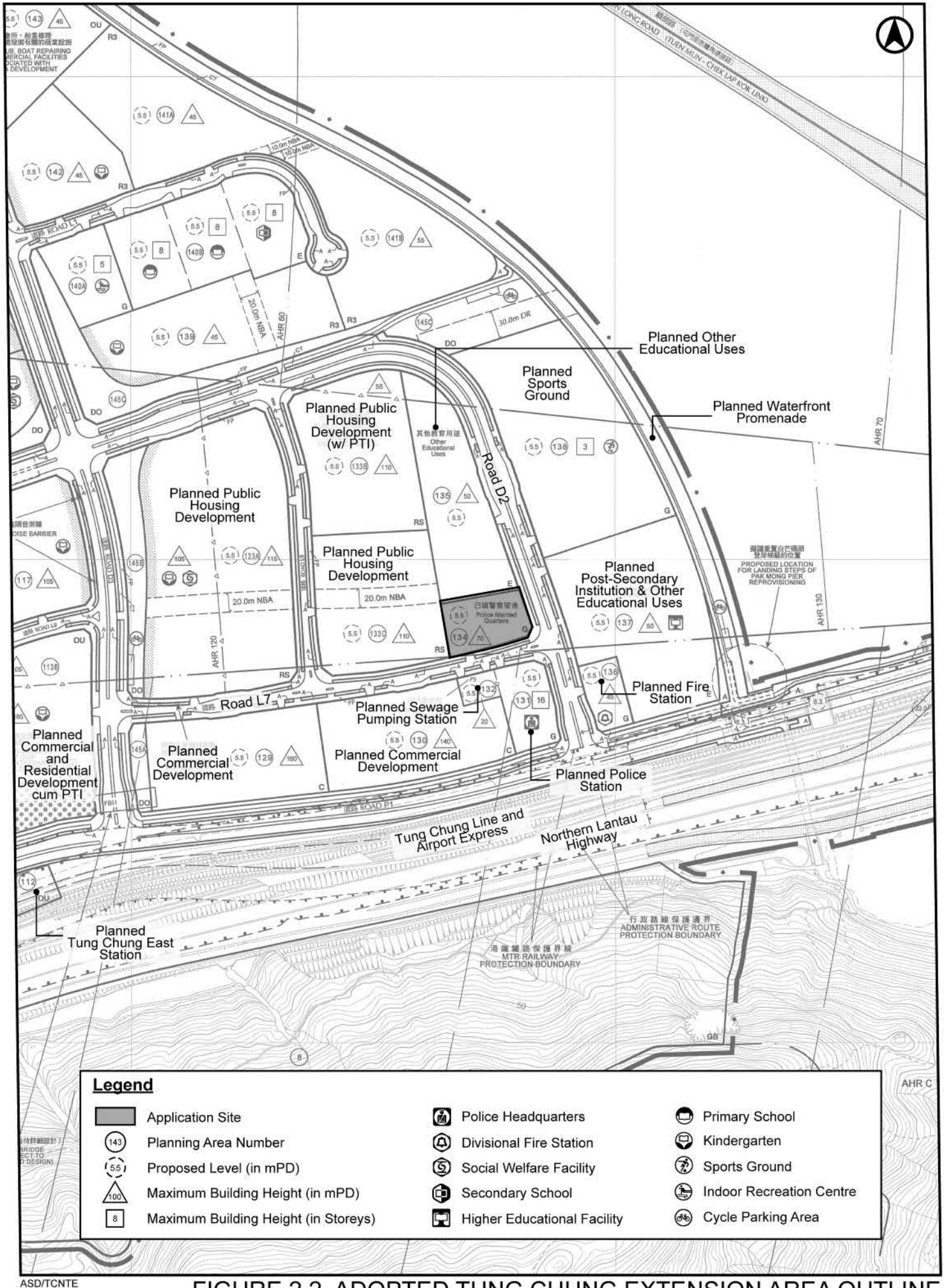
2.4.1 The Application Site will be accessible via planned Road L7 which will conveniently connect the Site to North Lantau Highway. The planned MTR TCE Station will be located approx. 600m to the southwest of the Site serving the future residents of TCE. Two (2) planned PTIs are located at TC Area 113 to the further west of the Site and Area 133B to the northwest of the Site respectively (***Figure 2.2*** refers).



ASD/TCNTE

FIGURE 2.1 SITE LOCATION PLAN

SCALE 1 : 5,000



ASD/TCNTE

FIGURE 2.2 ADOPTED TUNG CHUNG EXTENSION AREA OUTLINE DEVELOPMENT PLAN NO. D/I-TCE/1 (EXTRACT)

SCALE 1 : 5,000

3. PLANNING CONTEXT

3.1 Statutory Planning Context

Approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2

3.1.1 The Application Site is predominantly zoned "G/IC(1)" with a minor encroachment into the "G/IC" zone on the Approved OZP (***Figure 3.1*** refers). According to the Statutory Notes of the Approved OZP, the "G/IC" zone is intended "*primarily for the provision of Government, institution or community facilities serving the needs of the local residents and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments*".

3.1.2 While 'Flat (Government Staff Quarters only)' is a Column 1 use always permitted under the "G/IC(1)" zone, permission for 'Flat (not elsewhere specified)' in the "G/IC" zone is required. (***Figure 3.2*** refers).

3.1.3 In addition, the Approved OZP stipulates a BH restriction of 70mPD and 50mPD in the "G/IC(1)" and "G/IC" zones respectively. Based on individual merits of a development proposal, minor relaxation of the BH restrictions may be considered by TPB on application under S16 of the TPO.

3.1.4 The Application Site is not subject to PR / Gross Floor Area ("**GFA**") restrictions.

3.2 Non-Statutory Planning Context

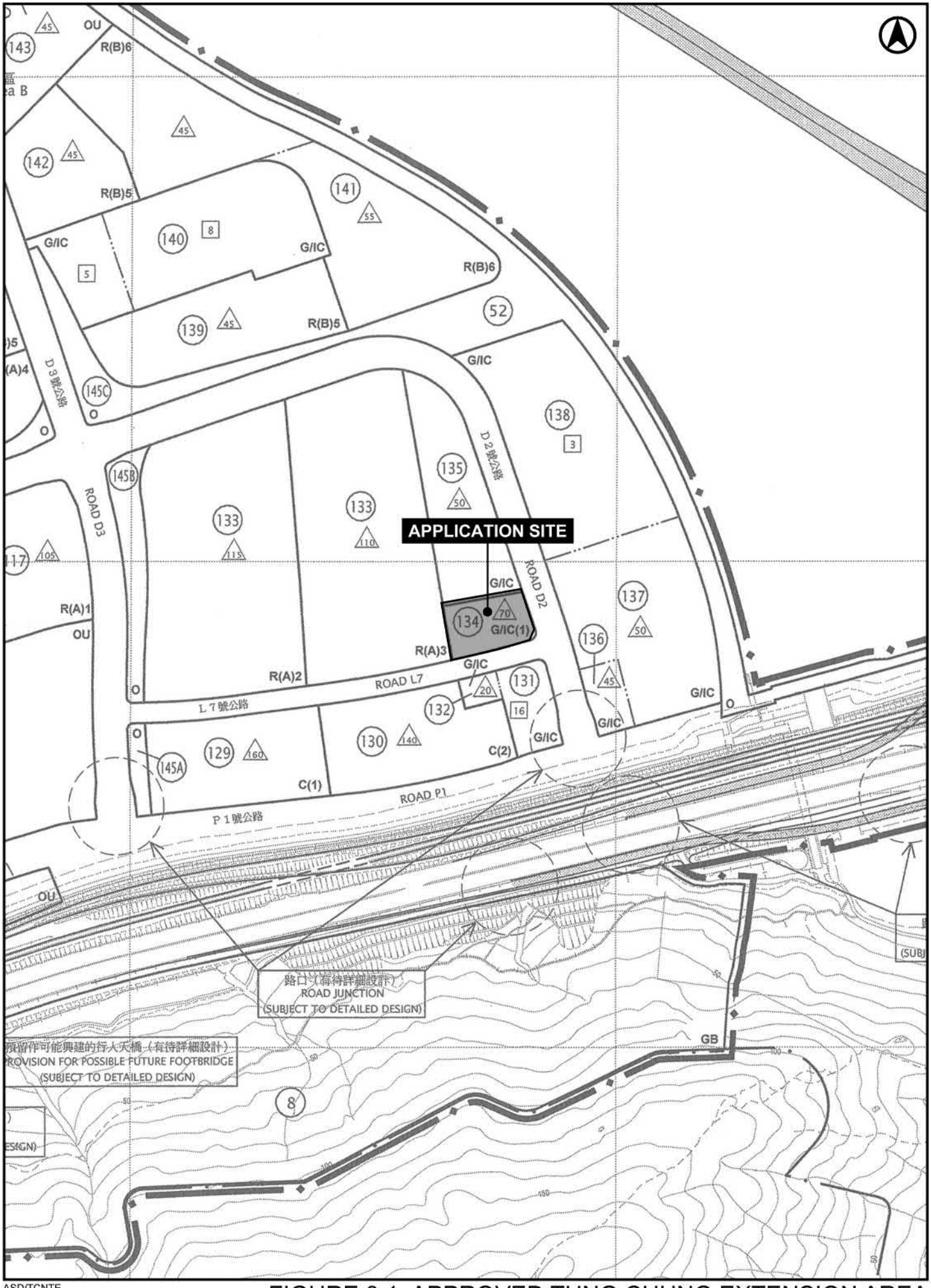
Tung Chung New Town Extension Study

3.2.1 To address the housing demand and development needs of the territory, CEDD and Planning Department ("**PlanD**") jointly commissioned the Planning and Engineering Study on the Remaining Development in Tung Chung - Feasibility Study (the "**P&E Study**") under Agreement No. CE 32/2011 (CE) in 2012. The overall objective of the P&E Study was to explore the feasibility of extending Tung Chung to the east and west to form an integrated new community with local employment opportunities and various community facilities to meet the demand of the local residents, and with a balance for development and conservation. Two potential expansion areas, namely TCE and Tung Chung West ("**TCW**"), were identified to the east and west of Tung Chung New Town for new developments. TCE, where the Application Site is located, was planned with housing and regional commercial developments to capitalise the accessibility to the planned MTR TCE Station.

3.2.2 According to the P&E Study, the Site is reserved for development of a PMQ as requested by the HKPF. There are no PR or GFA proposals pertaining the Application Site. Pursuant to the Preliminary Layout Plan formulated under the P&E Study ("**Preliminary Scheme**") (***Figure 3.3*** refers), one residential block with maximum BH of 70mPD was assumed on the Application Site. The initial development parameters were made reference to the Tuen Mun Wu Hong Police Quarters.

Policy Address

3.2.3 The Policy Address is the annual address made by the Chief Executive ("**CE**") of Hong Kong outlining the policy objectives of the Government for the following year. As reflected in past Policy Addresses, the Government is determined to increase the supply for DQs and enhance the speed and efficiency in land creation and housing provision. Optimisation of the use of existing land to unleash development potential is also one of the directives in addressing the shortfall of land.



ASD/TCNTE

FIGURE 3.1 APPROVED TUNG CHUNG EXTENSION AREA OUTLINE ZONING PLAN NO. S/I-TCE/2 (EXTRACT)

SCALE 1 : 5,000

GOVERNMENT, INSTITUTION OR COMMUNITY

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Ambulance Depot Animal Quarantine Centre (in Government building only) Broadcasting, Television and/or Film Studio Eating Place (Canteen, Cooked Food Centre only) Educational Institution Exhibition or Convention Hall Field Study/Education/Visitor Centre Flat (Government Staff Quarters only, on land designated "G/IC(1)" only) Government Refuse Collection Point Government Use (not elsewhere specified) Hospital Institutional Use (not elsewhere specified) Library Market Place of Recreation, Sports or Culture Public Clinic Public Convenience Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Recyclable Collection Centre Religious Institution Research, Design and Development Centre School Service Reservoir Social Welfare Facility Training Centre Wholesale Trade	Animal Boarding Establishment Animal Quarantine Centre (not elsewhere specified) Columbarium Correctional Institution Crematorium Driving School Eating Place (not elsewhere specified) Flat (not elsewhere specified) Funeral Facility Holiday Camp Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances Off-course Betting Centre Office Petrol Filling Station Place of Entertainment Private Club Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation Residential Institution Sewage Treatment/Screening Plant Shop and Services Utility Installation for Private Project

Planning Intention

This zone is intended primarily for the provision of Government, institution or community facilities serving the needs of the local residents and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments.

(Please see next page)

ASD/TCNTE

FIGURE 3.2 STATUTORY NOTES ATTACHED TO THE APPROVED TUNG CHUNG EXTENSION AREA OUTLINE ZONING PLAN NO. S/I-TCE/2 (EXTRACT)

GOVERNMENT, INSTITUTION OR COMMUNITY (Cont'd)

Remarks

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

(b) In determining the relevant maximum number of storeys for the purposes of paragraph (a) above, any basement floor(s) may be disregarded.

(c) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height restrictions stated in paragraph (a) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

ASD/TCNTE

FIGURE 3.2 (CONT'D) STATUTORY NOTES ATTACHED TO THE APPROVED TUNG CHUNG EXTENSION AREA OUTLINE ZONING PLAN NO. S/I-TCE/2 (EXTRACT)

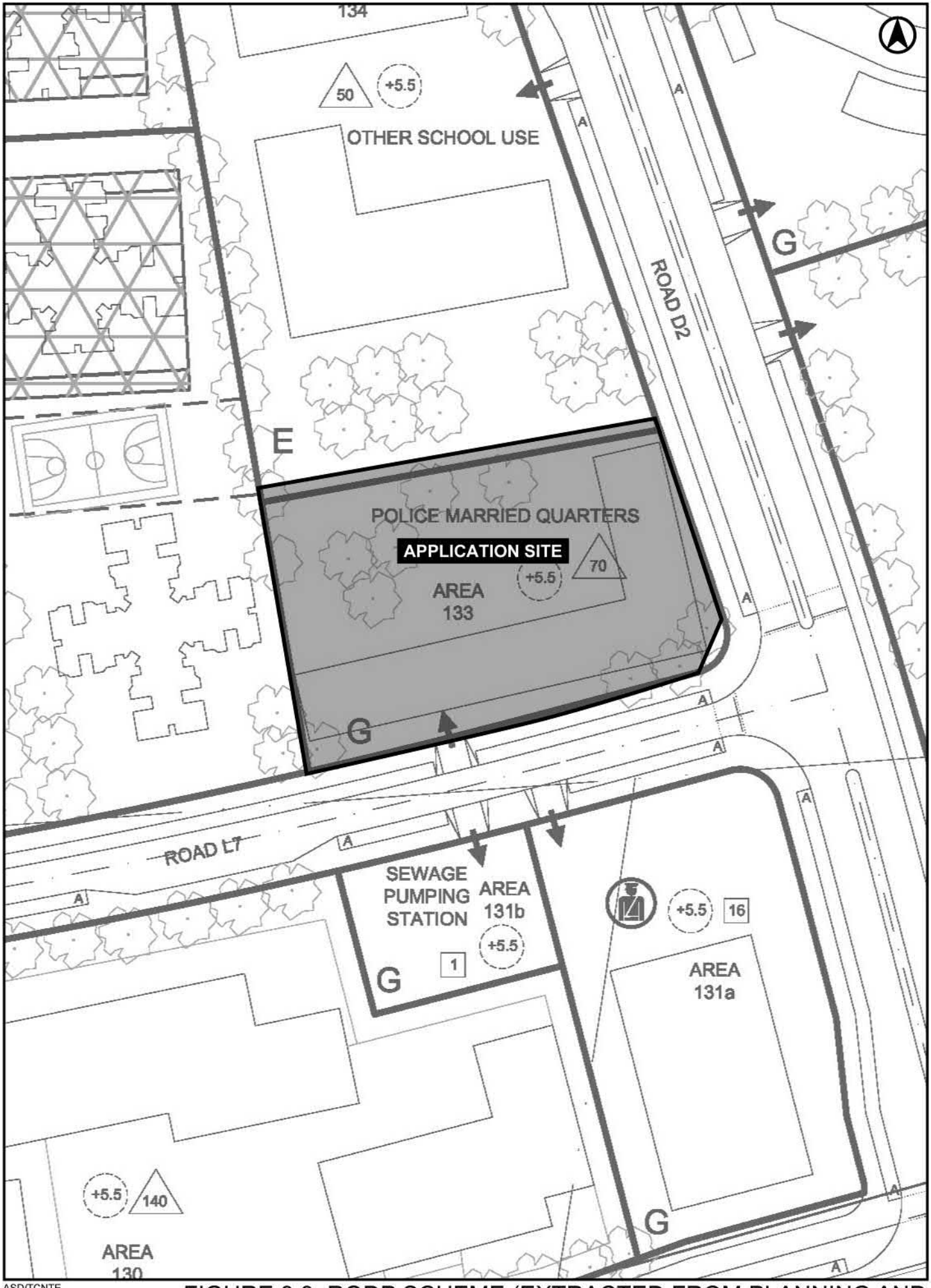


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FIGURE 3.3 RODP SCHEME (EXTRACTED FROM PLANNING AND ENGINEERING STUDY ON THE REMAINING DEVELOPMENT IN TUNG CHUNG - FEASIBILITY STUDY)

SCALE 1 : 1,000

3.2.4 Recognising the need to maintain quality and efficient administration of the Government, the Government is determined to expedite the DQs for disciplined services to alleviate the shortfall. As announced in the 2014 Policy Address, the Government would expedite eight (8) DQ projects for disciplined services, aiming at providing more than 2,200 units by 2020 (***Para. 191 of 2014 Policy Address*** refers). The initiatives to expedite DQ construction projects were also reflected in the Policy Agendas between 2015 – 2018.

3.2.5 Aside from emphasising on quantity via optimisation of land, the Government also encouraged a wider adoption of MiC method and other innovative construction approach in both public and private projects to shorten construction time, expedite the overall housing supply, reduce manpower in construction industry and enhance on-site safety. In the 2022 Policy Address, the Government recognised the need for wider adoption of MiC approach to enhance speed (***Para. 64 (iii) of 2022 Policy Address and P45 of Policy Measures*** refer). Identification for more suitable projects for adoption of the MiC approach to speed up construction remains as specified tasks under the 2023 and 2024 Policy Addresses.

*Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030 ("**HK2030+**")*

3.2.6 HK2030+ is a long-term planning framework that will guide Hong Kong's planning, land and infrastructure development, and shape Hong Kong's built and natural environment beyond 2030. HK2030+ recognises the importance of enhancing liveability in a compact high-density city while promoting the health, age-friendliness, well-being, and quality living environment of Hong Kong people. There is a stronger focus on quality of life and tackling the challenge of enhancing liveability in the high-density urban context of Hong Kong.

3.2.7 To enhance liveability in a compact high-density city, spatial planning and design shall be optimised and sufficient green spaces shall be provided. From the HK2030+, appropriate average flat sizes are identified to meet society's aspiration for more spacious living environment, which promotes child-raising, family-building, "ageing in place" and to attract talents (*Final Report of HK2030+* refers).

*Policy on the Adoption of MiC for New Building Works under the Capital Works Programme ("**CWP**")*

3.2.8 The Government is determined to lead by example in spearheading the wider adoption of MiC. According to Development Bureau ("**DevB**") Technical Circular (Works) ("**TC(W)**") No. 4/2024, new building works by the Government with total construction floor area larger than 300m^2 under the CWP to be tendered on or after 1 October 2024 shall adopt MiC as far as practicable. This Policy is applicable to a wide range of building types, including staff quarters, hostels, residential and care home, schools, office buildings, data centre and medical facilities. To avoid abortive design work and adverse impact to project cost and programme, consideration of adoption of MiC will be given in the early design stage.

3.3 Planning Precedents

3.3.1 There are a total of three (3) planning applications for minor relaxation of BH restrictions in the Approved OZP approved by the BOARD (***Table 3.1*** below refers).

Table 3.1 Approved Planning Applications for Minor Relaxation of BH restrictions in Approved OZP

TPB Ref No.	Application For	Zone	Address	Approval Date
A/I-TCE/5	Proposed Minor Relaxation of BH Restriction (105mPD to 108.39mPD) for Permitted Public Housing Development	"R(A)1"	Government Land at Area 114 and Area 117, Tung Chung, Lantau Island	Approved on 04/10/2024
A/I-TCE/4	Proposed Minor Relaxation of PR and BH Restrictions (115mPD to 135mPD; 110mPD to 130mPD; 110mPD to 125mPD) for Permitted Public Housing Development	Area 133A: "R(A)"2 and "O" Area 133B: "R(A)3" Area 133C: "R(A)3"	Government Land at Area 133A, Area 133B and Area 133C, Tung Chung, Lantau Island	Approved on 21/06/2024
A/I-TCE/3	Proposed Minor Relaxation of PR and BH Restrictions (110mPD to 125mPD) for Permitted Public Housing Development	"R(A)5"	Government Land at Area 103, Tung Chung, Lantau Island	Approved on 09/09/2022

3.3.2 Apart from similar planning precedents in the locality, there are numerous planning precedents for minor relaxation BH restrictions for the development of DQs. The details of the applications are listed in ***Table 3.2*** below.

Table 3.2 Approved Planning Applications for Minor Relaxation of BH restrictions for Development of DQs

TPB Ref No.	Application For	Zone	Address	Approval Date
A/K14/827	Proposed Minor Relaxation of BH Restriction (230mPD to 249.95mPD) for Permitted Government Use (Fire Station-cum-Ambulance Depot) and Proposed Flat (Departmental Quarters)	"G/IC(2)"	Government Land to the west of On Yu Road, Anderson Road Quarry Development, Kowloon	Approved with conditions on 27/10/2023
A/TKO/120	Proposed Flats (Departmental Quarters for Fire Services Department) with Permitted Fire Station-cum-Ambulance Depot and Minor Relaxation of BH Restriction (40m to 55.6m)	"G/IC (4)"	Government Land in Area 72, Tseung Kwan O	Approved with conditions on 04/09/2020
A/H3/440	Proposed Minor Relaxation of BH Restriction (80mPD to 104mPD) for Government Staff Quarters	"G/IC" and area shown as 'Road'	Western Police Married Quarters, 280 Des Voeux Road West, Sai Ying Pun, Hong Kong	Approved with conditions on 17/05/2019
A/TKO/105	Proposed Flat (Rank and File Quarters Units for Fire Services Department) and Proposed Minor Relaxation of BH Restriction (40m to 52m)	"G/IC (4)"	Government Land in Area 106, Pak Shing Kok, Tseung Kwan O	Approved with conditions on 18/03/2016
A/H15/266	Proposed Flat (Government Staff Quarters) with Minor Relaxation of BH Restriction (70mPD to 76.67mPD)	"G/IC"	Ex-Housing Department Staff Quarters site, Tin Wan Street, Tin Wan, Aberdeen	Approved with conditions on 08/01/2016

4. THE DEVELOPMENT PROPOSAL

4.1 The Proposed JPOMQ with Minor Relaxation of BH Restriction

4.1.1 To attract, retain and motivate staff to work in the disciplined services, it is the established policy of the Government to provide DQs to married disciplined services staff, subject to the availability of resources. As of July 2025, there is a shortfall of about 2,993 units for DQs for married JPOs of HKPF and the current average waiting time is 4.2 years. It is expected that there will be a continuing increase in the number of eligible staff for DQs in the future. In particular, with reference to the current structure of HKPF, Grades E to G[1] DQs are the most demanding types of DQs and HKPF is committed to enhancing the welfare of married JPOs by providing DQs with appropriate unit size for eligible applicants.

4.1.2 In this regard, opportunity is taken to fully utilise the development potential of the Application Site. Taking forward the design of the Proposed JPOMQ, the Applicant now proposes a two-tower design adopting a domestic PR of 6.5 providing 432 DQ units in varying sizes (from Grades E to G) for JPOs within the HKPF to address the pressing demand.

4.1.3 Minor relaxation of BH restriction from 70mPD to 105mPD is sought to accommodate the increased flat production in a cost-effective manner while adopting a balanced approach in accommodating various design requirements and overcoming design constraints (***Figure 4.1*** also refers), including:

Environmental Constraints

4.1.4 Under Chapter 9 of the Hong Kong Planning Standards and Guidelines ("**HKPSG**"), minimum horizontal buffer zones are recommended for major roads (i.e. 10m for planned Road D2 a primary distributor and 5m for planned Road L7 as a local distributor) to mitigate adverse air quality impact associated with open-air vehicular emissions. Due to the small size of the Application Site, the resultant area for the disposition of the residential towers after taking into consideration the horizontal buffer distances have limited the design flexibility.

4.1.5 The Application Site may also potentially be impacted by road traffic noise from planned Road L7 and Road D2 which would require the residential towers to incorporate some horizontal separation and unique orientation to face away from the road as a design solution, in addition to potential mitigation measures such as acoustic fins and acoustic windows, to help alleviate potential noise impacts arising from anticipated traffic.

Geotechnical Constraints and Exemption of GFA for Aboveground Carpark

4.1.6 The Site is located within the Designated Area of the Northshore Lantau which was identified with complex geological conditions that would increase the complexity and cost of constructing an underground carpark and ultimately hinder the construction programme.

4.1.7 Furthermore, per the Guidelines for Parking Provision for New Disciplined Services Quarters Projects promulgated by Security Bureau ("**SB**"), all GFA for aboveground ancillary parking spaces for disciplined services quarters can be disregarded. In this connection, an aboveground carpark is proposed to cater the ancillary parking spaces and for enhancing the cost-effectiveness of the Proposed JPOMQ.

[1] The unit sizes (in saleable floor area) for Grades E, F and G are 85m^2, 70m^2 and 55m^2 respectively.

ASD/TCNTE

FIGURE 4.1 SITE AND DESIGN CONSTRAINTS PLAN

Accommodating Building Design to Address Statutory/ Non-statutory Requirements

4.1.8 Due to the limited size of the Application Site, the design of the residential towers has to carefully consider the prescribed window requirements under the Building (Planning) Regulation ("**B(P)R**"). This has limited the number of flats that can be accommodated per floor and the required number of storeys. The Proposed JPOMQ will comply with Sustainable Building Design Guidelines ("**SBDG**"), which specifies minimum building separation with the adjacent development sites, further confining the disposition of the building.

4.1.9 Furthermore, B(P)R allows for a permissible site coverage ("**SC**") up to 37.5% for the Application Site, which limits the allowable floor space per floor for the residential towers and it is expected that the prevailing BH restriction would not be feasible to accommodate the targeted development intensity.

Adoption of MiC Method

4.1.10 To take forward the Government's initiative for wider adoption of MiC approach, the Proposed JPOMQ will adopt MiC method for the construction of the residential towers. Under current technology, the adoption of MiC normally involves thickened/ double slabs between MiC modules, resulting in an increase in storey height of MiC floor and hence in the overall BH of the building.

4.2 The Proposed Development

4.2.1 The Proposed JPOMQ consists of two (2) 27-storey residential towers atop a 3-storey podium, providing a total of 432 units. G/F and 1/F of the podium mainly accommodate the car park, loading/ unloading ("**L/UL**") bays, electrical and mechanical ("**E&M**") facilities and lobby. A podium garden is proposed at 2/F for recreational uses by the residents. The area falling within the "G/IC" zone is proposed as at-grade landscaped area to respect the non-building area ("**NBA**") running in east-west direction at Area 133C that serves as a breezeway and view corridor.

4.2.2 The Proposed JPOMQ adopts a domestic PR of 6.5, which is on par with the nearby planned public housing development and the maximum recommended under Chapter 2 of HKPSG.

4.2.3 Under the P&E Study, a Preliminary Scheme with one (1) L-shaped residential tower was assumed. After the design review by the Applicant, two (2) cruciform-shaped residential towers atop a 3-storey podium were adopted with a view to eliminate the potential wall effect arising from the elongated façade under the Preliminary Scheme. Cruciform-shaped design would also better facilitate wind flowing from different directions than rectangular-shaped design and minimising the air ventilation impact to the downstream area. The residential towers are also strategically oriented away from planned Road L7 and Road D2 to minimise the traffic noise impact to the residents and enhance their well-being.

4.2.4 The Proposed JPOMQ will comply with the SBDG in terms of building separation, building setback and site coverage of greenery (***Appendix 1*** refers). The Applicant also intends to seek BEAM Plus Gold Certification introduced by Hong Kong Green Building Council upon completion.

4.2.5 The Technical and Accommodation Schedule provided in ***Table 4.1*** summarise the major development parameters, while the Architectural Drawings of the Proposed JPOMQ are furnished in ***Appendix 1***.

Table 4.1 Technical and Accommodation Schedule

TECHNICAL SCHEDULE	
Application Site Area	Approx. 4,876m^2
Proposed Total PR	6.5
Proposed Total GFA	Approx. 31,694m^2
Proposed SC	
Below 15m	Approx. 80%
Above 15m	Approx. 37.5%
Proposed Total No. of Units	About 432
Average Unit Size (in Saleable Floor Area)	Approx. 60.63m^2
Estimated Total Population[*1]	About 1,167
Proposed No. of Blocks	2
Proposed No. of Storeys	30
Proposed BH (Main Roof Level)	105mPD
ACCOMMODATION SCHEDULE	
G/F	Lobbies/ Carpark/ L/UL Bays/ E&M Facilities
1/F	Carpark
2/F	Podium Garden
3/F – 29/F	Flat

[*1] *2.7 persons per flat are assumed with reference to 2021 Population Census for Island District.*

4.2.6 As the building footprint is largely confined by various site and design constraints outlined at ***Section 4.1*** and considering the design requirement (i.e. adoption of MiC method and aboveground carpark), the attainable development intensity will be limited under the existing BH restriction of 70mPD. As illustrated with Section Plan in Appendix 1, only 15 domestic storeys can be constructed under the BH restriction of 70mPD. The flat production will be correspondingly reduced to 240 units (i.e. reduction of 192 units).

4.3 Internal Transport Arrangement

4.3.1 Vehicular access to the Application Site will be provided at Road L7 (***Appendix 1*** refers).

4.3.2 The Proposed JPOMQ will provide adequate internal transport provisions in accordance with HKPF user requirements with reference to the HKPSG recommendations (***Table 4.2*** below refers).

Table 4.2 Internal Transport Provision

Type	Proposed Provision
Parking Spaces	
Private Car	87 (included 10 for visitors and 2 for disabled)
Motorcycle	13
L/UL Bays	
Heavy Goods Vehicle	2
Refuse Collection Vehicle	1

4.4 Conceptual Landscape Design

4.4.1 The Application Site is located on newly reclaimed land without any existing vegetation. To improve the landscape amenity of the Application Site, 13 nos. of trees will be introduced within the Site at G/F and 2/F for amenity purposes. The greenery requirements under the SBDG and DevB TC(W) No. 3/2012 will be met.

4.4.2 The landscape design for the Proposed JPOMQ aims to improve the living quality of residents by providing ample of open space at the podium level. At the ground level, planting is proposed at the periphery of along Road L7 and Road D2 and the northern boundary. The proposed landscaping will not only provide screening to the man-made structure but also enhance the amenity of the pedestrian environment. A podium garden that contains intergeneration recreational facilities and communal open space is also proposed at 2/F. Private open space of 1m^2 per person (i.e. 1,167m^2) will be provided to serve the residents. A Landscape Master Plan ("**LMP**") is prepared to illustrate the indicative landscape design on the Site (***Appendix 1*** refers).

4.4.3 Due to security requirements associated with DQs of Disciplined Services Departments ("**DSDs**"), tall fence wall of about 4.5m at the site boundary will be required. The Proposed JPOMQ will incorporate at-grade planting outside the fence wall adjacent to the public footpath to provide visual relief and to mitigate potential adverse impacts to the pedestrian experience. In addition, edge planting at the podium garden is also proposed to soften the building edges and allow for more visible greenery when viewing from the pedestrian level. Overall, the landscape treatment to the Proposed JPOMQ would enhance the amenity of the public realm.

4.5 Development Programme

4.5.1 The site formation work for the Application Site is anticipated to be completed in 2027 and handed over to the Applicant for construction. The Proposed JPOMQ is expected to be completed in Q4 2031.

5. PLANNING JUSTIFICATIONS

5.1 In Line with Government Policy and Initiatives

5.1.1 The Proposed JPOMQ is compliant with the Statutory Intention of the "G/IC" zone, with the site earmarked for PMQ under the P&E Study and subsequently reflected in the use being always permitted within the "G/IC (1)" zone. The Proposed JPOMQ with minor relaxation of BH restriction is in line with Government policies on maximising flat production on the Application Site and improve land use efficiency. Approval of the S16 Planning Application will enable an additional 192 units (+80%) when compared to the scenario that the Proposed JPOMQ is only developed up to 70mPD (i.e. with 15 domestic storeys and 240 units).

5.1.2 Furthermore, given the Application Site is located near the fringe of 500m radius of the planned TCE railway station, enhancing the development intensity is deemed appropriate and in line with the Government objectives to fully unleashing the development potential of created land and enhancing liveability outlined in the Policy Addresses and HK2030+. MiC approach will also be adopted, ultimately shorten the construction time, reduce manpower and enhance safety in construction sites.

5.2 Meeting the Strong Demand for DQs and Housing Needs

5.2.1 As indicated at ***Para. 4.1.1***, there is an acute shortfall of DQs within HKPF and other DSDs, particularly for Grades E to G unit types. Whilst the SB and the DSDs are actively exploring the opportunities of constructing new DQs, there are constraints with the limited land supply. The Government is endeavoured to explore various options to increase the supply of DQs, including increasing the PR and relaxing the BH restrictions of sites earmarked for DQs development. The Proposed JPOMQ with minor relaxation of BH restriction will allow for more efficient use of available land supply to provide up to 432 DQ units for the HKPF in a timely manner without compromising the land supply for other development needs. In tandem with the redevelopment of Western Police Married Quarters (to be completed by Q1 2028), a total of about 972 DQ units will be supplied in the foreseeable future.

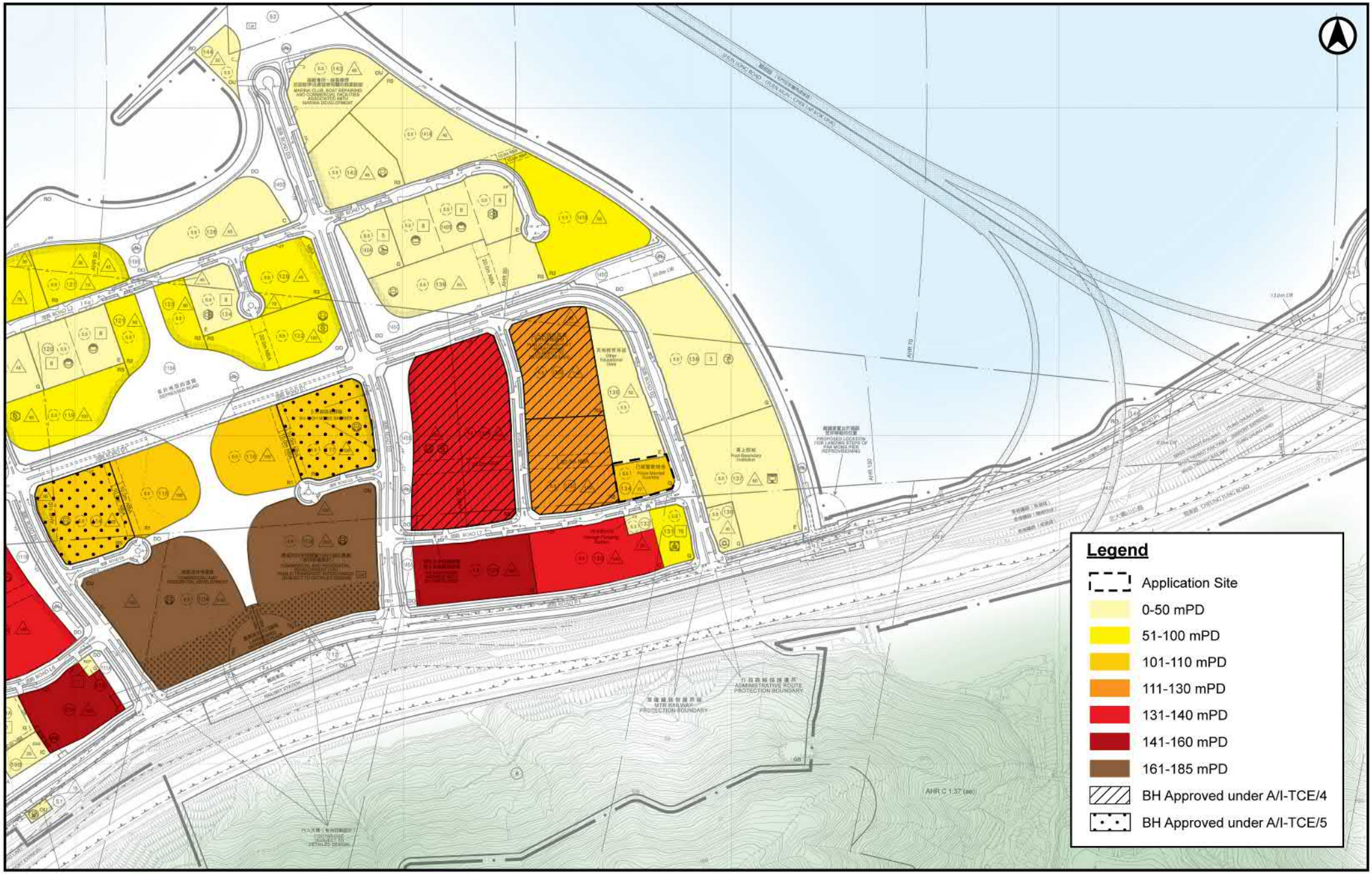
5.2.2 In order to speed up the development of the Proposed JPOMQ, aboveground ancillary car park with the 100% GFA exemption granted under Guidelines for Parking Provision for New Disciplined Services Quarters Projects promulgated by SB will be adopted, shortening the construction time and enable timely delivery of DQs units to meet the urgent demand without compromising the domestic GFA for flat production.

5.3 The Proposed BH is Compatible with TCE's Design Intent

5.3.1 The Proposed BH of 105mPD is compatible with the surrounding development context, comprising of high-rise residential and commercial developments, and the overall BH profile of TCE. According to the Approved OZP, a Stepped BH profile is adopted by which BHs are gradually reduced from the mountain backdrop in the south to the waterfront area in the north, creating a distinctive outline of a varied urban environment as well as respecting the current setting of the mountain and the sea. With consideration of the approved BHs (125mPD to 135mPD) under Application No. A/I-TCE/4 at Area 133 (i.e. to the west of the Site), the proposed BH of 105mPD for the Proposed JPOMQ will preserve a distinct height variation and descending BH profile towards the waterfront (***Figure 5.1*** refers).

5.3.2 TCE is also planned with various NBAs to serve as breezeways for facilitating the air circulation and promote urban climate in the locality. The Site is abutting an NBA running in east-west direction stipulated at Area 133C that allows for better air ventilation (***Figure 2.2*** refers). Whilst there is no NBA stipulated within the Application Site, no building structures of the Proposed JPOMQ is proposed within the "G/IC" zone to avoid encroachment into the planned breezeway. Instead, a landscaped area is proposed to enhance the amenity along the common boundary the planned educational use at Area 135. Furthermore, the podium and residential towers are proposed to set back from planned breezeway from Area 135 to enhance wind flow to the NBA as a good design feature.

5.3.3 Furthermore, the Proposed JPOMQ does not exceed the Airport Height Restriction prescribed under the Hong Kong Airport (Control of Obstructions) Ordinance (Cap. 301).



ASD/TCNTE

FIGURE 5.1 BUILDING HEIGHTS OF SURROUNDING PLANNED DEVELOPMENTS

SCALE 1 : 7,500

5.4 No Adverse Environmental Impact

5.4.1 A Preliminary Environmental Review ("**PER**") has been prepared to assess the potential environmental impacts on air quality, noise, water quality, land contamination and waste management arising from the Proposed JPOMQ. The results of the PER indicate that no insurmountable environment impact is anticipated with the proposed mitigation measures (***Appendix 2*** refers).

5.5 No Adverse Visual Impact

5.5.1 A Visual Impact Assessment ("**VIA**") has been conducted for the Proposed JPOMQ (***Appendix 3*** refers). A total of three (3) Viewpoints ("**VPs**") were identified and selected for assessment which best represents the key visual receivers looking towards the Proposed JPOMQ. The VIA concludes that the Proposed JPOMQ will incur slightly adverse impacts on the identified VPs. Mitigation measures such as landscape treatment at ground and podium level and light tone façade treatment will be explored at detailed design stage to soften the building edge and reduce the contrast with the open sky backdrop. The Proposed Minor Relaxation of BH Restriction is considered not incompatible with the surrounding context in terms of massing, scale and height.

5.6 No Adverse Traffic Impact

5.6.1 A Traffic Impact Assessment ("**TIA**") has been prepared to assess the traffic impact resulting from the implementation of the Proposed JPOMQ (***Appendix 4*** refers). The TIA concludes that no adverse traffic impact is anticipated on the surrounding road network and junctions with additional traffic generated by the Proposed JPOMQ.

5.7 No Adverse Infrastructural Impact

5.7.1 A Sewerage Impact Assessment ("**SIA**") was undertaken for the Proposed JPOMQ and is provided *in* ***Appendix 5***. The results of the SIA indicate that no insurmountable sewerage impact is anticipated as a result of the Proposed JPOMQ.

5.7.2 A Drainage Impact Assessment ("**DIA**") has also been conducted for the Proposed JPOMQ and is provided in ***Appendix 6***. The DIA concluded that there will be a reduction in the volume of runoff from the Site due to the introduction of greenery. No adverse drainage impact is anticipated with the proposed drainage arrangement.

5.8 No Undesirable Precedent

5.8.1 The Application Site will be occupied by a Government Staff Quarters and the minor relaxation of BH Restriction is to make better use of G/IC sites to allow for more flat production to satisfy the urgent housing need. Given the nature of the Application and its negligible impacts, approval of the Application is not likely to set an undesirable precedent.

6. CONCLUSION

6.1 This S16 Planning Application seeks planning permission from the BOARD for the Proposed JPOMQ with Minor Relaxation of BH Restriction from 70mPD to 105mPD at TC Areas 134 and 135, Lantau Island to address the demand for DQs for JPOs in the HKPF and facilitate the adoption of MiC method. It has been demonstrated in this SPS that the Proposal is justified on the following grounds:

- The Proposed JPOMQ with minor relaxation of BH Restriction is in line with the Statutory Planning Intention of the "G/IC" zone and Government Policy and Initiatives to fully utilise the development potential of the Application Site and facilitate the adoption of MiC method;
- The Proposed JPOMQ helps meet the pressing demand for DQs units and allow for more efficient use of available land supply for housing supply;
- The Proposed BH is compatible with the surrounding development context and will not jeopardise the stepped building height profile in the TCE;
- The Proposed JPOMQ will not set an undesirable precedent; and
- The Proposed JPOMQ will not induce adverse infrastructural, environmental and visual impacts.

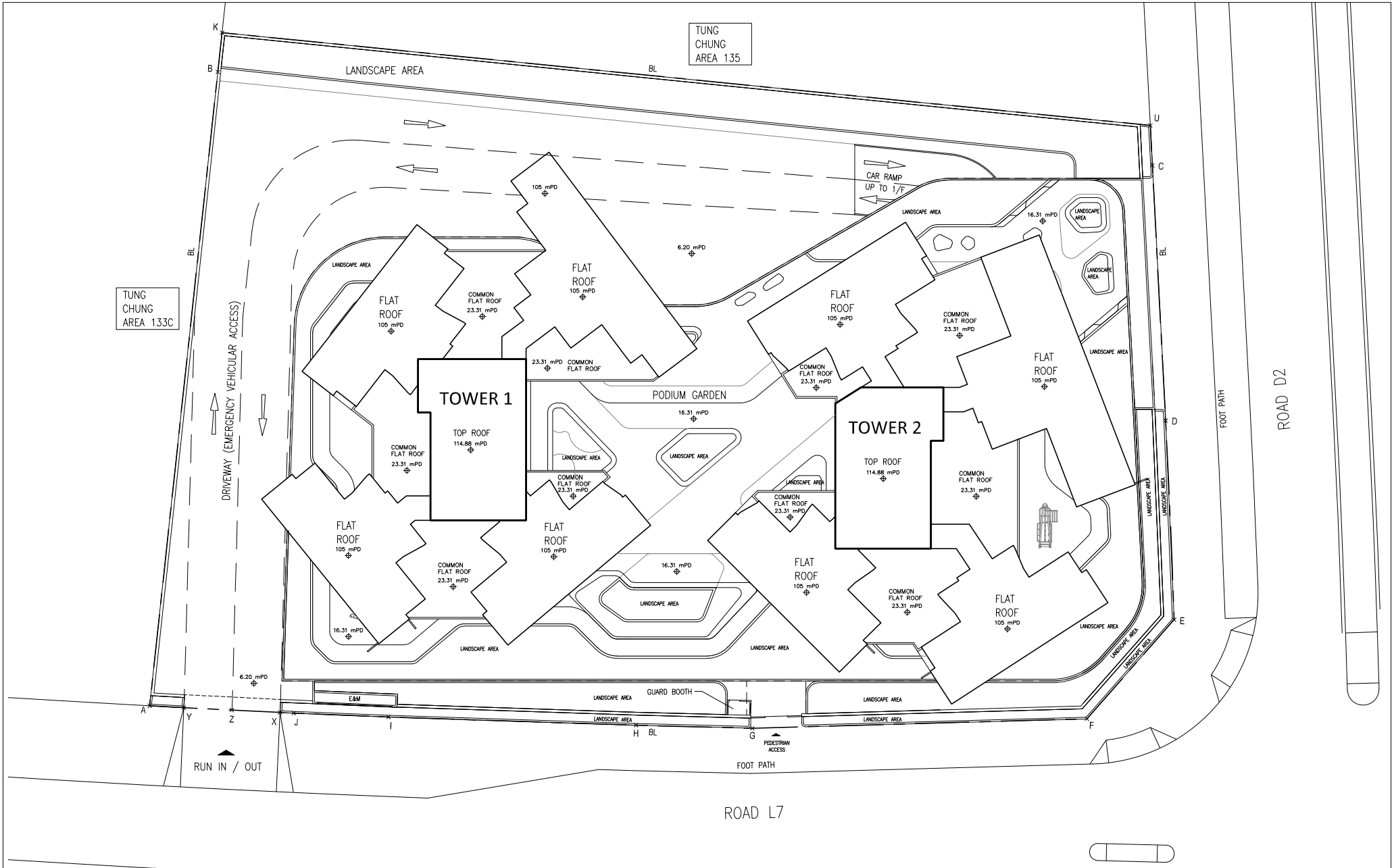
6.2 In light of the justifications and planning merits put forth in this SPS, we sincerely request the BOARD to give favourable consideration to this Application.

Edited &
Approved by: Vincent Lau
Prepared by: Eric Chan
Kelvin Chung

Date: 11 September 2025
File Ref: ASD/TCNTE

Appendix 1

ARCHITECTURAL DRAWINGS



MASTER LAYOUT PLAN

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

LEGEND:

—— – —— SITE BOUNDARY

2-9-2025

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N

Ivanhoe Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong
T +852 . 2882 2677 F +852 . 2576 7396
JPOM2@ivanhoearchitect.com

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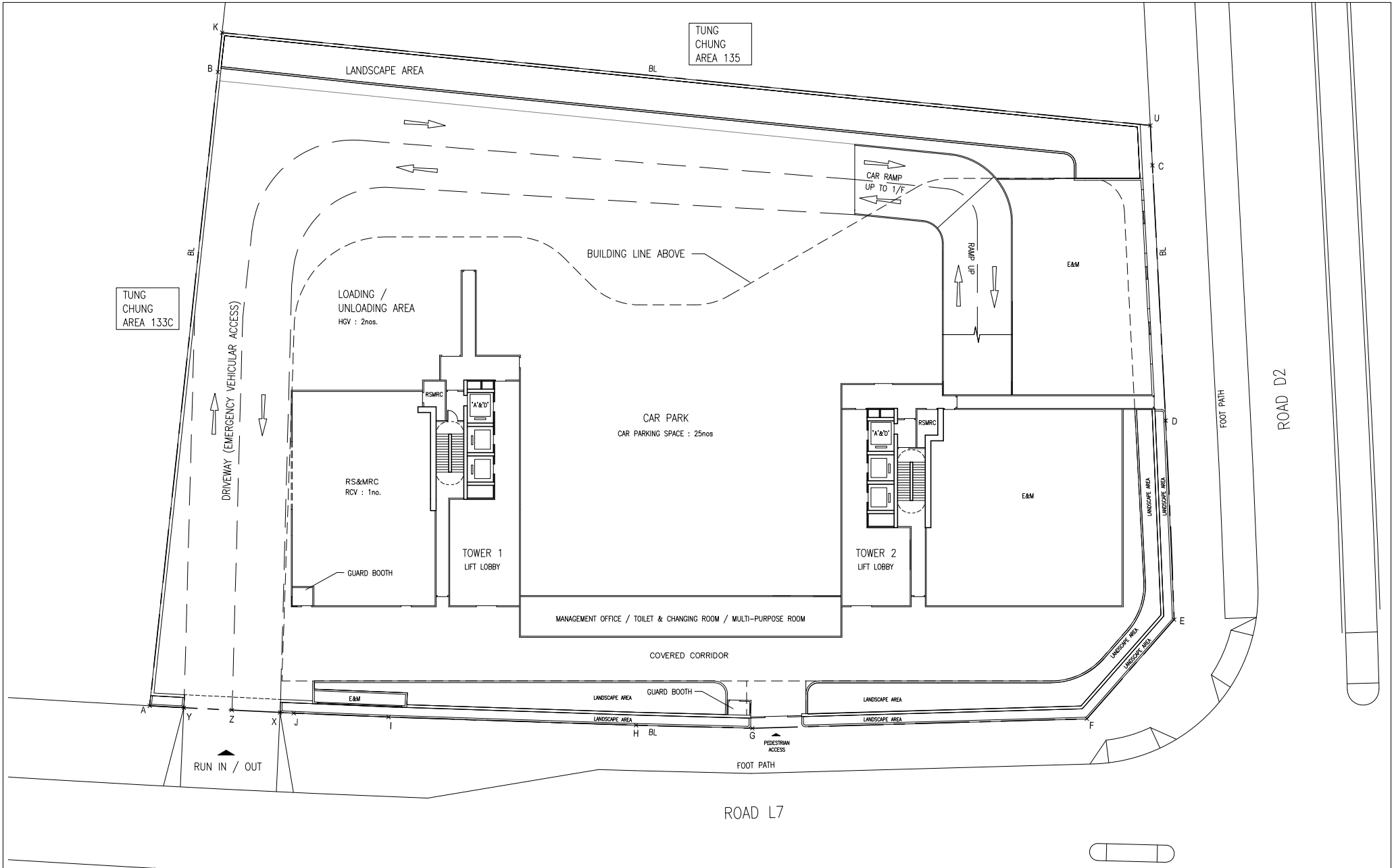

G/F PLAN

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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Ivanhoe Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong
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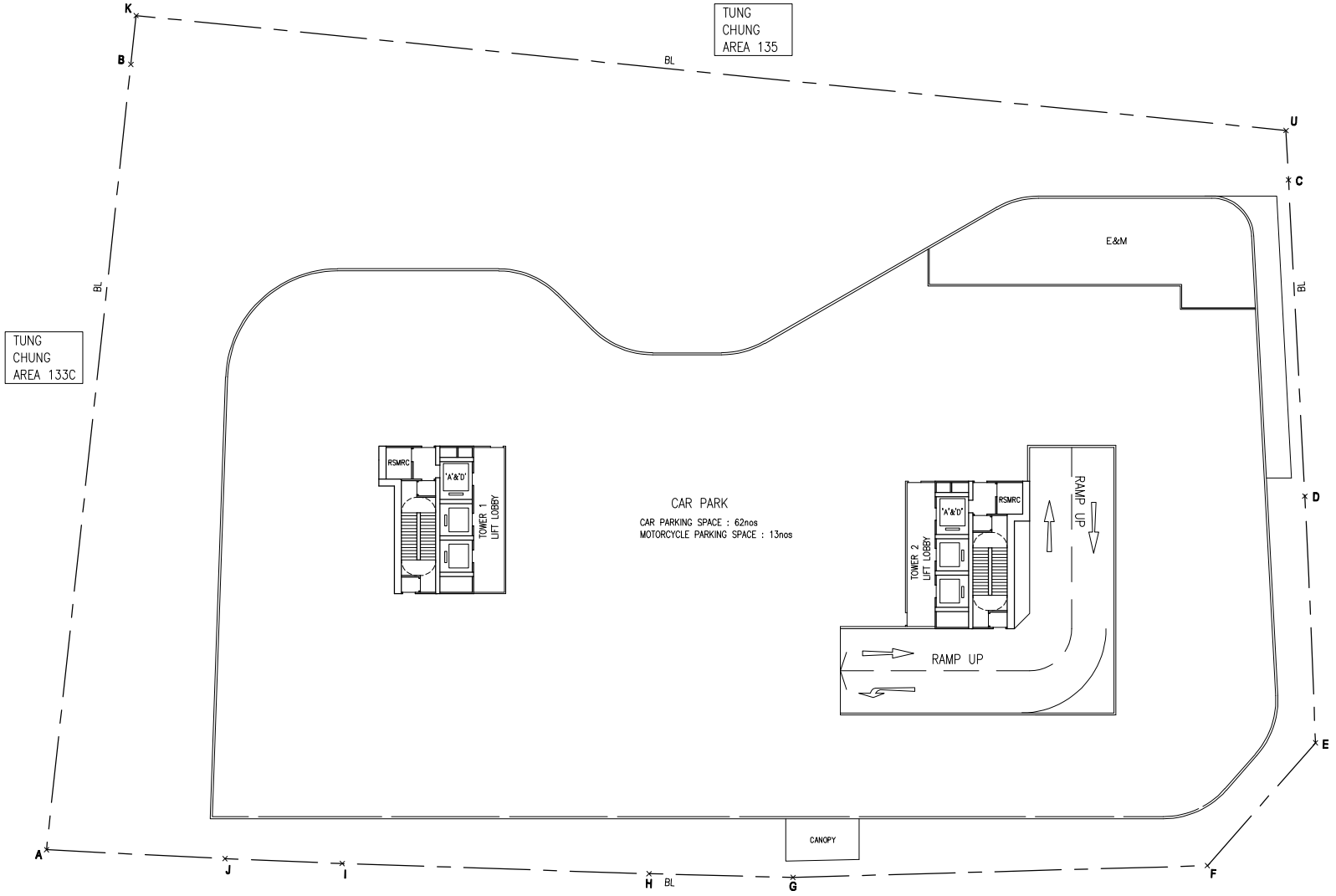

1/F PLAN

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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Ivanhe Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
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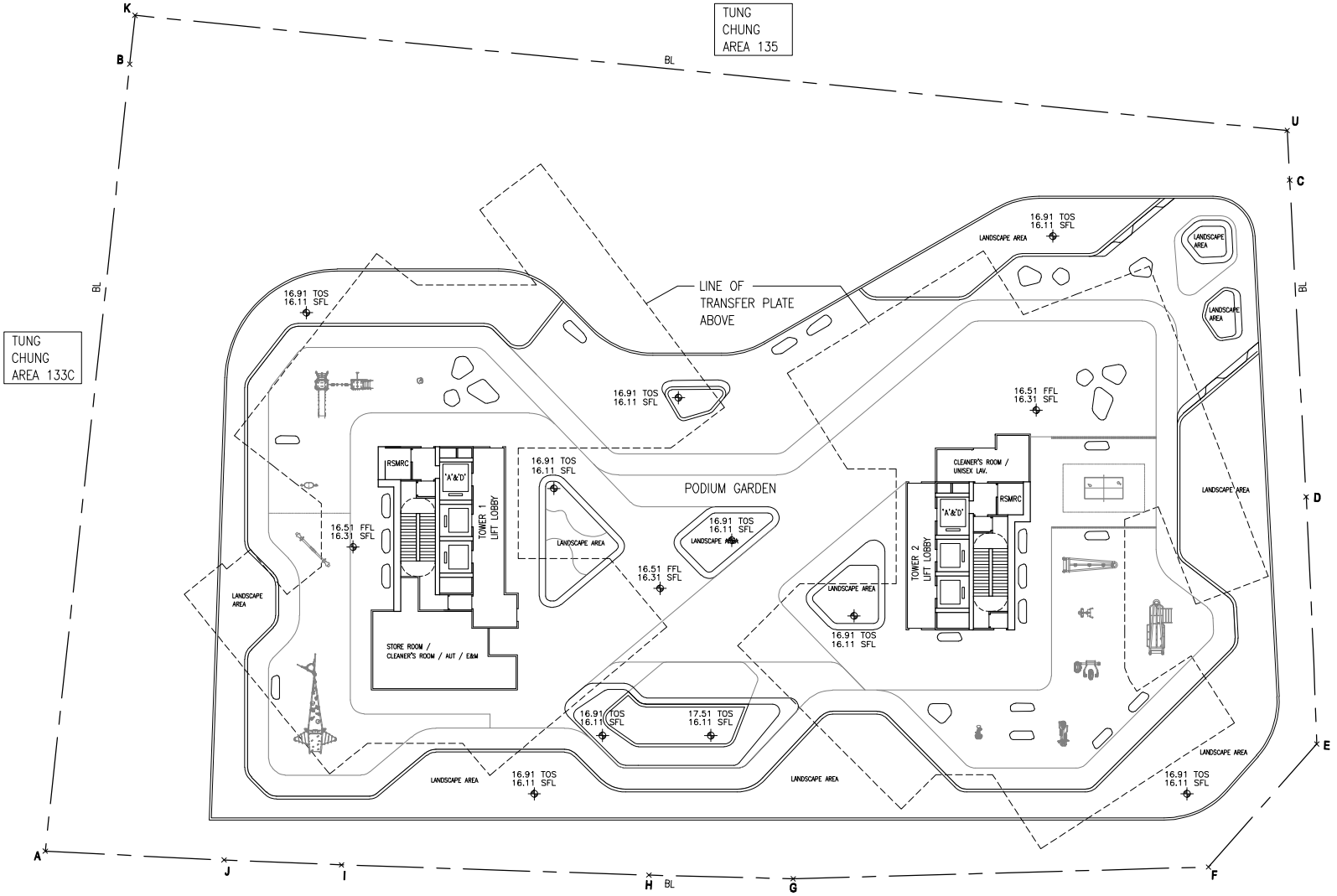

2/F PLAN

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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Ivanhe Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
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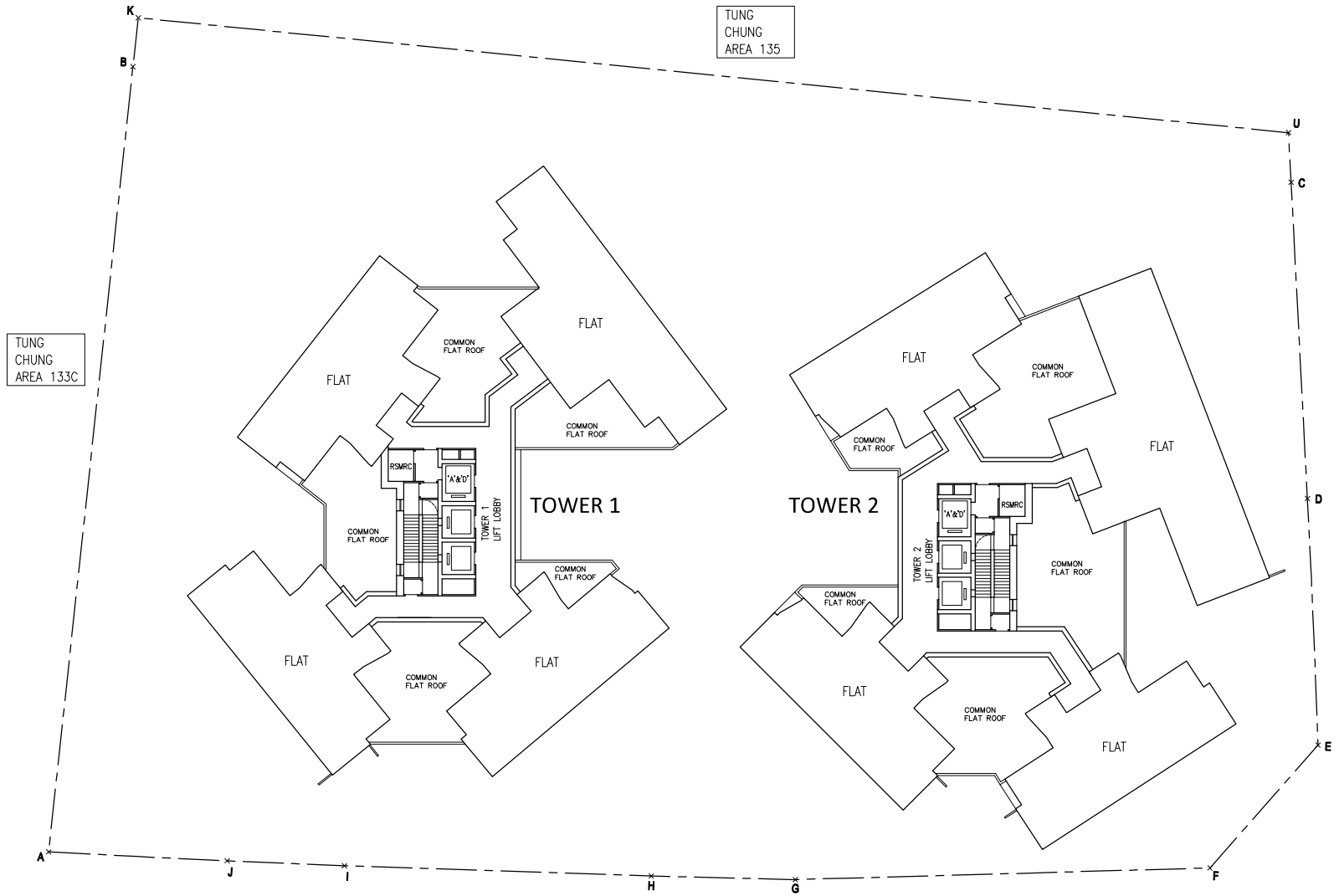

3/F PLAN

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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803, 8/F, Lee Garden Five, 18 Hysan Avenue
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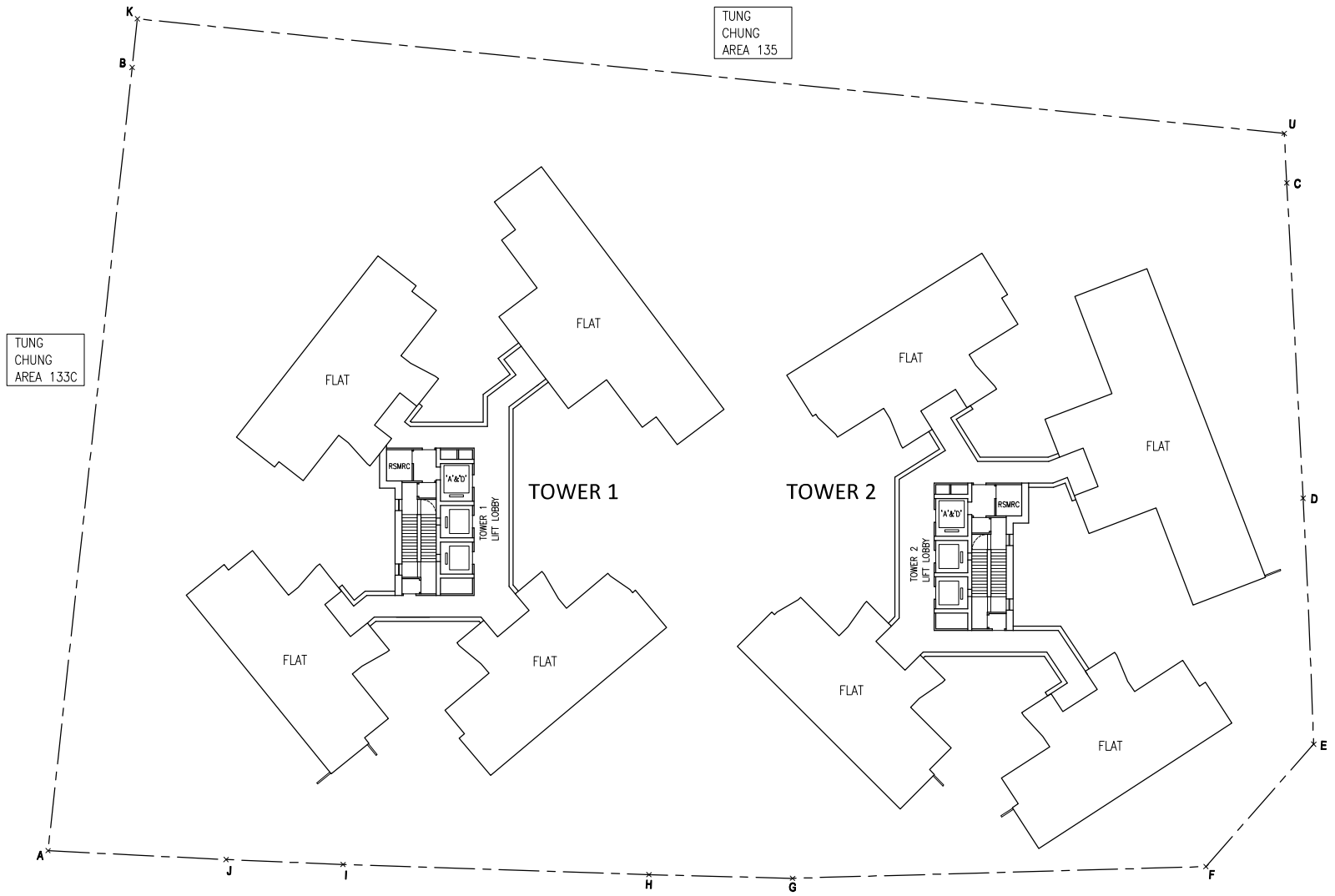

4/F to 29/F PLAN

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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Ivanhe Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
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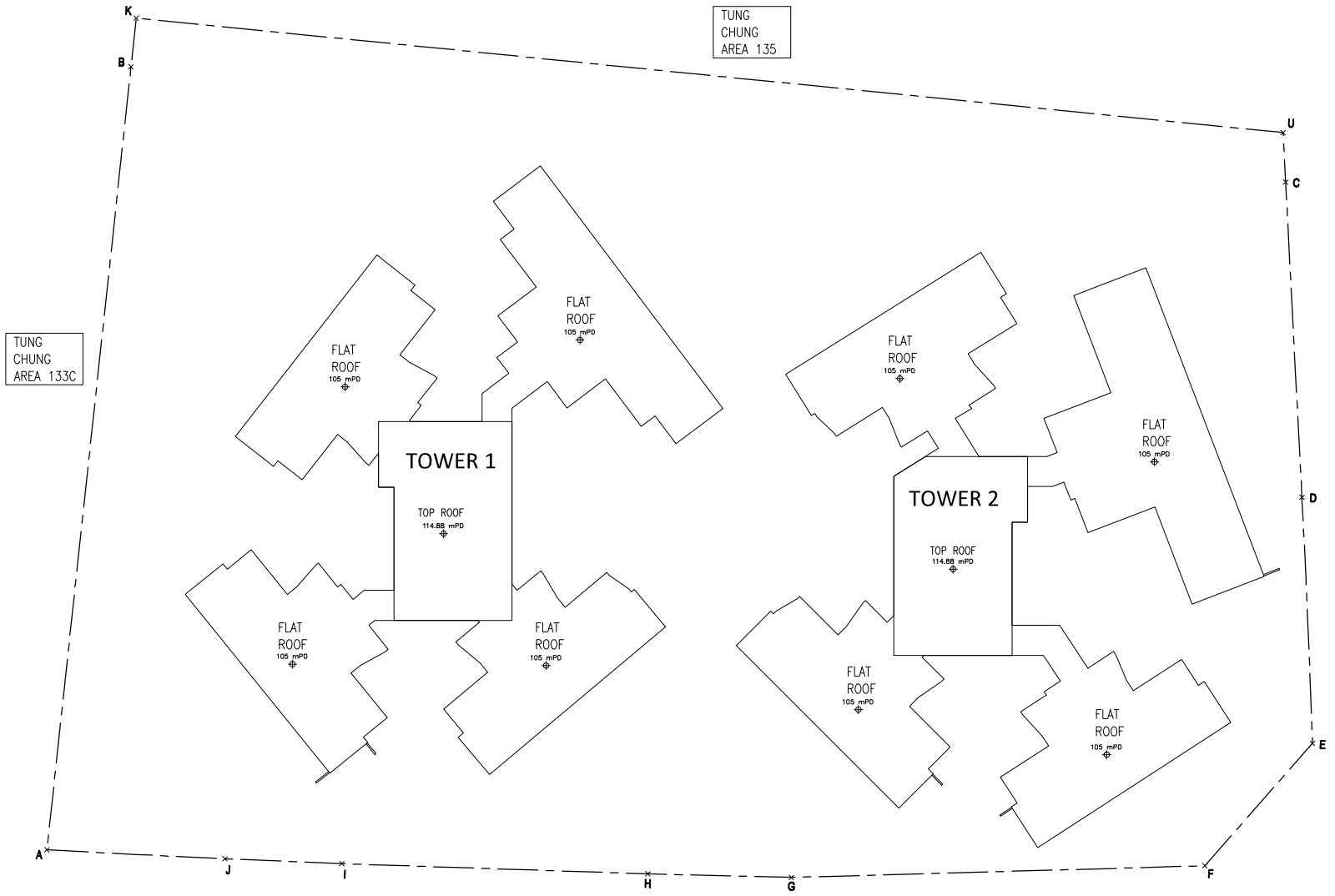

UPPER ROOF PLAN

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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N

Ivanhe Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
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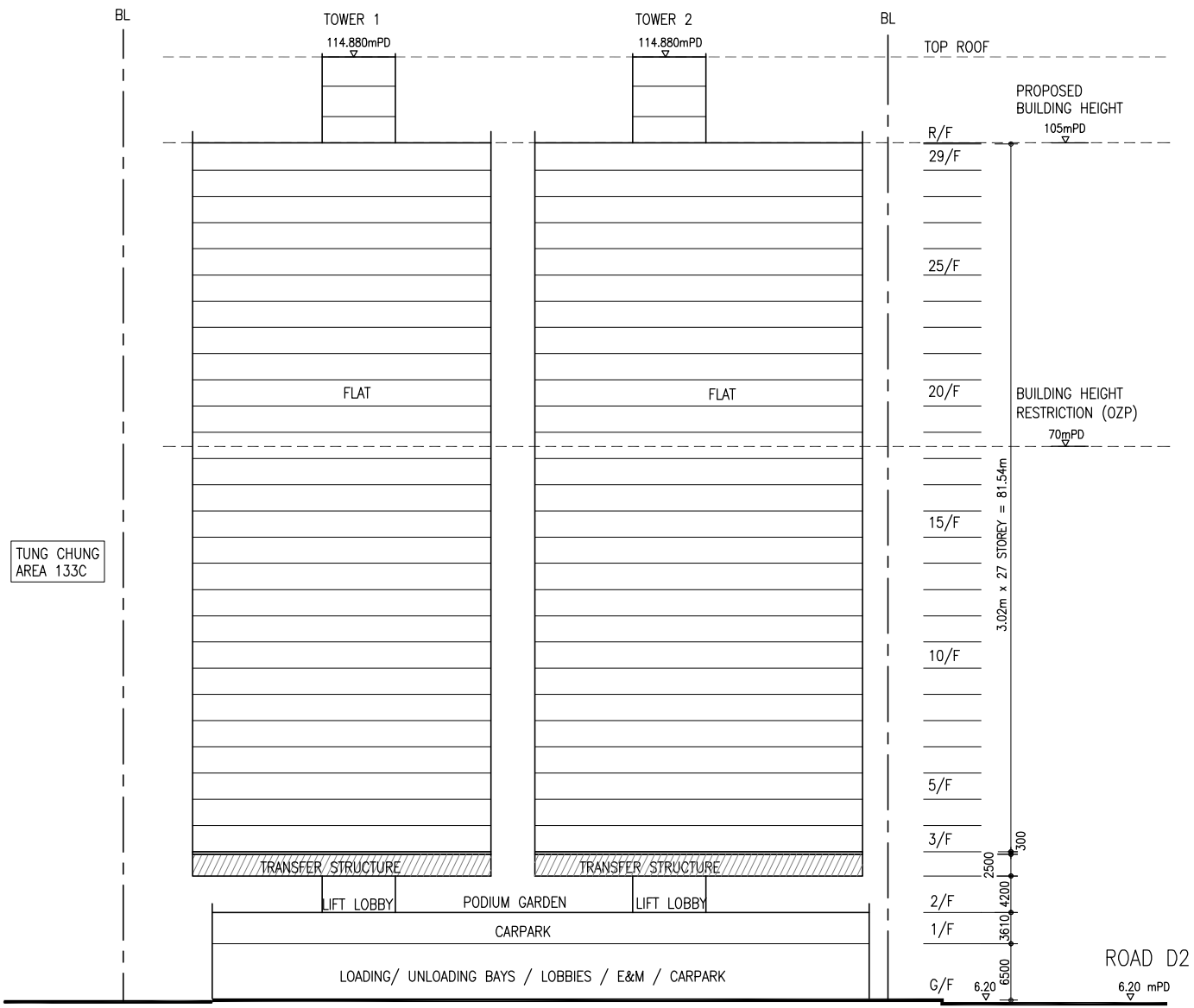

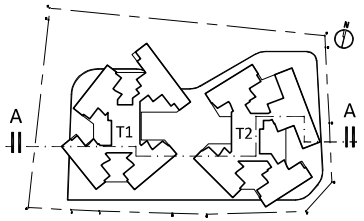

KEY PLAN

SCHEMATIC SECTION A

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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Ivanhe Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
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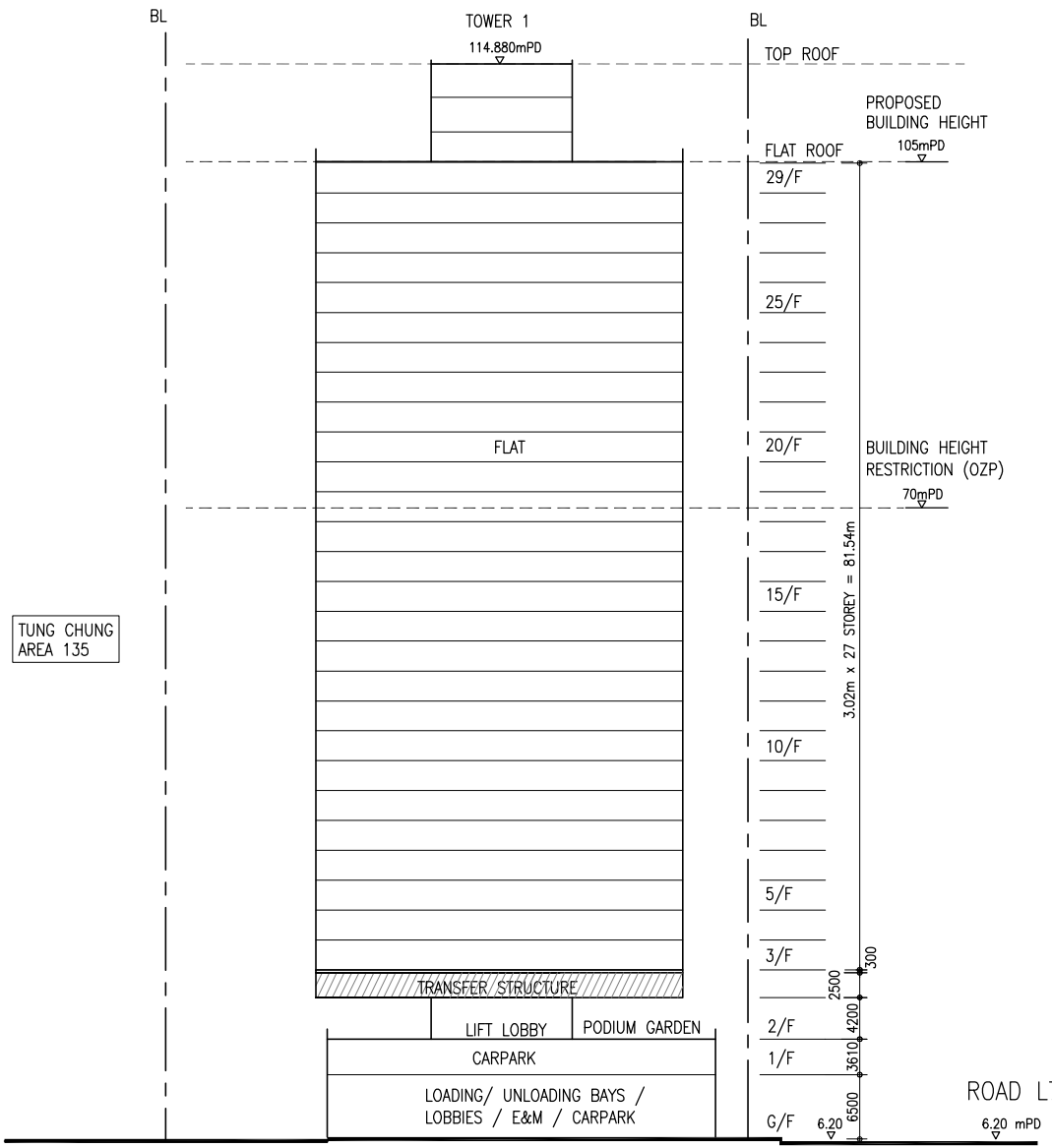

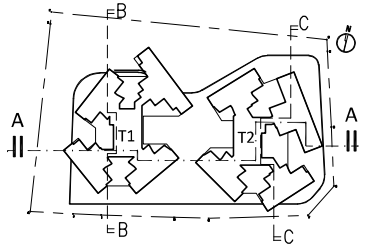

KEY PLAN

SCHEMATIC SECTION B

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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Ivanhe Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
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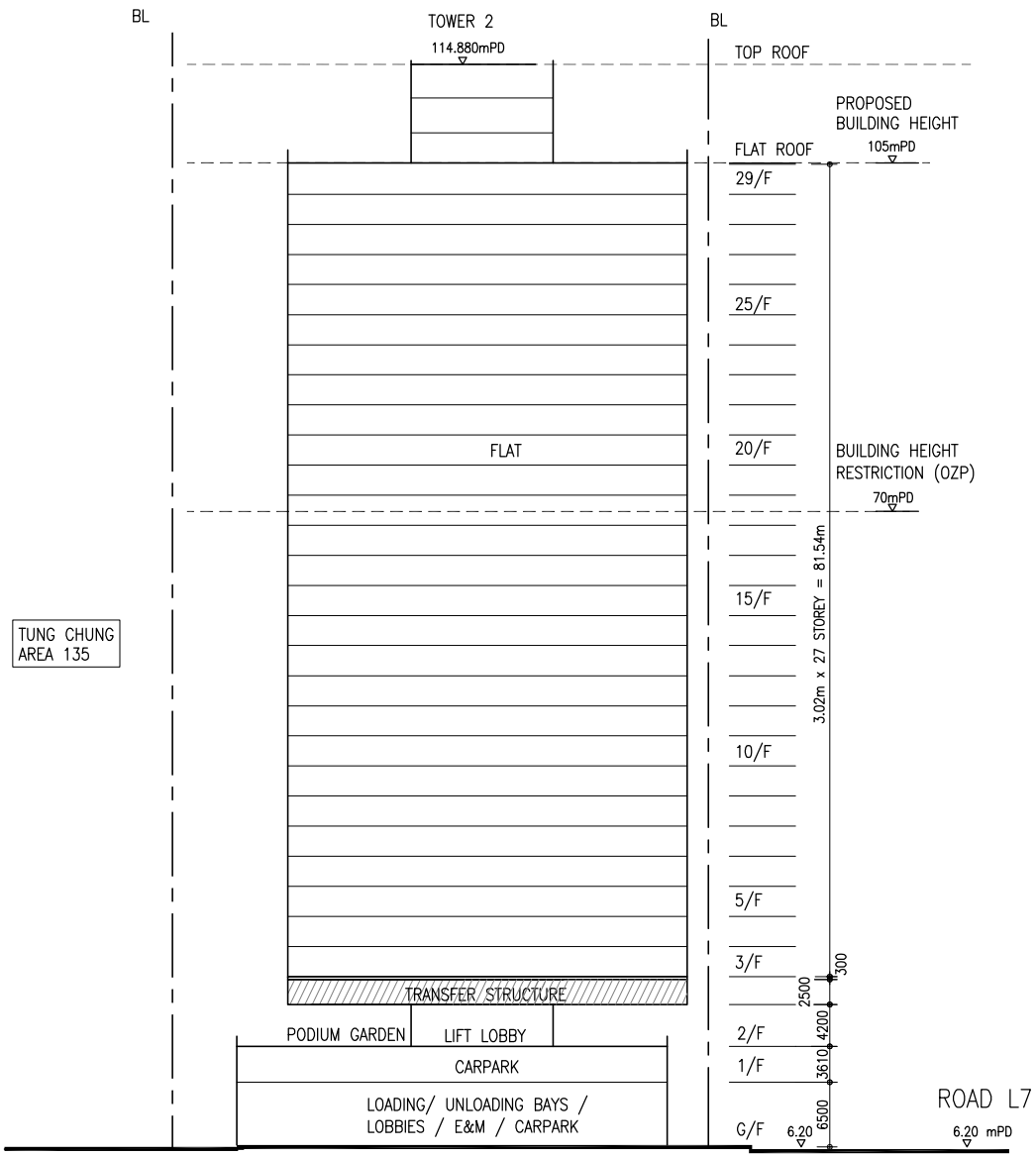

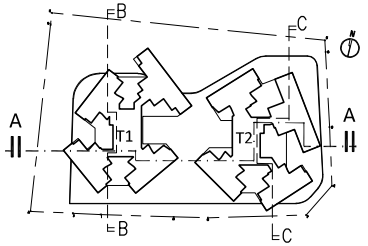

KEY PLAN

SCHEMATIC SECTION C

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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Ivanhe Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
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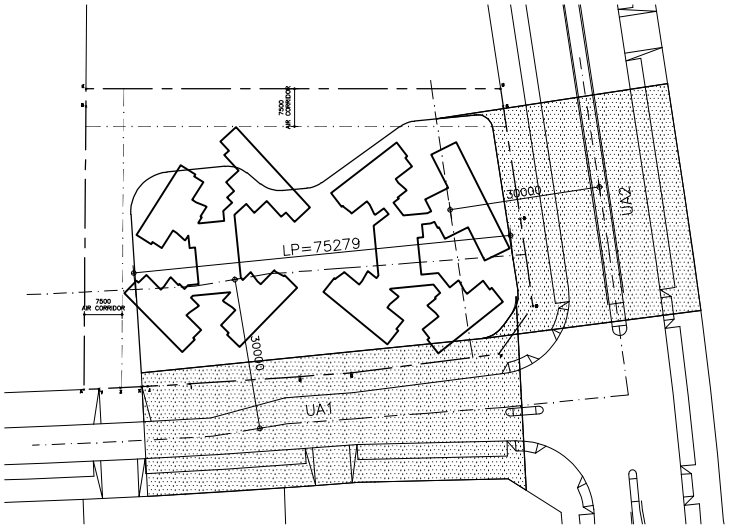
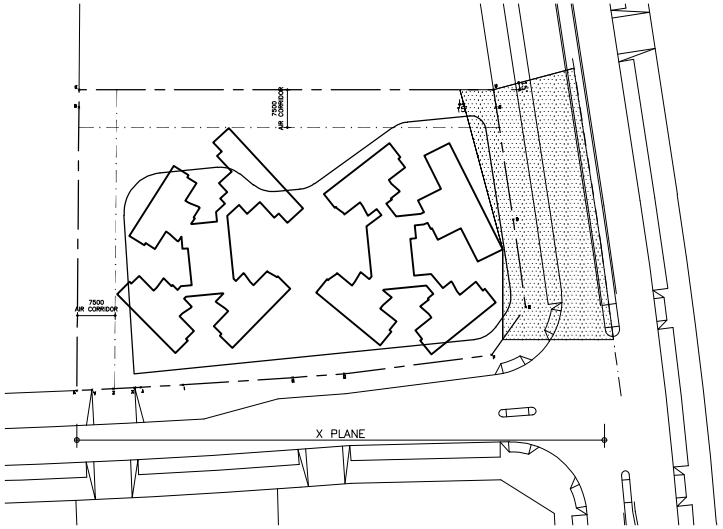
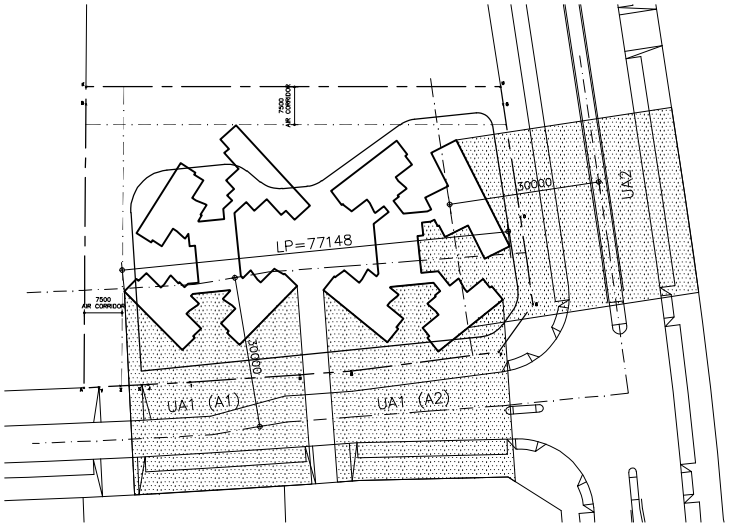


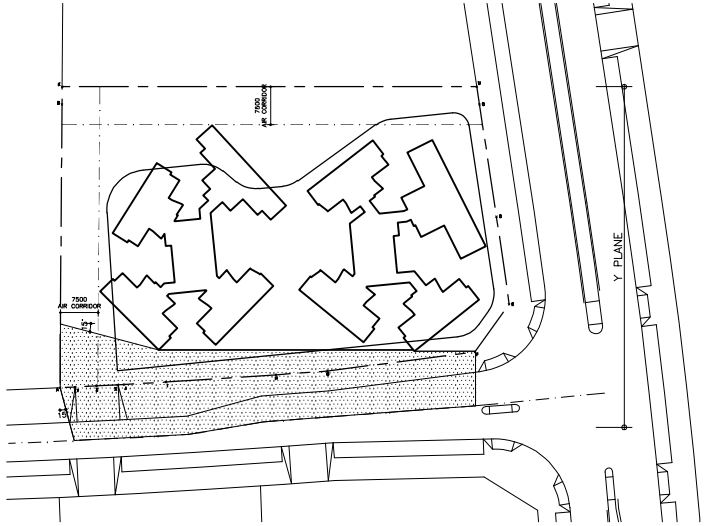
LOW ZONE - PODIUM



NOTIONAL AIR CORRIDOR (X PLANE)



MID & HIGH ZONE



NOTIONAL AIR CORRIDOR (Y PLANE)

SUSTAINABLE BUILDING DESIGN
BUILDING SEPARATION

LOW ZONE PROJECTED FACADE LENGTH(Lp) :

THE PROJECTED FACADE LENGTH (LOW ZONE)

MAX. Lp = 132m

Lp OF PROPOSED PODIUM (TAKE LONGER)
= 75.3m (< 132) (i.e. OK)

MID & HIGH ZONE PROJECTED FACADE LENGTH(Lp) :

THE PROJECTED FACADE LENGTH (MID & HIGH ZONE)

MAX. Lp = 167.5m

Lp OF PROPOSED PODIUM (TAKE LONGER)
= 77.1m (< 167.5) (i.e. OK)

X PLANE :

PERMEABILITY (P) OF BUILDINGS IN X–PLANE (LOW, MID & HIGH ZONE)

OVERALL P ACHIEVED AT LOW, MID & HIGH ZONE

= 27% (> 20% i.e. OK)

Y PLANE :

PERMEABILITY (P) OF BUILDINGS IN Y–PLANE (LOW ZONE)

OVERALL P ACHIEVED AT LOW ZONE

= 25% (> 20% i.e. OK)

PERMEABILITY (P) OF BUILDINGS IN Y–PLANE (MID & HIGH ZONE)

OVERALL P ACHIEVED AT MID & HIGH ZONE

= 34% (> 20% i.e. OK)

SUSTAINABLE BUILDING DESIGN - BUILDING SEPARATION

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

LEGEND:

—— — —— SITE BOUNDARY

2-9-2025

N

0 10 20 30 50m

Ivanhe Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
JPOMQ@ivanhoarchitect.com

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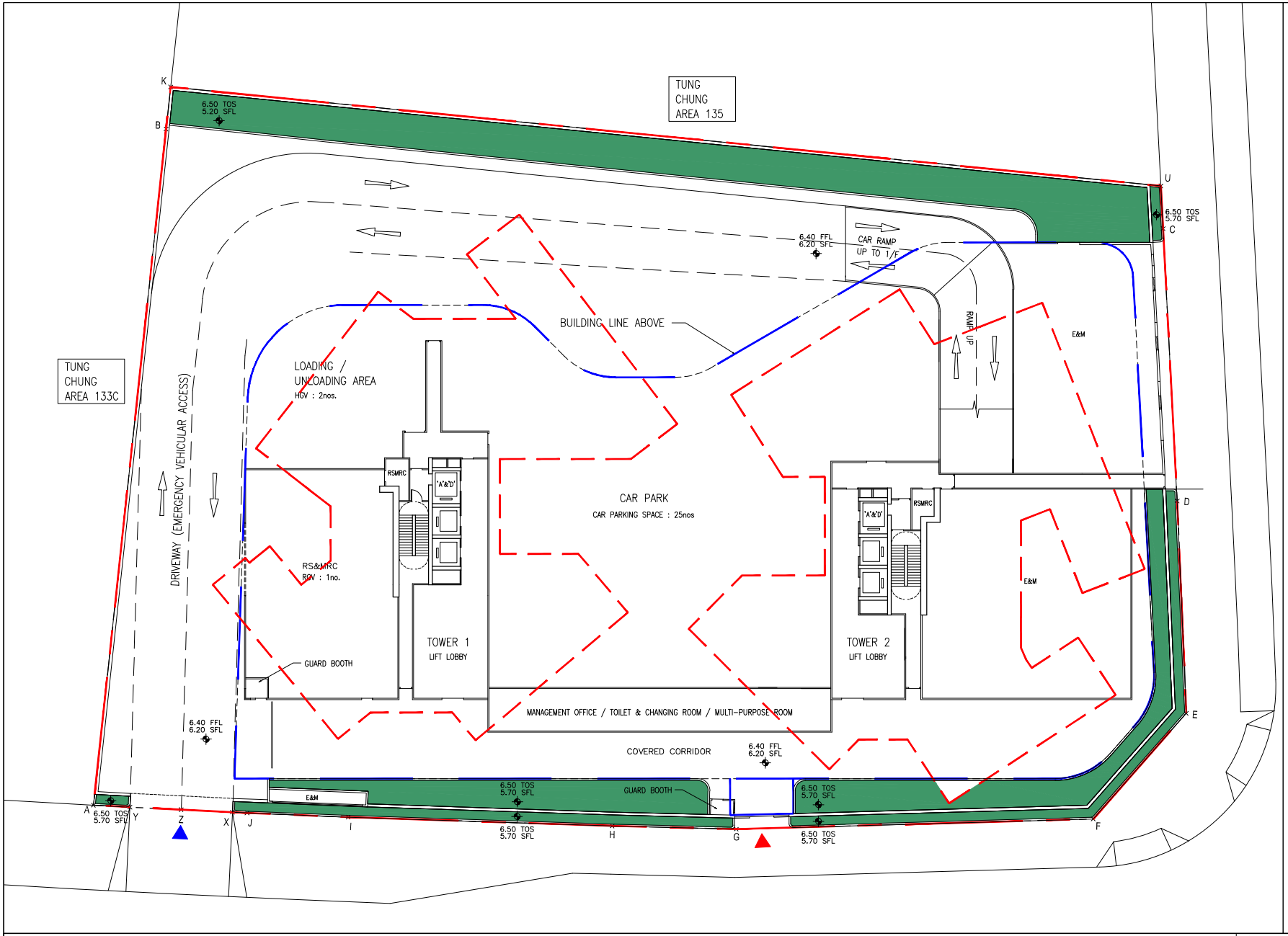
Current working drawing\



LEGEND

- APPLICATION SITE BOUNDARY
- SPOT LEVEL
- BUILDING LINE ABOVE
- VEHICULAR ENTRANCE/ EXIT
- PEDESTRIAN ENTRANCE/ EXIT
- SCG AT-GRADE/ PRIMARY ZONE: 492.66 sqm

NOTE: THE SITE COVERAGE OF GREENERY (SCG) IS CALCULATED IN ACCORDANCE WITH DEVB TC(W) NO. 3/2012 AND PNAP APP-152 SUSTAINABLE BUILDING DESIGN GUIDELINES.

SITE AREA = 4876 sqm

MINIMUM REQUIRED SCG
= 20% (975.2 sqm)

MINIMUM REQUIRED SCG AT-GRADE IN ACCORDANCE WITH DEVB TC(W) NO.3/2012 / PRIMARY ZONE IN ACCORDANCE WITH PNAP APP-152
= 10% (487.6 sqm)

G/F - SCG AT-GRADE IN ACCORDANCE WITH DEVB TC(W) NO.3/2012 / PRIMARY ZONE IN ACCORDANCE WITH PNAP APP-152
= 492.66 sqm > 487.6 sqm
(i.e. COMPLIED)

2/F - UNCOVERED SCG
= 467.01 sqm

2/F - COVERED SCG
= 205.04 /2 = 102.52 sqm

CURRENT PROPOSED
= 492.66+467.01+102.52
= 1062.19 sqm > 975.2 sqm
(i.e. COMPLIED)

SITE COVERAGE OF GREENERY FIGURE - G/F (DWG NO. LP_003)

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

Project no. 2412	S16
	REVISON NO. / DATE:
	(-)03/09/25
03/09/2025 Rev. -	

(FOR INFORMATION ONLY)

N

0 3 6 9 15m

Landscape Consultant
SLSL
STEPHEN LAI STUDIO LIMITED
G/F, Sun Chun Street, Tai Hanf Hong Kong

Architect
Ivanho Architect Limited
803, 8/F., Lee Garden Five, 18 Hysan Avenue Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
JPDMQ@ivanhoarchitect.com
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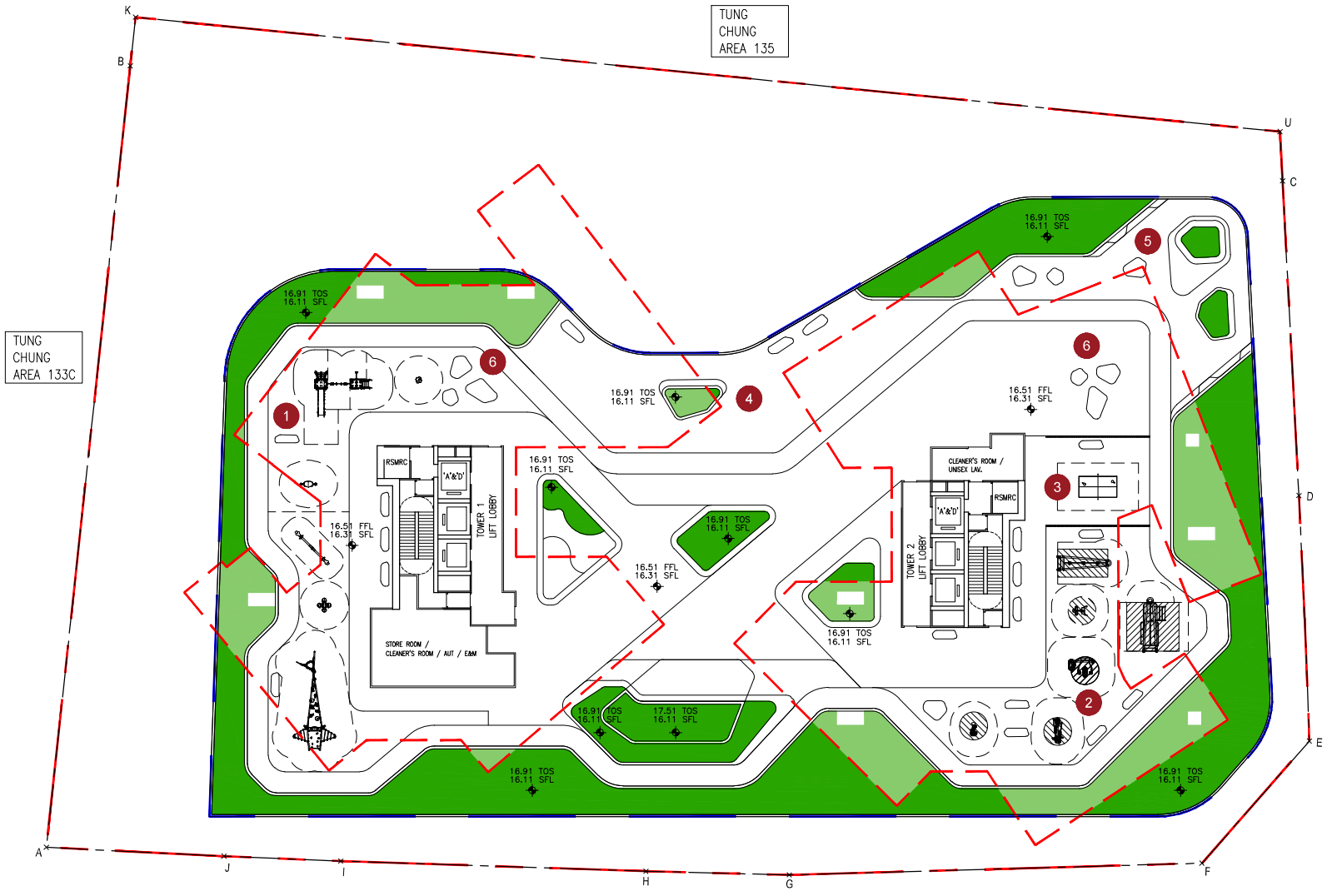

LEGEND

- APPLICATION SITE BOUNDARY
- SPOT LEVEL
- SECOND FLOOR
- BUILDING LINE ABOVE
- UNCOVERED SCG: 467.01 sqm
- COVERED SCG: 205.04 /2 = 102.52 sqm
- 1 CHILDREN PLAY AREA
- 2 FITNESS AREA
- 3 TABLE TENNIS TABLE
- 4 GREEN VIEW CORRIDOR
- 5 SEA VIEW PLATFORM
- 6 LEISURE SEATING SPACE

SITE COVERAGE OF GREENERY FIGURE - 2/F (DWG NO. LP_004)

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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(FOR INFORMATION ONLY)

N

0 3 6 9 15m

Landscape Consultant
SLSL
STEPHEN LAI STUDIO LIMITED
G/F, Sun Chun Street, Tai Hanf Hong Kong

Architect
Ivanho Architect Limited
803, 8/F., Lee Garden Five, 18 Hysan Avenue Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
JPDMQ@ivanhoarchitect.com

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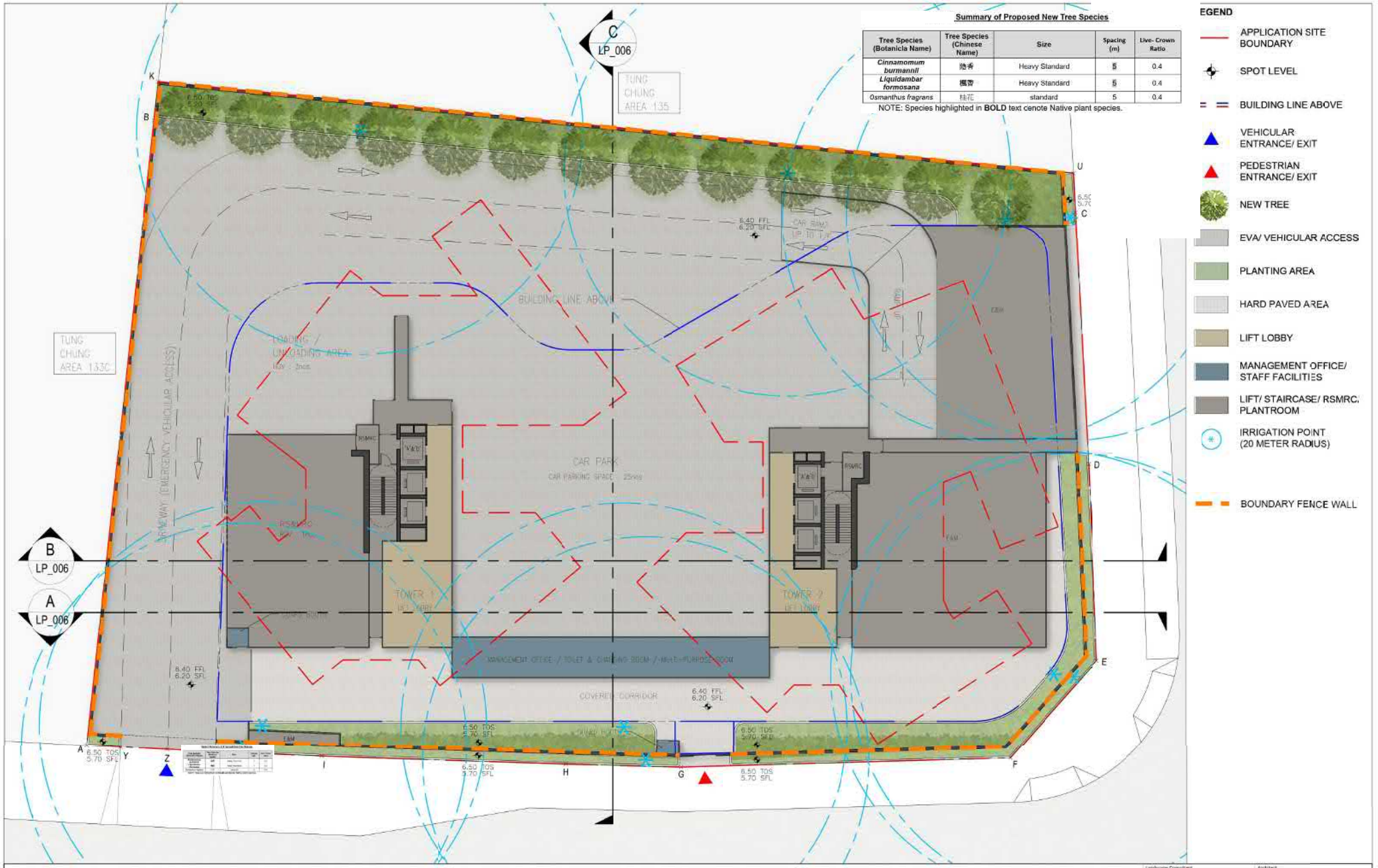

Summary of Proposed New Tree Species

Tree Species (Botanicla Name)	Tree Species (Chinese Name)	Size	Spacing (m)	Live- Crown Ratio
Cinnamomum burmannii	陰香	Heavy Standard	5	0.4
Liquidambar formosana	楓香	Heavy Standard	5	0.4
Osmanthus fragrans	桂花	standard	5	0.4

NOTE: Species highlighted in **BOLD** text cenote Native plant species.

EGEND

- APPLICATION SITE BOUNDARY
- SPOT LEVEL
- BUILDING LINE ABOVE
- VEHICULAR ENTRANCE/ EXIT
- PEDESTRIAN ENTRANCE/ EXIT
- NEW TREE
- EVA/ VEHICULAR ACCESS
- PLANTING AREA
- HARD PAVED AREA
- LIFT LOBBY
- MANAGEMENT OFFICE/ STAFF FACILITIES
- LIFT/ STAIRCASE/ RSMRC/ PLANTROOM
- IRRIGATION POINT (20 METER RADIUS)
- BOUNDARY FENCE WALL

LANDSCAPE MASTER PLAN - G/F (DWG NO. LP_001)

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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0 3 6 9 15m

Landscape Consultant: SLSL STEPHEN LAISTUDIO LIMITED G/F, Sun Chun Street, Tai Kwrf Hong Kong

Architect: Ivanhoe Architect Limited 803, 8/F., Leo Garden Five, 28 Hysan Avenue, Causeway Bay, Hong Kong. T +852 - 2882 2677 F +852 - 2570 7206 JPOA@ivanhoearchitect.com

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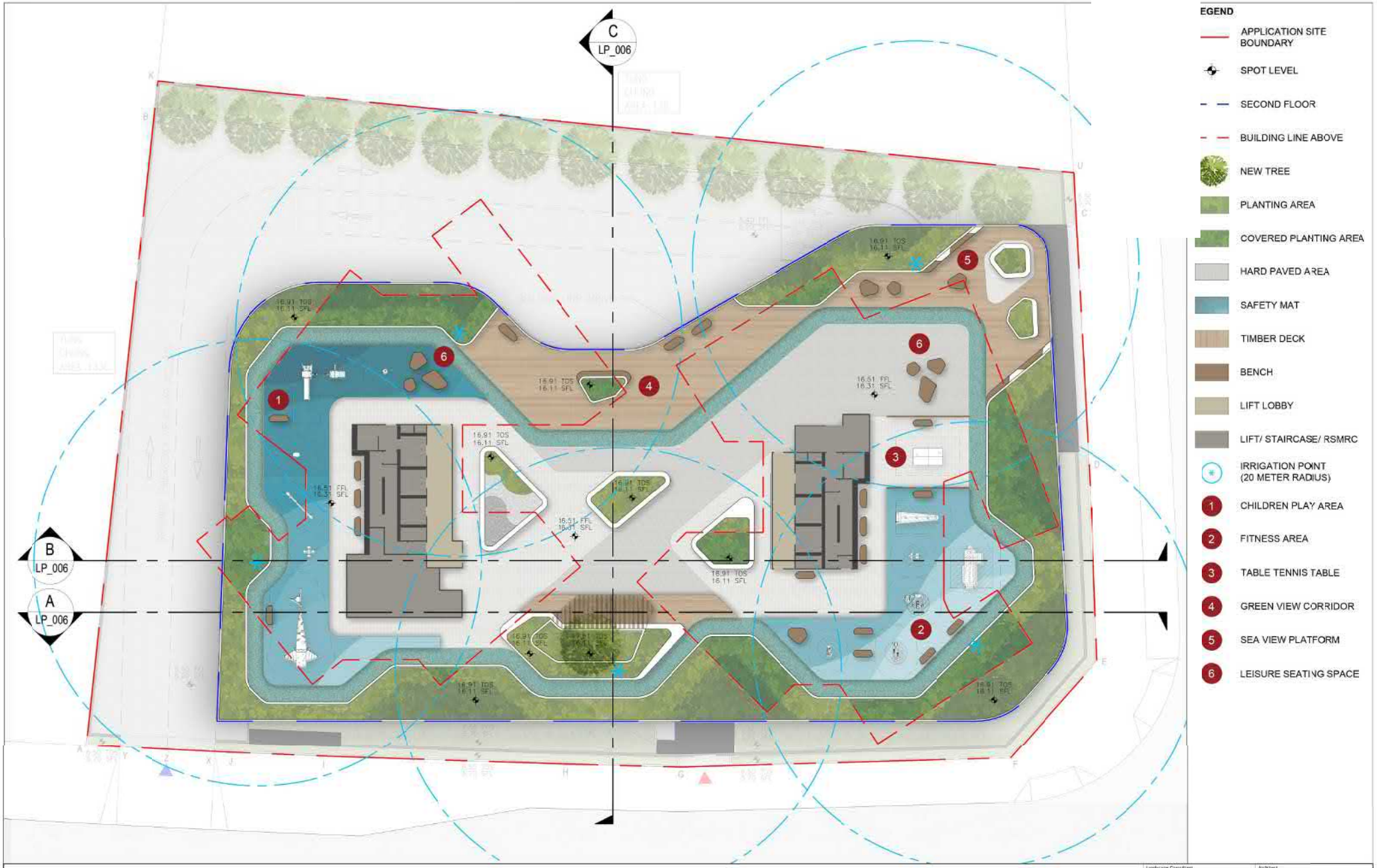

LANDSCAPE MASTER PLAN - 2/F (DWG NO. LP_002)

Prcposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in 'Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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0 3 6 9 15m

Landscape Consultant
SLSL
STEPHEN LAISTUDIO LIMITED
G/F, Sun Chun Street, Tai Hanf Hong Kong

Architect
Ivanna Architect Limited
803, B/F., Lee Garden Five, 33 Hysan Avenue, Causeway Bay, Hong Kong
T +852 . 2882 2677 F +852 . 2576 7196
JPOM2@ivannaarchitect.com
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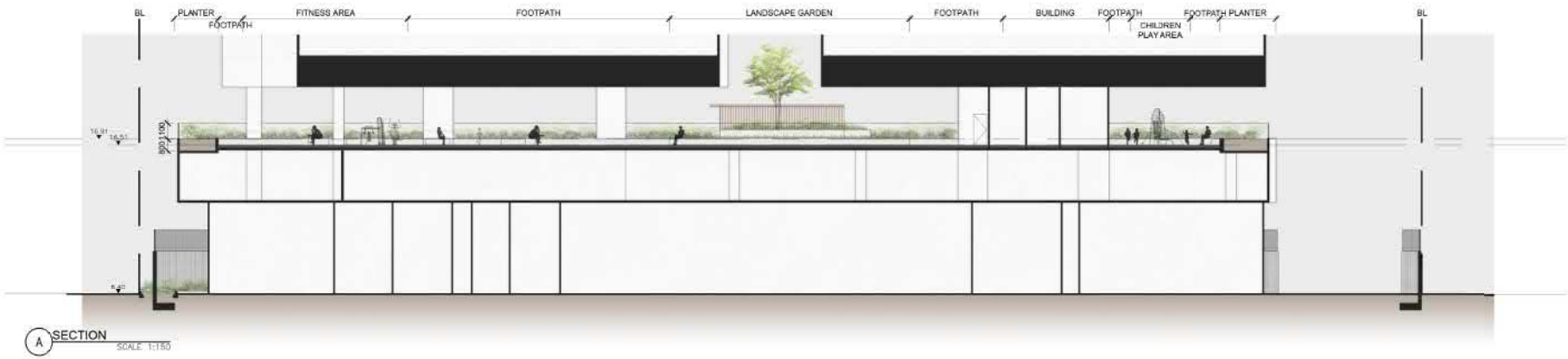
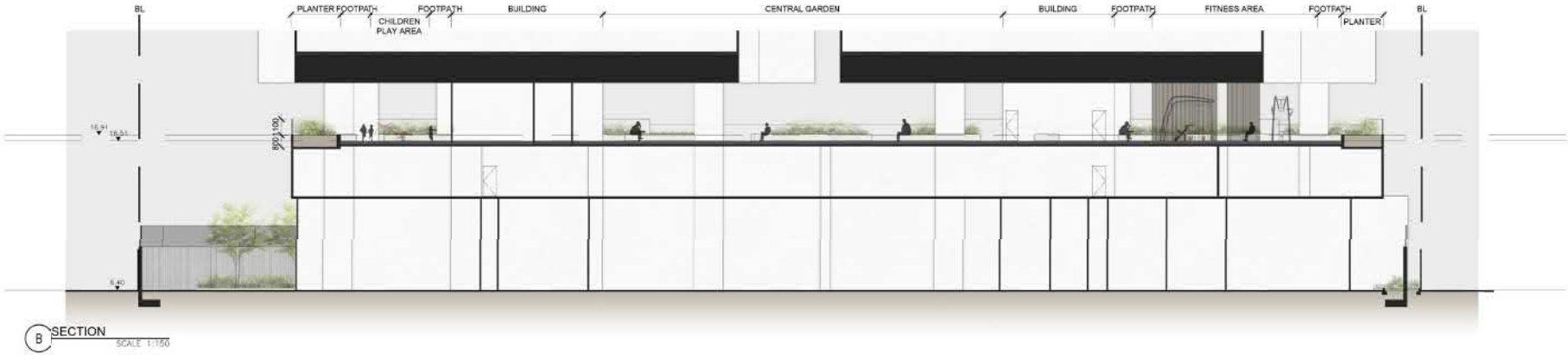


A SECTION
SCALE 1:150



B SECTION
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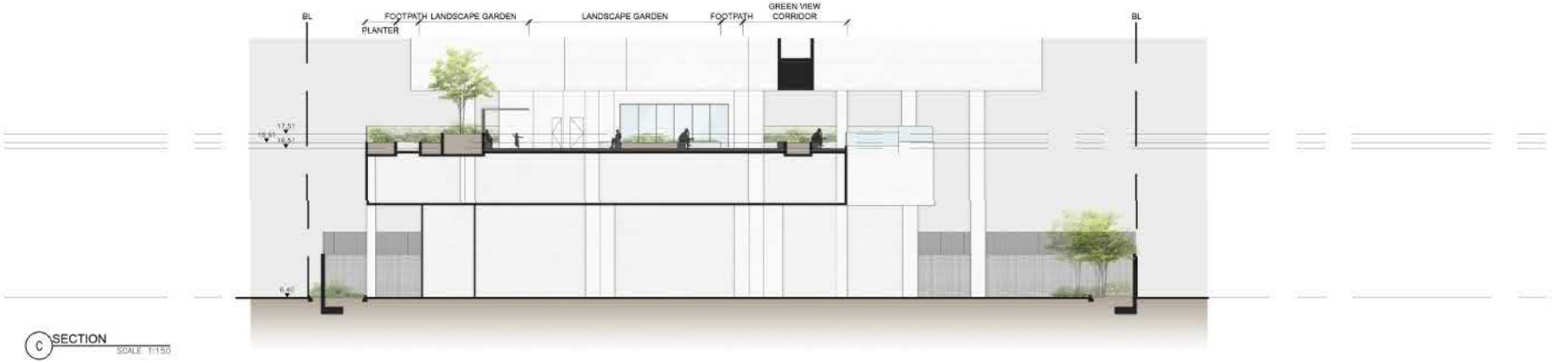

C SECTION
SCALE 1:150

LANDSCAPE SECTIONS (DWG NO. LP_006)

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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Rev. -	

N

0 3 6 9 15m

Landscape Consultant
SLSL
STEPHEN LAI STUDIO LIMITED
G/F, Sun Chan Street, Tai Hang Hong Kong

Architect
Wonho Architect Limited

903, 9/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong
T +852 . 2882 2677 F +852 . 2576 7196
JPONG@wonhoarchitect.com

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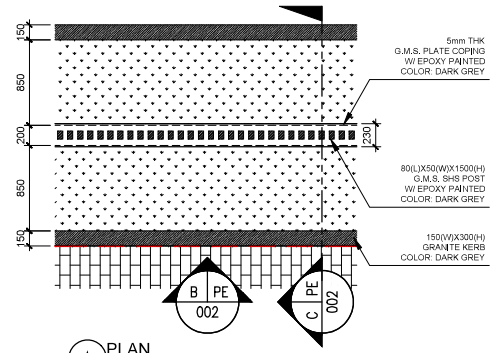
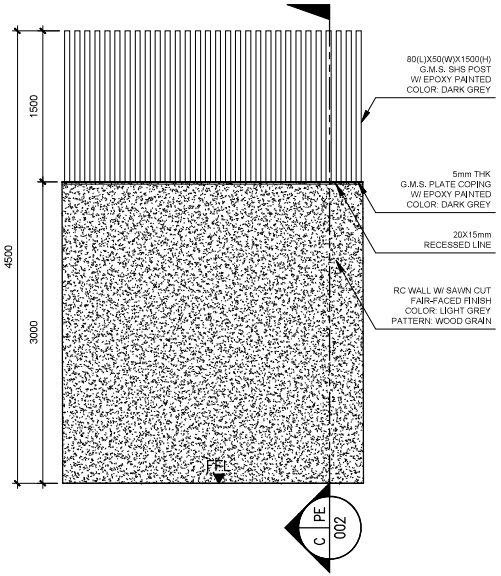
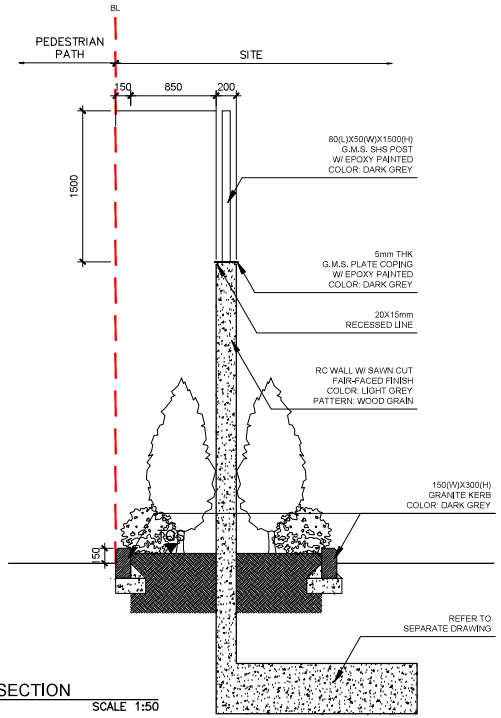


A PLAN
SCALE 1:50



B ELEVATION
SCALE 1:50



C SECTION
SCALE 1:50

D BLOW-UP FENCE WALL
RENDERING (INDICATIVE ONLY)

E FENCE WALL ELEVATION AT SOUTH (INDICATIVE ONLY)

BOUNDARY FENCE WALL

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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Landscape Consultant
SLSL
STEPHEN LAI STUDIO LIMITED
G/F, Sun Chun Street, Tai Hanf Hong Kong

Architect
Ivanho Architect Limited
803, 8/F., Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
JPDMQ@ivanhoarchitect.com

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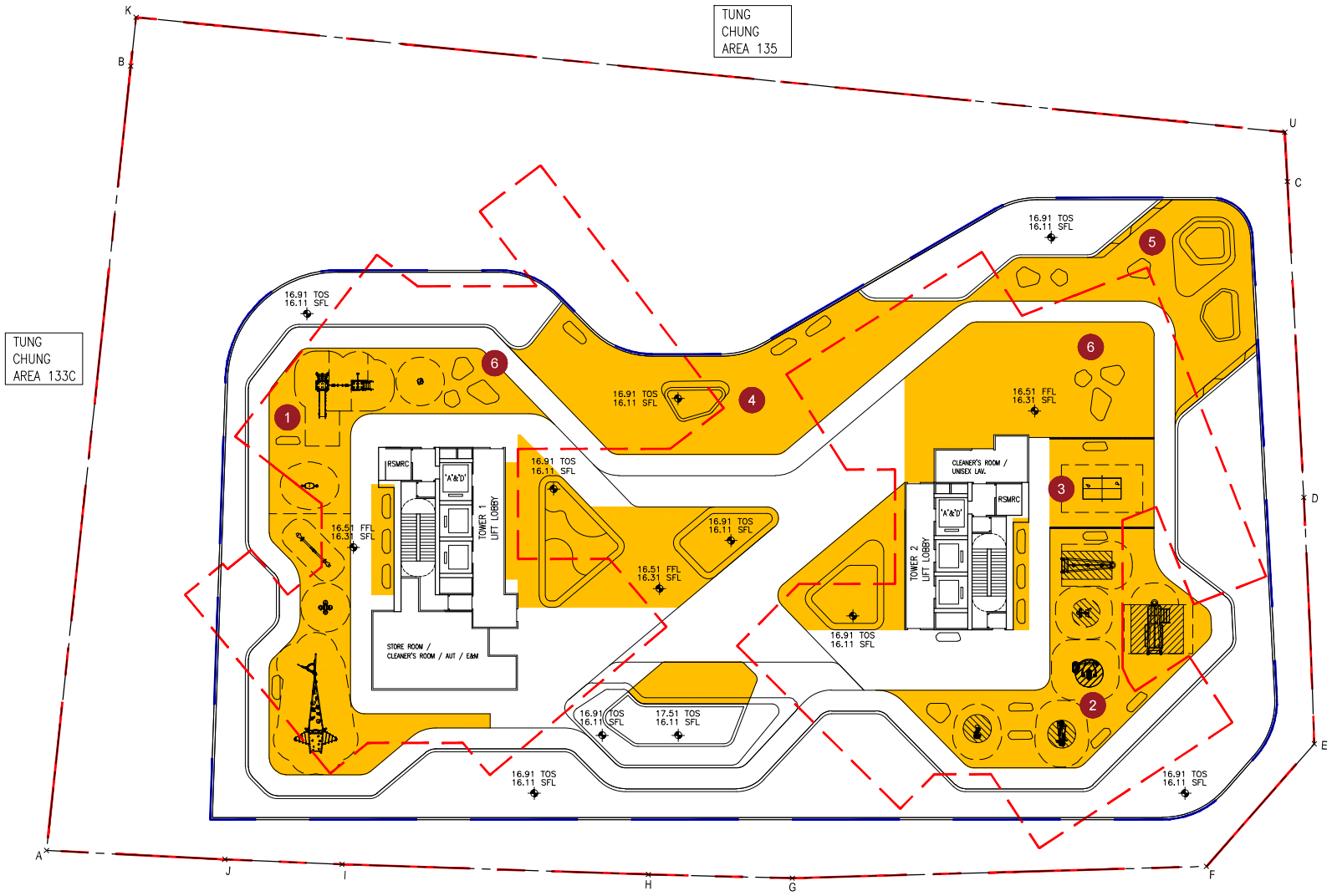

LEGEND

- APPLICATION SITE BOUNDARY
- SPOT LEVEL
- SECOND FLOOR
- BUILDING LINE ABOVE
- PRIVATE OPEN SPACE: NOT LESS THAN 1,167 sqm
- 1 CHILDREN PLAY AREA
- 2 FITNESS AREA
- 3 TABLE TENNIS TABLE
- 4 GREEN VIEW CORRIDOR
- 5 SEA VIEW PLATFORM
- 6 LEISURE SEATING SPACE

PRIVATE OPEN SPACE FIGURE - 2/F (DWG NO. LP_005)

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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03/09/2025 Rev. -	

N

0 3 6 9 15m

Landscape Consultant
SLSL
STEPHEN LAI STUDIO LIMITED
G/F, Sun Chun Street, Tai Hanf Hong Kong

Architect
Ivanho Architect Limited
803, 8/F., Lee Garden Five, 18 Hysan Avenue Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
JPDMQ@ivanhoarchitect.com

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Appendix 2

PRELIMINARY ENVIRONMENTAL REVIEW

Issue No. : 3
Issue Date : October 2025
Project No. : 2240

PRELIMINARY ENVIRONMENTAL REVIEW

FOR

PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

Allied Environmental Consultants Limited
Member of AEC Group (HKEX Stock Code: 8320.HK)
27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
www.asecg.com T: +852 2815 7028 F: +852 2815 5399

沛然環境評估工程顧問有限公司
沛然環保集團成員（港交所股份代號：8320.HK）
香港灣仔告士打道 160 號海外信託銀行大廈 27 樓

Document Verification

Project Title	PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND	**Project No.** 2240
Document Title	Preliminary Environmental Review	

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
1	June 2025	1st Submission	Various	Cathy Man	Grace Kwok
2	September 2025	2nd Submission	Various	Cathy Man	Grace Kwok
3	October 2025	3rd Submission	Various	Cathy Man	Grace Kwok

Allied Environmental Consultants Limited
Member of AEC Group (HKEX Stock Code: 8320.HK)
27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
www.asecg.com T: +852 2815 7028 F: +852 2815 5399

沛然環境評估工程顧問有限公司
沛然環保集團成員（港交所股份代號：8320.HK）
香港灣仔告士打道 160 號海外信託銀行大廈 27 樓

Table of Contents

1. Introduction 7

2. Objectives 7

3. The Proposed development 7

4. Implication of Environmental Impact Assessment 9

5. Air Quality Impact Assessment 10

5.1. Introduction 10

5.2. Environmental Legislation, Standards and Criteria 10

5.3. Background Air Quality 12

5.4. Assessment Area and Representative Air Quality Sensitive Receivers (ASRs) 14

5.5. Potential Air Quality Impact - Construction Phase 16

5.6. Potential Air Quality Impact – Operation Phase 22

5.7. Conclusions 26

6. Noise Impact Assessment 27

6.1. Introduction 27

6.2. Design Strategy for Noise Consideration 27

6.3. Traffic Noise Impact Assessment 28

6.4. Fixed Plant Noise Impact Assessment 37

6.5. Railway Noise Impact Assessment 45

6.6. Review on Helicopter Noise Impact 48

6.7. Review on Aircraft Noise Impact 50

7. Water Quality Impact Assessment 52

7.1. Introduction 52

7.2. Legislation and Standards on Water Quality 52

7.3. Surrounding Environmental Context and Water Sensitive Receivers 55

7.4. Potential Impacts During Construction Phase 56

7.5. Mitigation Measures and Good Site Practice 56

7.6. Potential Impacts During Operation Phase 58
7.7. Conclusion 59
8. Land Contamination 60
8.1. Guidelines 60
8.2. Site Appraisal 60
8.3. Review of Historical Aerial Photos and Past Land Use 60
8.4. Information from Government Departments 61
8.5. Conclusion 62
9. Waste Management 63
9.1. Legislation and Standards on Waste Management 63
9.2. Assessment Approach and Criteria 64
9.3. Potential Impacts during Construction Phase 64
9.4. Mitigation Measures to Control Construction Waste Impact 67
9.5. Potential Impacts and Mitigation Measures during Operation Phase 70
9.6. Conclusion 71
10. Conclusion 72

List of Tables

Table 3-1 Development Schedule 8
Table 5-1 Hong Kong Air Quality Objectives 11
Table 5-2 Recommended Buffer Distance for Land Uses (Table 3.1 of HKPSG Chapter 9) 12
Table 5-3 Background Air Quality at Tung Chung Air Quality Monitoring Station 13
Table 5-4 Background Air Quality Concentration of Pollutants 14
Table 5-5 Representative Air Sensitive Receivers (ASRs) 15
Table 5-6 List of Concurrent Projects 18
Table 5-7 Buffer distance between the Proposed development and Nearby Road 23
Table 6-1 Summary of Noise Conscious Design Strategy 28
Table 6-2 Traffic Noise Prediction Results, Base Scheme Scenario 30
Table 6-3 Proposed Vertical Architectural Fins 31
Table 6-4 BAW (Configuration 1) and Living Room 33
Table 6-5 BAW (Configuration 2), Master Bedroom and Bedroom 34
Table 6-6 Noise Mitigation Measures Adopted in the Scenarios 35
Table 6-7 Traffic Noise Prediction Result 35
Table 6-8 Area Sensitivity Ratings (ASRs) of NSRs 38
Table 6-9 Acceptable Noise Level for Fixed Noise Sources 38
Table 6-10 Summary of Identified Fixed Noise Sources 40
Table 6-11 Predicted Fixed Noise Level at Representative NAPs 43
Table 6-12 Noise Criteria for Rail Noise 45
Table 6-13 Daytime Helicopter Noise Assessment Criteria 48
Table 6-14 Location of Helicopter Holding Areas 49
Table 6-15 Assessment Criteria for Aircraft Noise 50
Table 7-1 Summary of Water Quality Objectives for North Western WCZ 52
Table 7-2 Summary of Representative Water Sensitive Receivers 55
Table 8-1 Summary Table of Land Use 60
Table 8-2 Enquiries and Responses on Land Contamination Related Records in the Application Site 61
Table 9-1 Summary of Construction Waste Generated 66

List of Figures

Figure 3.1 Location of Application Site and its Environ
Figure 5.1 Location of Air Sensitive Receivers (ASRs)
Figure 5.2 Location of Concurrent Projects
Figure 5.3 Buffer distance from nearby roads
Figure 5.4 Location of Public Transport Interchange (PTI)
Figure 6.1 Existing Low Noise Road Surfacing (LNRS) at North Lantau Highway and Shun Long Road
Figure 6.2 Location of Noise Assessment Points
Figure 6.3 Locations of Vertical Architectural Fins and BAW
Figure 6.4 ASR Ratings of Proposed Development for Tower 1 and Tower 2
Figure 6.5 Location of Planned Fixed Noise Sources
Figure 6.6 Location of Nearest NSR to Helicopter Flight Paths
Figure 6.7 Location of Nearest NSR to Hong Kong International Airport, Hong Kong Business Aviation Centre (HKBAC) and Government Flying Services (GFS)
Figure 7.1 Location of Water Sensitive Receivers (WSRs) and Coastal Protection Area

List of Appendices

Appendix 3.1 Layout Design Scheme of the Proposed Development
Appendix 5.1 Extract of Proposed Marina & Existing Local Vessels from TCNTE EIA Report (AEIAR-196/2016)
Appendix 5.2 Endorsement from Transport Department
Appendix 6.1 Traffic Forecast of Year 2046
Appendix 6.2 Predicted Traffic Noise Levels for Residential Blocks (Base Scheme Scenario)
Appendix 6.3 Predicted Traffic Noise Levels for Residential Blocks (Mitigated Scenario)
Appendix 6.4 Indicative Design of Proposed Acoustic Window (Baffle Type)
Appendix 6.5 Fixed Noise Calculation
Appendix 6.6 Extract of Railway Noise Contour from TCLE EIA Report (AEIAR-235/2022)
Appendix 6.7 Extract of Helicopter Flight Path and Holding Area from TCNTE EIA Report (AEIAR-196/2016)
Appendix 6.8 Extract of NEF Contours from TCNTE EIA Report (AEIAR-196/2016)
Appendix 8.1 Historical Aerial Photographs
Appendix 8.2 Copy of Letter Replies from Various Government Departments

1. Introduction

1.1.1. The Hong Kong Police Force (the Applicant) intends to develop a Junior Police Officers Married Quarters (JPOMQ) (hereafter as "the proposed development") at Tung Chung Area 134, Lantau Island (hereafter as "the Application Site").

1.1.2. The Application Site is located in Tung Chung East (TCE) of Tung Chung New Town Extension (TCNTE). It is predominantly zoned "Government, Institution or Community (1)" ("G/IC (1)") with minor encroachment into the "Government, Institution or Community" ("G/IC") zone. The "G/IC" and "G/IC (1)" zones are subject to BH restrictions of 50mPD and 70mPD respectively. A Section 16 (S16) Planning Application is being submitted in support of the Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "G/IC (1)" zone and Proposed Flat (Police Married Quarters in "G/IC" zone at the Application Site.

1.1.3. Allied Environmental Consultants Limited (AEC) has been appointed to conduct a Preliminary Environmental Review (PER) for the proposed development in support of the Section 16 Planning Application.

2. Objectives

2.1.1. A Preliminary Environmental Review for the proposed development is required to assess the potential air quality and noise impacts on its air/noise sensitive uses and recommend relevant mitigation measures where necessary.

3. The Proposed development

3.1.1. The Application Site is currently reclaimed land, the site area is about 4,876m^2 in land area. The proposed development is located at Area 134 in Tung Chung New Town Extension (East) (TCNTE) which is at the junction of Road D2 to the east and Road L7 to the south. Road P1 and North Lantau Highway are located to the south of approximately 127m and 200m respectively. The Application Site will be surrounded by other developments in its immediate vicinity, including Area 137 to the east, Areas 130, 131 and 132 to the south. The public housing site of Area 133C is located to its west and Area 135 is designated for other educational use and is located to the immediate north.

3.1.2. The existing Tung Chung Line (TCL) and Airport Express Line (AEL) are located about 170m and 175m respectively to the south of the Application Site. The location of the site and its surroundings are presented in ***Figure 3.1***.

3.1.3. Across Road D2 are Area 137 and Area 138, located to the east, designated for a post-secondary institution and other educational uses, and a sports ground respectively. Area 131 is a planned police station and Area 132 is the planned Eastern Sewage Pumping System (ESPS) across Road L7 located to the south. Area 133C is located to the west, planned for public housing while Area 135 is designated for other educational use and is located to the immediate north. The Application Site is currently located on reclaimed land within TCNTE in the Islands District. Location of the site and its surroundings are presented in ***Figure 3.1***.

3.1.4. The proposed development comprises two residential towers with 3 podium floors and 27 residential floors with about 432 domestic units. Carpark is proposed at G/F and 1/F while E&M facilities and Loading/Unloading Bays are proposed at G/F. Podium garden is located at 2/F.

3.1.5. The development schedule of the proposed development is tabulated in ***Table 3-1***. The layout design scheme of the proposed development is shown in ***Appendix 3.1***.

Table 3-1 Development Schedule

Floor	Use
G/F	Carpark, E&M Facilities, Loading/Unloading Bays, Management Office/Toilet & Changing Room/ Multipurpose Room
1/F	Carpark
2/F	Podium Garden
3/F – 29/F	Flat

3.1.6. According to the latest programme, the commencement of construction works will start in October 2027 tentatively and the proposed development is expected to be completed in Q4 2031.

4. Implication of Environmental Impact Assessment

4.1.1. The proposed usage of the Proposed Development is for residential and there are no ecological valuable locations, country parks, conservation area within 500m study area of the Proposed Development. In view of the project nature and the location of proposed site, therefore it is not a designated project under the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). This PER has been undertaken with reference to the guidance for environmental considerations provided in Chapter 9 "Environment" of the Hong Kong Planning Standards and Guidelines (HKPSG). This PER presents a study of the potential environmental impacts, with respect to air quality, noise, water quality, land contamination and waste management. Drainage and sewerage impact assessments are presented separately.

5. Air Quality Impact Assessment

5.1. Introduction

5.1.1. This section assesses the potential air quality impacts in association with the proposed development by taking into account the following considerations:

- Road traffic emissions from nearby roads in the proximity;
- Industrial emissions; and
- Potential cumulative air quality impacts, if any, from nearby major housing development.

5.2. Environmental Legislation, Standards and Criteria

Hong Kong Air Quality Objectives

5.2.1. Air quality in Hong Kong is governed under the Air Pollution Control Ordinance ("APCO") (Cap. 311). Under this legislation, the Government has designated various Air Control Zones for the whole territory, and the new Air Quality Objectives ("AQOs") was taken into effect on 11 April 2025. The AQOs stipulate the statutory limits for seven pollutants and dictate the maximum number of allowable exceedances over specified periods as shown in **Table 5-1**.

Table 5-1 Hong Kong Air Quality Objectives

Pollutant	Averaging Time	Concentration Limit (ug/m^3)[i]	Number of Exceedances to be allowed per Calendar Year
Sulphur Dioxide (SO_2)	10-minute	500	3
	24-hour	40	3
RSP or PM_{10}[ii]	24-hour	75	9
	Annual	30	N/A
FSP or $PM_{2.5}$[iii]	24-hour	37.5	18
	Annual	15	N/A
Nitrogen Dioxide (NO_2)	1-hour	200	18
	24-hour	120	9
	Annual	40	N/A
Ozone (O_3)	8-hour	160	9
	Peak season	100	N/A
Carbon monoxide (CO)	1-hour	30,000	0
	8-hour	10,000	0
	24-hour	4,000	0
Lead (Pb)	Annual	0.5	N/A

Note:

[i] All measurements of the concentration of gaseous air pollutants, i.e., sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293 Kelvin and a reference pressure of 101.325 kilopascal.

[ii] Respirable suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 10 μm or less.

[iii] Fine suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 2.5 μm or less.

Hong Kong Standards and Guidelines

5.2.2. The Hong Kong Planning Standards and Guidelines (HKPSG) also provide guidance for all private and public development projects. A summary of relevant environmental design guidelines extracted from Table 3.1 of the HKPSG Chapter 9 is provided below.

Table 5-2 Recommended Buffer Distance for Land Uses (Table 3.1 of HKPSG Chapter 9)

Polluting Uses	Sensitive Uses	Buffer Distance
Trunk roads and Primary Distributor	(a) Active and passive recreational uses (b) Passive recreational uses (c) Amenity areas	>20m 3 – 20m < 3m
District Distributor	(a) Active and passive recreational uses (b) Passive recreational uses	>10m <10m
Local Distributor	(a) Active and passive recreational uses (b) Passive recreational uses	>5m <5m
Industrial Chimneys	(a) sensitive uses (b) high-rise buildings (c) active open spaces	Within 500m, consult EPD 200m 10 – 100m
Odour sources	sensitive uses	200m

5.3. Background Air Quality

Existing Air Quality in Tung Chung District

5.3.1. The background air quality of Project Site has been accessed and the nearest EPD air quality monitoring station (AQMS) is Tung Chung Monitoring Station which is adopted to represent the ambient air quality of the area. The latest 5 available years of air quality data, i.e., 2019 to 2023, are summarised in **Table 5-3** to depict local air quality trends.

Table 5-3 Background Air Quality at Tung Chung Air Quality Monitoring Station

Pollutant	Averaging time	Concentration 2019-2023 (μg/m³)[1][2]					AQO (μg/m³)
		2019	2020	2021	2022	2023	
SO_2	4th peak 10-min	57	24	19	26	22	500
	4th peak 24-hr	18	8	9	11	11	40
PM_{10}	10th peak 24-hr	**75**	66	63	57	51	75
	Annual Average	**30**	25	26	23	22	30
$PM_{2.5}$	19th peak 24-hr	**43**	34	**38**	36	28	37.5
	Annual Average	**19**	14	**17**	14	14	15
NO_2	19th peak 1-hr	149	113	115	94	118	200
	10th peak 24-hr	80	64	61	51	58	120
	Annual Average	33	28	28	25	26	40
O_3	10th peak 8-hr	**208**	**168**	158	**171**	156	160
	Peak season	**104**	90	82	89	79	100
CO	1st peak 1-hr	2260	1530	1240	1170	1280	30,000
	1st peak 8-hr	1874	1388	1073	1151	1095	10,000
	1st peak 24-hr	1644	1157	865	1011	1007	4,000

Notes:

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

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

5.3.2. Exceedance of concentration of $PM_{2.5}$, PM_{10} and O_3 in the AQO has been recorded at Tung Chung Air Quality Monitoring Station. The exceedance of $PM_{2.5}$ and PM_{10} are likely due to the influence from exhaust emission from traffic on the busy networks (e.g. North Lantau Highway) in Tung Chung Area, whereas the exceedance of O_3 is mainly caused by regional air pollution and is not directly emitted from man-made sources. In general, the results show a decreasing trend in the concentration of most pollutants in these 5 years.

Future Background Air Quality Condition

5.3.3. In view of the tentative completion year of the proposed development will be in Q4 2031, it is noted that the PATH v3.0 dataset only provides the nearest projected nearest background air quality concentrations for Year 2030. Therefore, the Year 2030 projections at Grid (19, 31), Grid (19,32) and Grid (18,31) have been adopted as the best available representation of the future background air quality for the Application Site. A summary of the Year 2030 background air quality concentrations is presented in **Table 5-4**.

Table 5-4 Background Air Quality Concentration of Pollutants

Pollutant	Averaging time	AQOs Concentration limit (μg/m³) (number of exceedances to be allowed)	Background (19,31)	Background (19,32)	Background (18,31)
SO_2	4th peak 10-min	500 (3)	31.35	32.42	29.87
	4th peak 24-hr	40 (3)	6.9	6.96	7.08
PM_{10}	10th peak 24-hr	75 (9)	51.06	51.25	51.18
	Annual Average	30	18.66	18.86	18.78
$PM_{2.5}$	19th peak 24-hr	37.5 (18)	27.43	27.66	27.91
	Annual Average	15	11.31	11.48	11.40
NO_2	19th peak 1-hr	200 (18)	88.29	96.73	94.32
	10th peak 24-hr	120 (9)	39.88	46.27	44.99
	Annual Average	40	16.77	20.32	17.74
O_3	10th peak 8-hr	160 (9)	**180.48**	**181.35**	**183.59**
	Peak season	100	**113.13**	**112.35**	**113.77**
CO	1st peak 1-hr	30,000 (0)	532.14	529.74	536.52
	1st peak 8-hr	10,000 (0)	500.48	502.89	502.84
	1st peak 24-hr	4,000 (0)	469.55	473.84	471.01

Notes:

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

[2] Future background air quality is represented using PATH data at Level 1.

5.3.4. These data have demonstrated that the concentrations of pollutants are below the AQOs, except for O_3. O_3 is not directly emitted from an emission source. It is formed by the chemical reactions of NOx and VOCs under the presence of sunlight and a regional pollution problem. O_3 is therefore not considered as a key parameter in this assessment.

5.4. Assessment Area and Representative Air Quality Sensitive Receivers (ASRs)

5.4.1. In general, the assessment area for an air quality impact assessment (AQIA) is defined by a distance of 500m from the site boundary.

5.4.2. Representative air quality sensitive receivers (ASRs) were identified and the separation distance between ASRs and Application Site are shown in ***Figure 5.1*** and summarized in **Table 5-5**.

5.4.3. The planned ASRs were identified based on best available information from at the time of preparation of this report, including:

- Tung Chung Line Extension (TCLE) EIA report (AEIAR-235/2022);
- Tung Chung New Town Extension (TCNTE) EIA (AEIAR-196/2016); and
- Hong Kong Housing Authority (HKHA) report Public Housing Development at Tung Chung Area 133A, 133B and 133C Environmental Assessment Study Final Report"

Table 5-5 Representative Air Sensitive Receivers (ASRs)

ASR ID	Description	No. of Storey (approx.) [1]	Land Use [2]	Shortest distance from project boundary (m)
ASR01	Proposed Post Secondary Institution	118	E	188
ASR02	Proposed Fire Station	9	GIC	119
ASR03	Proposed Police Station	6	GIC	98
ASR04	Proposed International School	11	E	108
ASR05	Proposed Residential Development (C2-2)	32	R	236
ASR06	Proposed Residential Development (C2-1)	28	R	27
ASR07	Proposed Commercial Development (COM-3)	28	CDA	151
ASR08	Proposed Residential Development (C1-1)	37	R	327
ASR09	Proposed Commercial Development (COM-2)	34	CDA	332
ASR10	Proposed Comprehensive Development (A1-2)	30	CDA	454
ASR11	Proposed Comprehensive Development (A1-2)	30	CDA	381
ASR12	Proposed Residential Development (A2-4)	32	R	435
ASR13	Proposed Residential Development (E1-5)	31	R	489
ASR14	Proposed Residential Development (F1-1)	10	R	338
ASR15	Proposed Residential Development (F1-2)	13	R	309
ASR16	Proposed Residential Development (F1-1)	10	R	443
ASR17	Proposed Secondary School (F1)	8	E	496
ASR18	Proposed Primary School (F)	8	E	467
ASR19	Proposed Primary School (F)	8	E	443
ASR20*	Tower 1 - Master Bedroom	27	R	-
ASR21*	Tower 1 - Master Bedroom	27	R	-
ASR22*	Tower 1 - Master Bedroom	27	R	-

ASR ID	Description	No. of Storey (approx.) [1]	Land Use [2]	Shortest distance from project boundary (m)
ASR23*	Tower 1 - Master Bedroom	27	R	-
ASR24*	Tower 2 - Master Bedroom	27	R	-
ASR25*	Tower 2 - Master Bedroom	27	R	-
ASR26*	Tower 2 - Master Bedroom	27	R	-
ASR27*	Tower 1 - Master Bedroom	27	R	-
ASR28*	Management Office	1	R	-

Remark:

[1] Reference from (TCNTE) EIA (AEIAR-196/2016) and HKHA report.

[2] E = Education; R = Residential Development; CDA = Comprehensive Development Area; GIC = Government Institution or Community; C = Commercial

*[3] * = ASRs within Proposed Development*

5.4.4. Openable windows will be provided at habitable rooms at residential units at Tower 1 and Tower for ventilation. Management office at podium will be provided with air-conditioning. These rooms are considered as ASRs within the project site.

5.5. Potential Air Quality Impact - Construction Phase

Emissions Sources from the Project

5.5.1. Foundation and superstructure works during the construction period would be anticipated in construction phase, dust emission in terms of Total suspended particulates (TSP), respirable suspended particulates (RSP) and fine suspended particulates (FSP) are the key air pollutants during construction. No demolition works will be carried out as there is no existing structure to demolished. MiC construction method will be adopted. No basement will be provided and thus deep excavation is not expected. In view of the project nature and scale, the construction activities will be limited to localised at-grade construction works.

5.5.2. The construction activities are expected to generate about 7,131m^3 of inert C&D waste as shown in **Table 9-1**. The construction will last for 4 years, assuming a capacity of 7m^3 per truck, bulk factor of 1.2, 25 working days a month and the works will not be conducted simultaneously, it is estimated that a maximum of 1 truck trip per day would be required for the delivery of excavated material. In view of the estimated number of dump trucks arising from the transportation of inert C&D materials is low, the impacts from transportation off-site are expected to be limited.

5.5.3. Diesel-fueled machinery operating on-site, including construction trucks and powered mechanical equipment (PMEs) may be potential source of PM_{10}, $PM_{2.5}$, NO_2, SO_2, and CO during construction stage. Number of PME to be used per time over the work site shall be kept to minimum and subject to selection of Contractor and future construction management. Concurrent operation of PMEs will be avoided and PMEs are to be placed away from the ASRs as far as practicable to avoid adverse impact to the nearby ASRs.

Emissions from Concurrent Projects

5.5.4. All potential concurrent projects within 500m assessment area during construction phase of the proposed development have been identified and tabulated in table below and shown in **Figure 5.2**.

Table 5-6 List of Concurrent Projects

Concurrent Projects		Construction Programme	Potential Cumulative Impacts		Approximate Distance from the Application Site
			Construction Phase	Operational Phase	
1.	Tung Chung Line Extension (TCLE) [1]	Q2 2023 till Q1 2028	Yes	No	170m
2.	Sports Ground at Area 138 [2]	2024 till 2030	Yes	No	85m
3.	Fire Station at Area 136 [2]	2024 till 2030	Yes	No	77m
4.	Post Secondary Institution at Area 137[2]	2024 till 2030	Yes	No	135m
5.	International School at Area 135 [2]	2024 till 2030	Yes	No	29m
6.	Public Housing Development at Area 133A, Area 133B and Area 133C [3]	2024/25 till 2029/30	Yes	No	Area 133A: 156m Area 133B: 93m Area 133C: 3m
7.	Police Station at Area 131 [2]	2024 till 2030	Yes	No	55m
8.	East Sewage Pumping Station at Area 132 [2]	2024 till 2030	Yes	No	21m
9.	Commercial development in Area 129 [2]	2024 till 2030	Yes	No	151m
10.	Commercial development in Area 130 [2]	2024 till 2030	Yes	No	31m
11.	Public Housing Development at Area 117 [4]	Q3 of 2024 till 2028	Yes	No	362m
12.	Residential Development at Area 139 [2]	2024 till 2030	Yes	No	303m
13.	Planned integrated development with housing, office, retail facilities, open space, GIC facilities	NA	-	-	388m

Concurrent Projects		Construction Programme	Potential Cumulative Impacts		Approximate Distance from the Application Site
			Construction Phase	Operational Phase	
	and Public Transport Interchange (PTI) in Area 113 [2]				
14.	Residential Development at Area 122 [2]	2024 till 2030	Yes	No	461m
15.	Residential Development at Area 140 [2]	2024 till 2030	Yes	No	376m
16.	Residential Development at Area 141 [2]	2024 till 2030	Yes	No	299m
17.	Sports Centre at Area 140 [2]	2024 till 2030	Yes	No	435m

Note:
[1] reference to Tung Chung Line Extension (TCLE) EIA report (AEIAR-235/2022)
[2] reference to Tung Chung New Town Extension (TCNTE) EIA (AEIAR-196/2016)
[3] reference to Hong Kong Housing Authority (HKHA) report Public Housing Development at Tung Chung Area 133A, 133B and 133C Environmental Assessment Study Final Report" (April 2024)
[4] reference to "Section 16 Planning Application for Proposed Minor Relaxation of Building Height Restrictions for Permitted Public Housing Development at Tung Chung Area 114 and Tung Chung Area 117, Lantau Island" (August 2024)

5.5.5. With reference to findings in TCNTE EIA report (AEIAR-196/2016), it is anticipated that appropriate mitigation measures for air quality impact stipulated in Air Pollution Control (Construction Dust) Regulation will be implemented by the contractors of the concurrent project. In addition, careful programme management liaison will be arranged to ensure that construction activities near ASRs are efficiently scheduled to prevent concurrent works at the same interfacing locations. Review of the Environmental Monitoring and Audit (EM&A) Reports of the TCNTE EIA (AEIAR-196/2016) from August 2020 to August 2025 indicates that the dust monitoring data recorded no exceedance of Action and Limit Levels for construction air quality monitoring during the reporting period. As a result, adverse cumulative air quality impact during the construction phase of the proposed development is not expected.

Proposed Mitigation Measures

5.5.6. With the implementation of sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation and good site practices, significant adverse dust generated from the construction of the planned residential developments is not anticipated. Mitigation measures to control construction dust/ gaseous emission listed below are recommended to be incorporated into the future contractor specifications for contractor's implementation:

- Wetting by water spraying or dust suppression chemical on dusty material before loading and unloading, stockpile of dusty materials, area where breaking, excavation or earth moving activities works is carried out, and unpaved main haul road.
- Providing hoarding of not less than 2.4m high from ground level along the site boundary which is next to a road or other public area.
- Providing effective dust screens, sheeting or netting to enclose any scaffolding built around the perimeter of a building.
- Covering or sheltering any stockpile of dusty materials.
- Disposing of any dusty materials collected by fabric filters or other pollution control system in totally enclosed containers.
- Properly treating any exposed earth, such as by compacting or hydroseeding, within 6 months after the last construction activity.
- Providing vehicle washing facilities at all site exits to wash away any dusty materials from vehicles body and wheels before they leave the site.
- Covering of dust load on vehicles before they leave the site.
- Use of ultra-low sulphur content for on-site generators to minimize black smoke emission.
- Providing water spraying system where available and applicable.
- Restricting heights from which materials are to be dropped, as far as practicable, to minimise the fugitive dust arising from unloading / loading.
- Where the public can be affected by exhaust fumes or smoke emission from any construction plants or activities, shielding the related activities by an incombustible screen such as corrugated sheet of at least 2m in width and 1.8m in height.
- Using enclosed chutes for dropping construction materials to ground level and the chutes are dampened regularly, if applicable.
- The foundation work can be carried out either by percussive piling method or non–percussive pilling method. For this project, adoption of non–percussive piling method is anticipated which helps generating lower dust emissions.

- The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcore.
- Vehicles within the site are restricted to a maximum speed of 10 kph.
- Vehicles are inspected regularly and well maintained to ensure that they are operating efficiently and that exhaust emissions are not causing nuisance.
- Vehicle engines are turned off when they are not in use.
- Haul road of the subject site is located as far as possible from nearby ASRs.

5.5.7. Due to small in development scale, the construction works to be involved the Application Site would be very limited. Also, requirements set out in the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation to control potential emissions from non-road mobile machinery (NRMM) will need to be fully complied with. Therefore, gaseous emission from diesel-fueled construction equipment would be minor and would not cause any significant adverse air quality impact.

5.5.8. To reduce SO_2 emission from diesel-fueled machinery operating on-site, Air Pollution Control (Fuel Restriction) Regulations was enacted in 1990 to impose legal control on the types of fuel allowed for use and their sulphur contents in commercial and industrial processes. To improve air quality and protect public health, EPD has introduced the Air Pollution control (Non-road Mobile Machinery) (Emission) Regulation since 1 December 2015, under which only approved or exempted NRMMs are allowed to be used in construction sites. In addition, all construction plants are required to use ULSD (defined as diesel fuel containing not more than 0.001% sulphur by weight) as stipulated in Environment, Transport and Works Bureau Technical Circular (ETWB-TC(W)) No.19/2005 on Environmental Management on Construction Sites. Furthermore, given the localized and small scale of the Project, as well as the small number of PMEs involved, adverse air quality impacts due to emissions from the use of PMEs would be unlikely.

5.5.9. Requirements set out in DEVB's TC No.1/2015, Emissions Control of NRMMs in Capital Works Contracts of Public Work need to comply by the Contractor. This Circular promulgates the requirements for the use of NRMMs approved under the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation ("the Regulation") in new capital works contracts of public works including design and build contracts, in addition to the statutory requirements of the Regulation.

5.5.10. The Contractor should also adhere to DEVB's TC No. 13/2020, Timely Application of Temporary Electricity and Water Supply for Public Works Contracts and Wider Use of Electric Vehicles in Public Works Contracts. In response to the carbon emission reduction target as specific in the "Hong Kong Climate Action Plan 2030+", at the detailed design stage, the Project Team should timely apply for the temporary electricity with a target that the necessary cables laying works could be completed before the commencement of the works contract. In addition, timely provision of electricity to construction sites can facilitate the use of Electric Vehicles (EVs) in public works contracts. The Project Team should specify the use of EV(s) as well as the installation of designated medium-speed charger for each EV as a standard provision at the site accommodation in each public works contract.

5.6. Potential Air Quality Impact – Operation Phase

Vehicular Emissions from Open Road Traffic

5.6.1. The major air pollution source in the vicinity of the Subject Site during operational phase would be tailpipe emission generated from road traffic along open road.

5.6.2. The Subject Site is bounded by two roads, namely Road L7 facing to the south and Road D2 along its east. With reference to Roadworks and Noise Mitigation Measures Design Report under TCNTE (East) – Design and Construction and the respective Technical Note on Traffic Forecast for Environmental Impact Assessment for Planning Review for Population Increase and Development Intensity in TCNTE (East), Road L7 is classified as local distributor while Road D2 is classified as district distributor. In accordance with HKPSG, the buffer distance between the proposed residential towers and the nearby roads should be adopted, which are summarised in ***Table 5-7*** and presented in ***Figure 5.3***.

Table 5-7 Buffer distance between the Proposed development and Nearby Road

Road	**Road Type** [1]	**HKPSG Guideline Buffer Distance Requirement**	**Distance between Proposed Residential Development and nearby road**
Road D2	**District Distributor**	**>10m**	**~10m**
Road L7	**Local Distributor**	**>5m**	**~9m**

Note:
[1] DD – District Distributor, LD – Local Distributor. The road classifications are given in the Roadworks and Noise Mitigation Measures Design Report under TCNTE (East) – Design and Construction and the respective Technical Note on Traffic Forecast for Environmental Impact Assessment for Planning Review for Population Increase and Development Intensity in TCNTE (East) has referenced the road classification. The road type is referenced from HKHA report "Public Housing Development at Tung Chung Area 133A, 133B and 133C Environmental Assessment Study Final Report" (April 2024) to ascertain the appropriate buffer distance requirements.

5.6.3. Representative ASRs (NAPs T2-O19 and T2-O28) with the shortest separation distance of 10.3m and 5.8m distance to the nearest road kerb, respectively, demonstrated that no openable windows encroach into the buffer zones of Road D2 and Road L7, as shown in **Figure 5.3**. The management office will be provided with air conditioning, the location of fresh air intake will be carefully designed and will not encroach on the buffer zone as recommended in the HKPSG.

5.6.4. The proposed development for the current scheme can satisfy the setback distance requirements between the nearest road kerb of Road D2 and Road L7 as stipulated in HKPSG. There are also no other sensitive active and passive recreational uses located within the minimum buffer zone. Therefore, adverse vehicular emission impacts on the proposed development are not anticipated.

Vehicular Emissions from Public Transport Interchange

5.6.5. For the concurrent project of Planned Public Transport Interchange (PTI) will be located at Area 113 and Area 133B as shown in **Figure 5.4**. With reference to the approved TCNTE EIA (AEIAR-196/2016) and TCLE EIA (AEIAR-235/2022), the PTI would be decked under proposed Area 113 development. The proposed PTI at Area 113 is planned by other parties, any design, maintenance, and operating requirements stipulated in Practice Note for Professional Persons (ProPECC PN) 1/22 "Control of Air Pollution in Semi-Confined Public Transport Interchanges" relevant to any air quality impacts to its neighbouring developments shall be considered and addressed by other parties. The planned PTI at Area 133B will be designed with due consideration to the HKPSG as far as practicable. Besides, ProPECC PN 1/22 be followed as appropriate for designing and operating the PTI to meet the air quality guidelines inside the PTI. With the provision of implementing appropriate mitigation by the future operator, no adverse air quality impacts are anticipated.

Vehicular Emissions from Tunnel Portal and Ventilation Building

5.6.6. Other than vehicular emission along open roads, those emitted from the tunnel portals and ventilation buildings would also cause cumulative air quality impact. They are outside 500m assessment area as shown in ***Appendix 5.1*** and thus adverse air quality impact from these facilities are not anticipated.

Industrial Chimney Emissions

5.6.7. Based on desktop study and and site survey conducted on 29 Aug 2025, no existing chimney were found within 500m of the subject site. According to the Air Quality Impact Assessments Review for Population Increase and Development Intensity - CASE 2: Scenario 2A (Final) under TCNTE (East) – Design and Construction conducted in May 2021, no chimney is also planned within 500m of the subject site. Given the proposed development is for residential use, which is not environmental polluting in nature and does not have provision of chimney. Hence, no chimney emission will arise from the proposed development and no adverse air quality due to chimney emission is anticipated.

Odour Emission from the proposed Sewage Pumping Station

5.6.8. With reference to deliverable PI49 (Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – Case 2) of CEDD, the latest design of proposed Sewage Pumping Station (SPS) is located to the south of Application Site, with a separation distance of 27m from the building façade of the current development scheme. Given the mitigation measures stipulated in TCNTE EIA Report (AEIAR-196/2016) will be incorporated, including installation of de-odourisation system within the pump house, design exhaust outlets further away from sensitive receivers, and full enclosure of pumps within building. It is anticipated that with the implementation of appropriate mitigation measures, potential odour impact from the SPS to the proposed development could be properly controlled.

Marine Emission from the proposed Marina at TCE

5.6.9. According to TCNTE EIA report (AEIAR-196/2016), the proposed Marina is located outside 500m assessment of the proposed site as shown in ***Appendix 5.1***. No marine routing is identified within 500m assessment area. In view of large separation distance, no adverse air quality impacts are anticipated.

Marine Emission from Existing Local Vessels

5.6.10. Apart from proposed Marina at TCE, gaseous emission from the existing local vessels operating at the Tung Chung Pier for the transportation between Tuen Mun, Tung Chung, Sha Lo Wan and Tai O are observed to the west of project as shown in ***Appendix 5.1***. As these vessels are located outside 500m assessment area and thus no adverse air quality impact from existing local vessels is anticipated.

Air Quality Impact arising from the Proposed Development

5.6.11. The nature of the proposed development is not environmental polluting and it is primarily for residential use. Car parks will be provided at G/F and 1/F. The air quality inside the car park shall comply with the air pollutant standards as recommended by the ProPECC PN 2/96 Control of Air Pollution in Car Parks. Therefore, the mechanical ventilation system of car park shall be properly designed away not to encroach buffer zone of nearby roads. Furthermore, the exhaust outlet of the mechanical ventilation system of the carpark shall also be designed by facing away from the air sensitive uses to ensure not to cause a nuisance to the occupants/ residents of the air sensitive uses including the surrounding developments and the Proposed Development. The location of the exhaust outlet and fresh air intake of the mechanical

ventilation system is not available yet and will be provided at the detailed design stage. Impact from proposed car park shall be reviewed again during the later stage to ensure no adverse air quality impact to the nearby air sensitive uses.

5.7. Conclusions

5.7.1. With the implementation of dust suppression measures of the Proposed development and provision of good site practice as stipulated under the Air Pollution Control (Construction Dust) Regulation, Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation and Air Pollution Control (Fuel Restriction) Regulations, fugitive dust impacts and gaseous emission from diesel-fueled construction equipment and machinery to the nearby air sensitive receivers due to construction works are expected to be insignificant.

5.7.2. For vehicular emission, a sufficient horizontal buffer distance between Road L7 and Road D2 to the Application Site is proposed in accordance with the requirements set out in the HKPSG. No significant adverse air quality impact due to vehicular emission on the proposed development is anticipated.

5.7.3. In view of no chimney was identified within the assessment area, no air quality impact with respect to industrial chimney emission on the future domestic users in the proposed development is anticipated. The proposed development does not include any chimney provision, no adverse air quality impact from chimney emissions is expected on nearby sensitive receivers.

5.7.4. For odour emission, with the adoption of appropriate odour control measures as outlined in the TCNTE EIA report (AEIAR-196/2016) and commonly implemented in other sewage pumping stations in Hong Kong, no adverse air quality impact due to odour emission is anticipated from the proposed SPS at Area 132 on the Application Site.

5.7.5. For marine emission, given the proposed marina at TCE and the existing local vessels are located outside the 500m assessment area, no adverse air quality impact due to marine emissions is anticipated.

5.7.6. Given that the exhaust outlet of mechanical ventilation system of car parks will be carefully designed and located away from fresh air intakes of proposed development and nearby ASRs, no adverse air quality impact during operation phase is expected.

6. Noise Impact Assessment

6.1. Introduction

6.1.1. As observed, potential traffic noise, fixed noise, railway noise, helicopter noise and aircraft noise impact are identified upon the proposed development.

6.1.2. The potential traffic noise impact is mainly dominated by Road P1, Road D2, Road L7, North Lantau Highway, Cheung Tung Road and Shun Long Road within the assessment area, road traffic noise impact assessment is conducted to evaluate potential adverse noise impact arising from the carriageways in the vicinity of the Application Site (detailed in ***Section 6.3***).

6.1.3. Since the Application Site is surrounded by numerous residential and commercial buildings in its vicinity, potential fixed noise impact on the proposed development is envisaged. Therefore, fixed noise impact assessment has been conducted (detailed in ***Section 6.3.25***).

6.1.4. The following reports have been made reference for analysing the traffic noise, railway noise fixed noise, helicopter noise and aircraft noise impact within 300m assessment area of proposed development.

- Tung Chung Line Extension (TCLE) EIA report (AEIAR-235/2022)

- Tung Chung New Town Extension (TCNTE) EIA (AEIAR-196/2016).

- Hong Kong Housing Authority (HKHA) report "Public Housing Development at Tung Chung Area 133A, 133B and 133C Environmental Assessment Study Final Report"

- Deliverable PI49 (Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – Case 2) of CEDD

6.2. Design Strategy for Noise Consideration

6.2.1. General guidance is provided in the HKPSG and EPD's website on Innovative Noise Mitigation Designs and Measures to reduce noise exposure. These guidelines have been duly considered in the design layout of the Proposed development. **Table 6-1** below summarizes the design strategies adopted in the Proposed development.

Table 6-1 **Summary of Noise Conscious Design Strategy**

Item	Design Strategy/Mitigation Measure	Considerations in the Proposed development
1	Building Setback	- The residential tower requires to maintain a setback from Road L7 and Road D2 to increase the horizontal separation distance from noise sources.
2	Building Layout	- Cruciform building block designed has been adopted where the subject site is close Road L7 and Road D2. Cruciform block could provide self-screening effect and reduce view angle to the nearby roads.
3	Podium	- Tower 1 and Tower 2 are situated on top of a podium approximately 16.31m high for the current scheme, which can increase the separation distance between the residential units and the nearby roads to achieve larger noise reduction.

6.3. Traffic Noise Impact Assessment

Introduction

6.3.1. This road traffic NIA is prepared to assess the potential traffic noise impact on the noise sensitive uses of the proposed development and recommend mitigation measures where practicable to attenuate the noise impact, if any. Road L7 and Road D2 are the potential dominant noise sources in view of their proximity to the Application Site.

Assessment Criteria

6.3.2. Noise standards are recommended in Chapter 9, "Environmental" of the HKPSG for guiding new developments against potential noise impact from sources such as road traffic, railway and aircraft. The applicable road traffic standard on the residential blocks (relies on openable windows for ventilation) is $L_{10(1\text{-hour})}$ 70dB(A).

Assessment Methodology

6.3.3. The potential noise impact arising from nearby existing and future road carriageways within 300m assessment area on the Noise Sensitive Receivers (NSRs) of Proposed development was assessed.

6.3.4. This approach considers the worst-case scenario of 15 years from the tentative completion date (Year 2031) of the proposed development. For worst case scenario evaluation, the assessment year has been chosen to be Year 2046, which has the maximum forecasted traffic flow within the 15-year period, per the advice by the traffic engineer.

6.3.5. ***Appendix 6.1*** presents the predicted peak hour traffic flows and percentage of heavy vehicle of road carriageways within 300m assessment area from the Application Site for Year 2046, with Transport Department's no objection on such traffic forecast data supplemented as shown in ***Appendix 5.2***.

6.3.6. The procedure of "*Calculation of Road Traffic Noise*" adopted by U.K.'s Department of Transport was used to predict the hourly $L_{10(1\text{-hour})}$ noise levels generated from road traffic at selected representative NSRs. The predicted noise levels were compared to the noise standard set out in the HKPSG (i.e. $L_{10(1\text{-hour})}$ 70dB(A) for domestic use. Practicable noise mitigation measures have been recommended where necessary.

6.3.7. Low noise road surfacing (LNRS) is currently in place on North Lantau Highway and Shun Long Road and the extent of LNRS is shown in ***Figure 6.1***. It is considered in the assessment in both Base Scheme Scenario and Mitigated Scenario.

Noise Sensitive Receivers

6.3.8. Noise Sensitive Receivers (NSR) within the Proposed development have been selected to assess the road traffic noise impact to the noise sensitive uses. Assessment points for the residential blocks have been assigned to all openable windows for ventilation at all habitable rooms. All noise assessment points (NAPs) were taken at 1.2m above the floor level and 1m away from the façade of openable windows in rooms of sensitive uses.

6.3.9. Based on ***Appendix 3.1***, the management office is located on the G/F and will be provided with air conditioning without relying on openable window for ventilation. Therefore, the management office is not considered as NSR for assessment.

6.3.10. ***Figure 6.2*** shows the location of the selected NSRs for traffic noise impact assessment.

Assessment Result Under Based Scheme Scenario (Scenario 1)

6.3.11. The road traffic noise prediction results indicate that the residential units are likely to be exposed to traffic noise levels exceeding the HKPSG traffic noise criterion of 70 dB(A). The predicted noise levels at all the NAPS at different levels under this "Base Scheme Scenario" (Scenario 1) are shown in ***Appendix 6.2***. Summary of traffic noise prediction results is shown in **Table 6-2.** Residential flats facing Road L7 are anticipated to be the worst-affected locations.

6.3.12. Under the "Base Scheme Scenario" (Scenario 1), 52% of residential flats of the proposed development will be subjected to noise levels within the stipulated noise limit of 70 dB (A). The remaining flats will be subjected to noise levels higher than 70 dB (A), in the range of 71-74dB(A). The results of the assessment have indicated that the highest predicted noise level is 72 dB(A) for Tower 1 and 74 dB(A) for Tower 2.

6.3.13. **Table 6-2** summarizes the results of the traffic noise assessment under "Base Scheme Scenario" (Scenario 1). Predicted noise levels at the representative NSRs are presented in ***Appendix 6.2***.

Table 6-2 Traffic Noise Prediction Results, Base Scheme Scenario

	Residential Towers		
	Tower 1	**Tower 2**	**Overall**
Maximum Predicted Traffic Noise Level, $L_{10,peak\ hr}$ in dB(A)	72	74	74
Noise Criteria $L_{10,1\ hr}$ in dB(A)	70	70	NA
Total No. of Units	216	216	432
Total No. of Units Exceed Traffic Noise Criteria	74	135	209
Percentage of Compliance	66%	38%	52%

Proposed Mitigation Measures

6.3.14. Despite adopting above site specific layout design strategies for minimizing the potential road traffic noise impact, exceedance of road traffic noise is anticipated at residential blocks. Other practical mitigation measures and "Innovative Noise Mitigation Designs and Measures" as listed on the EPD's website have been considered and incorporated into the development to further mitigate the noise impact.

(a) Vertical Architectural Fin

Table 6-3 Proposed Vertical Architectural Fins

Fin Length	Number of fins used	Rooms with fins
1.0m fins	3	T1-O32 T2-O29 T2-O32
1.2m fins	2	T1-O33 T2-O19

6.3.15. A total of 5 no. vertical architectural fin ("architectural fin") have been proposed to minimize road traffic noise impacts on the proposed development.

6.3.16. The noise reduction effect is determined using CRTN methodology taking into account the view angle correction but would have the maximum value of not more than 3 dB(A). The locations of vertical fins are shown in **Figure 6.3**.

(b) Acoustic Window (Baffle-type) (BAW)

6.3.17. In view of the maximum traffic noise exceedance < 5dB(A), BAW is proposed as a noise mitigation measure at living rooms, bedrooms and master bedrooms of Tower 1 and Tower 2 with traffic noise exceedance. The reference designs of BAW are reference to EPD's ProPECC PN5/23 "Practice Note on Application of INNOVATIVE NOISE MITIGATION DESIGNS in Planning Private Residential Developments against Road Traffic Noise Impact"

6.3.18. The locations of BAW are shown in ***Figure 6.3***. The details of the proposed BAW are given in **Table 6-4** and **Table 6-5**. The schematic design of BAW is given in ***Appendix 6.4***.

6.3.19. Each BAW comprises of two layers of window, i.e. typical window at outer layer and sliding glazing at inner layer. While the prescriptive requirements of ventilation openings under Building (Planning) Regulations can be met by an unobstructed opening that allows air flow, noise reduction is achieved when the opening is obstructed by sliding glazing. The noise reduction performance shall be further enhanced by locating the opening of the outer layer of window away from dominant noise sources.

6.3.20. Optimal noise reduction performance of BAW would be considered when location of openable window and fixed glazing at outer layer is arranged in favourable setting. Openable window at outer layer are arranged further apart from dominant noise source, while fixed glazing is closer to the dominant noise source in general. In case there is a noise barrier structure, e.g. architectural fin, screening the openable window from noise source, openable window is arranged adjacent to the barrier structure.

6.3.21. For living rooms, bedrooms and master bedrooms with predicted traffic noise exceedance, BAW are proposed designed in accordance with EPD's "Practice Note on Application of INNOVATIVE NOISE MITIGATION DESIGNS in Planning Private Residential Developments against Road Traffic Noise Impact" as detailed in **Table 6-4** and **Table 6-5**.

6.3.22. To ensure the noise reduction performance of the acoustic window BAW, only one window opening with the acoustic window design will be allowed in each habitable room. This design arrangement is strictly followed. The openable window is well-gasketed with at least 6mm thick window panel.

Table 6-4 BAW (Configuration 1) and Living Room

Parameters	**PN BAW2 w/o SAM**	**Proposed development (Living Room)**
Size of Room [1] (m^2)	18	20
Maximum relative noise reduction required (dB(A))	/	2.8
Noise reduction adopted (dB(A))	7	7
Required Opening Area [2] (m^2)	/	1.11
Opening Area Provided [3], (W) x (H) = Area (m and m^2)	/	Subject to detailed design stage
Acoustic Window Height (m)	1.5	
Gap Width (mm)	100 - 175	
Overlapping Length [4] (mm)	100	
Outer Opening Dimensions (W) x (H) = Area (m and m^2)	0.75 x 1.5 = 1.125	
Inner Opening Dimensions (W) x (H) = Area (m and m^2)	0.75 x 1.5 = 1.125	
Absorption Lining [5]	No	

Notes:
[1] Size of room in terms of Usable Floor Area (UFA) of subject room, excluding area of enclosed kitchens or toilets
[2] Size of opening required to satisfy ventilation requirement under Building Regulations, this area excludes area occupied by window frames.
[3] Opening when inner and outer opening aligned, i.e. the minimum of inner and outer opening area in above acoustic window (baffle type) configurations.
[4] Overlapping length of exterior and interior glazing measured from centres of aluminium frames (standard aluminium frame size of 50mm).
[5] Absorption Lining: on 3 sides of window frame (Top, Left and Right), with 30mm thick acoustic infill, rock wool, wrapped in sound transparent membrane in perforated casing of minimum 23% perforation. NRC 0.7 or above

Table 6-5 BAW (Configuration 2), Master Bedroom and Bedroom

Parameters	PN BAW1 w/o SAM	Proposed development (Master Bedroom)	Proposed development (Bedroom)
Size of Room [1] (m^2)	8	7.1	4.9
Maximum relative noise reduction required (dB(A))	/	3.6	3.1
Noise reduction adopted (dB(A))	6	5.5	3.9
Required Opening Area [2] (m^2)	/	0.45	0.31
Opening Area Provided [3], (W) x (H) = Area (m and m^2)	/	Subject to detailed design stage	Subject to detailed design stage
Acoustic Window Height (m)	0.87		
Gap Width (mm)	100 - 175		
Overlapping Length [4] (mm)	100		
Outer Opening Dimensions (W) x (H) = Area (m and m^2)	0.6 x 0.87 = 0.522		
Inner Opening Dimensions (W) x (H) = Area (m and m^2)	0.58 x 0.87 = 0.5046		
Absorption Lining [5]	No		

Notes:
[1] Size of room in terms of Usable Floor Area (UFA) of subject room, excluding area of enclosed kitchens or toilets
[2] Size of opening required to satisfy ventilation requirement under Building Regulations, this area excludes area occupied by window frames.
[3] Opening when inner and outer opening aligned, i.e. the minimum of inner and outer opening area in above acoustic window (baffle type) configurations.
[4] Overlapping length of exterior and interior glazing measured from centres of aluminium frames (standard aluminium frame size of 50mm).
[5] Absorption Lining: on 3 sides of window frame (Top, Left and Right), with 30mm thick acoustic infill, rock wool, wrapped in sound transparent membrane in perforated casing of minimum 23% perforation. NRC 0.7 or above

Assessment Result under Mitigated Scenario (Scenario 2)

6.3.23. The details of the noise mitigation measures adopted in the scenarios for road traffic noise impact assessment are tabulated in **Table 6-6**. The road traffic noise prediction results for mitigated scenario are shown in **Table 6-7**. The predicted noise levels are provided in **Appendix 6.3**.

Table 6-6 Noise Mitigation Measures Adopted in the Scenarios

	Scenarios	
	Base Scheme (Scenario 1)	Mitigated Scenario (Scenario 2)
Existing Low Noise Surfacing	Adopted	Adopted
Building Layout	Adopted	Adopted
Podium	Adopted	Adopted
Vertical Architectural Fins	-	Adopted
BAW	-	Adopted

Table 6-7 Traffic Noise Prediction Result

	Tower 1	**Tower 2**	**Overall**
Total No. of Units: 432	216	216	432
Scenario 1: Base Scheme			
Max. predicted traffic noise level ($L_{10\,(1hour)}$, dB(A))	72	74	74
Total No. of NSRs exposed to noise level > 70dB(A) $_{L10\,(1hour)}$	74	135	209
Percentage of Compliance	66%	38%	52%
Scenario 2: Mitigated Scenario			
Max. predicted traffic noise level ($L_{10\,(1hour)}$, dB(A))	70	70	70
Total No. of NSRs exposed to noise level > 70dB(A) $_{L10\,(1hour)}$	0	0	0
Percentage of Compliance	100%	100%	100%

6.3.24. With the abovementioned noise mitigation measures incorporated in the proposed development scheme, it is anticipated that the road traffic noise criteria can be fully complied with. The predicted noise levels under mitigated scenario and the schedule of mitigation measures are given in ***Appendix 6.3***.

Summary for Road Traffic Noise Impact Assessment

6.3.25. Potential road traffic noise impact on the proposed development has been assessed. According to the road traffic noise impact assessment result, the proposed development will comply with the relevant traffic noise standard stipulated in HKPSG with the implementation of noise mitigation measures, i.e. acoustic windows (baffle type) and architectural fins. Full compliance is expected with incorporation of mitigation measures.

6.4. Fixed Plant Noise Impact Assessment

Environmental Legislation and Guidance

6.4.1. Legislation, standards, guidelines, and criteria relevant to the consideration of planning against possible fixed noise impact under this assessment include the following:

- Noise Control Ordinance (NCO) Cap.400

- Chapter 9 of HKPSG

- Technical Memorandum on Noise from Places other than Domestic Premises, Public Places or Construction Sites (IND-TM)

6.4.2. Existing Fixed Plant Noise is controlled under the NCO's Technical Memorandum on Noise from Places other than Domestic Premises, Public Places or Construction Sites (IND-TM), which shall not exceed the Acceptable Noise Level (ANL) for a Noise Sensitive Receiver.

6.4.3. More stringent criteria are applicable for planned fixed plants, as stipulated in the Chapter 9, "Environmental" of the HKPSG with the following requirements: 5dB(A) below the appropriate ANLs in the IND-TM, or in the case of the background noise being 5 dB(A) lower than the ANL, should not be higher than the background.

6.4.4. The ANLs for the NSRs are based on the Area Sensitivity Rating (ASR), which is defined in the IND-TM issued under NCO. The ASR depends on the type of area and the degree of impact that Influencing Factors (IFs) have on the NSRs and as illustrated in below **Table 6-8**. Industrial area and major road shall be considered to be an IF. For the given ASR, the ANL, in dB(A), is given in **Table 6-9**.

Table 6-8 Area Sensitivity Ratings (ASRs) of NSRs

Type of Area Containing NSR	Degree to which NSR is affected by Influencing Factors (IFs)		
	Not affected	Indirectly affected	Directly affected
I. Rural area, including country parks, or village type developments	A	B	B
II. Low density residential area consisting of low-rise or isolated high-rise developments	A	B	C
III. Urban area	B	C	C
IV. Area other than those above	B	B	C

Table 6-9 Acceptable Noise Level for Fixed Noise Sources

Time Period	ANL, dB(A)		
	ASR "A"	ASR "B"	ASR "C"
Day (0700 to 1900 hours)	60	65	70
Evening (1900 to 2300 hours)	60	65	70
Night (2300 to 0700 hours)	50	55	60

6.4.5. The site is planned for high-rise residential development, it is surrounded by planned residential developments in TCNTE (East). The types of area (i) rural area; (ii) low density residential area consisting of low-rise or isolated high-rise developments and (iii) urban area according to IND-TM cannot reflect the future environs of the subject site and are all not applicable. Thus, the whole site shall fall into type (iv) "Area other than those above" according to IND-TM.

6.4.6. Review of the Annual Traffic Census (ATC) for Year 2023, indicated that North Lantau Highway had an AADT of 41,340, which is considered as an Influencing Factor (IF) under the IND-TM. All façades of Tower 1 except the south east façade will not have line of sight to the North Lantau Highway and therefore considered to be not affected by the IF. An ASR of B is assigned. The ANL for "B" should be 65 dB(A) and 55 dB(A) for daytime and night-time respectively. As the south east façade of Tower 1 will be exposed to IF as shown in **Figures 6.4a to 6.4c.** The corresponding ANLs should be 70 dB(A) and 60 dB(A) for daytime and night-time respectively.

6.4.7. For Tower 2 of the proposed development, the east and south facades are directly exposed to North Lantau Highway. The proposed police station and east sewage pumping station located in front of the development does not provide effective shielding. As such, these facades are therefore considered to be directly affected by the IF and hence an ASR of "C" is assigned. The corresponding ANLs should be 70 dB(A) and 60 dB(A) for daytime and night-time respectively. For the facades facing west and north, ASR of "B" is assigned. The proposed ASR for the NSRs is indicated in **Figure 6.4.**

Planned Noise Sources

6.4.8. With reference to the approved TCLE EIA report (AEIAR-235/2022), TCNTE EIA (AEIAR-196/2016) and HKHA report "Public Housing Development at Tung Chung Area 133A, 133B and 133C Environmental Assessment Study Final Report", four planned fixed noise sources were identified within 300m assessment area of proposed development and shown in **Figure 6.5**. The basic information of the identified planned fixed noise sources is summarized in **Table 6-10**.

Table 6-10 Summary of Identified Fixed Noise Sources

Location	Operators	Identified Potential Noise Sources	Shortest separation distance from site boundary (m)	Sound Power Level, SWL (dBA) [1]
(C2-2) Area 133B	Public Transport Interchange (PTI) [1]	Operation: ventilation fans	242	82
(CO-3) Area 132	Sewage Pumping Station (SPS)[1]	Operation: Pumps and exhaust of the mechanical ventilation system to be operated during daytime, evening, and nighttime periods.	27	88
(G0-3) Area 136	Tung Chung East Fire Station [1]	Operation: Station operations include loudspeakers, siren, fire engine sirens, condenser and transformer, etc.	67	97
(G0-1) Area 138	Sports Ground [2]	Operation: Operation of the facility and public address (PA) system	220	105 (NW)
			175	101 (SE)

Note:
[1] Sound power level for identified fixed noise sources is referred to the approved TCNTE EIA (AEIAR-196/2016)
[2] Sound power level of Sports Ground is made reference to approved Main Arena of the 2008 Olympic Equestrian Event EIA Report and it is measured in NW - northwest and SE – southeast direction.

Public Transport Interchange (PTI)

6.4.9. With reference to the TCNTE EIA (AEIAR-196/2016) and HKHA report, PTI is planned on G/F underneath Block 1 and Block 3 of public housing development at Area 133B, which will be designed with due consideration to the HKPSG. The planned PTI will be covered under a podium decking with full height double bank louvre, solid boundary wall and hanger louver/fins at vehicular and pedestrian accesses, to avoid line of sights to the planned noise sensitive uses in the proximity as far as practicable.

Sewage Pumping Station (SPS)

6.4.10. Noise sources include the pumps and exhaust of mechanical ventilation system to be operated during daytime, evening time and night-time periods. With reference to deliverable PI49 (Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – Case 2) of CEDD, the latest design of proposed SPS has incorporated the mitigation measures stipulated in AEIAR-196/2016, including design exhaust outlets further away from sensitive receivers, and full enclosure of pumps within building. Given the use of proper design and provision of noise mitigation measures, no adverse fixed noise impact on the proposed development is anticipated.

Fire Station

6.4.11. Major fixed noise sources of the fire station include chillers, condensers and transformers from the station operations. Other noise sources associated with the fire station include loudspeakers, siren and vehicular sirens. As confirmed by the Fire Services Department (FSD), daily operational activities at the fire station will be confined to daytime hours only. Noise emissions from sirens and loudspeakers are expected to occur for a short duration, while machinery used for daily training activity will operate for 30 minutes per day during daytime hours. It is assumed that the proposed fire station will be designed to meet the HKPSG noise criteria, taking the Project into account as the potential NSR. Given that the occurrences of fire station activities are on an as-needed basis and last for a short duration only, adverse fixed noise impact on the proposed development is not anticipated.

Sports Ground

6.4.12. Noise sources of sports ground including the operation of the facility and PA system during daytime and evening time operation. With reference to the approved TCNTE EIA (AEIAR-196/2016), it was recommended to incorporate measures for the PA system and/ or the sound amplification system, if used during the outdoor noise activities. The recommended measures include the adoption of a cluster of small power loudspeakers instead of a few large power loudspeakers, adoption of directional loudspeakers with orientation to point away from the nearby NSRs; and the inclusion of a "Limiter" device in the system to set the upper bound of the output sound level. Besides, as concluded in the TCNTE EIA, the sports ground is a DP under Item O.7 of Schedule 2 of Technical Memorandum on the Environmental Impact Assessment Process, a separate EIA study would be required to be conducted by the future operator to fulfil all the statutory requirements and procedures under the EIAO. Any potential environmental noise impacts caused by the planned sports ground shall be addressed in the respective future EIA and mitigated by appropriate at source mitigation measures where necessary to ensure no noise exceedance at all nearby sensitive receivers including the proposed development.

Representative NAP for Fixed Noise Impact Assessment

6.4.13. Representative NAPs with short separation distance from different potential noise sources are selected within the proposed development and are shown in **Figure 6.4**.

Potential Fixed Noise Impact on the Proposed Development

6.4.14. The summary of the predicted fixed plant noise level is tabulated in **Table 6-11**. Detailed calculation of fixed noise impact assessment is presented in **Appendix 6.5**.

6.4.15. The maximum predicted fixed noise levels for representative NAP at Tower 1 during daytime/ evening time are up to 51dB(A), whilst for the night-time period, it is 47dB(A). Therefore, the assessment criteria for fixed noise levels are 65dB(A) and 55 dB(A) for day/ evening time and night time periods can be complied with.

6.4.16. The maximum predicted fixed noise levels for representative NAPs at Tower 2 during daytime/ evening time are up to 57dB(A), whilst for the night-time period, it is 44dB(A). Therefore, the assessment criteria for fixed noise levels are 70dB(A) and 60dB(A) for day/ evening time and night time periods can be compiled with.

Table 6-11 Predicted Fixed Noise Level at Representative NAPs

NAP ID	ASR	Daytime & Evening Time Criteria (dB(A))	Night Time Criteria (dB(A))	Maximum Predicted Noise Level, dB(A)	
				Daytime & Evening Time	Night Time
T1-O12	B	65	55	44	39
T1-O33				51	47
T2-O12	C	70	60	54	39
T2-O23				57	41
T2-O28				57	44

Fixed noise impacts from the Project on the NSRs in the vicinity

6.4.17. Potential fixed noise to be generated from the proposed development includes noise from the operation of air-conditioning units from the residential units, mechanical ventilation installations of the plant rooms, as well as other fixed noise sources equipment.

6.4.18. The residential development with the shortest separation distance from the Project Site is Area 133C, located approximately 14m away from the building facade as shown in **Figure 6.4**.

6.4.19. Mechanical Equipment and Air conditioning (MVAC) and E&M plants, such as pump units, transformers, emergency generator and lift machines, will be placed at enclosed plant rooms. In particular, based on the current design, PV equipment, water tanks, water pump rooms will be placed on the rooftop. The water pump will be installed within the plant room. The ventilation louvres, mechanical ventilation intakes or exhausts of MVAC equipment and E&M plant rooms will be treated by silencers and enclosure, if necessary.

6.4.20. The choice of equipment and the requirement of noise control measures, such as acoustic treatments by silencers and enclosure, will be determined to ensure that noise level at potentially affected NSR will comply with the noise criteria. The cumulative noise impact on nearby NSRs shall comply with statutory requirement under Noise Control Ordinance (NCO) stipulated in IND-TM. For the design of plant noise control treatment, the plant noise shall be controlled and designed to meet the HKPSG requirement, i.e. 5 dB below ANL or the prevailing background noise level, whichever is lower. The prevailing background noise levels shall be determined at detailed design stage, before construction commencement, for determining the planning criteria. The design requirement for the compliance to HKPSG criteria will be stated clearly in the tender specification. The Contractor shall be responsible for the design of the MVAC and E&M plants with proper mitigation measures, if necessary.

Summary of Fixed Noise Impact Assessment

6.4.21. The predicted fixed noise levels for daytime/ evening time and nighttime at representative NSR show that full compliance with assessment criteria of 65/ 70 dB(A) and 70/ 60 dB(A) for day/ evening time and night time periods respectively. The proposed development will not be exposed to fixed noise impact from noise sources nearby.

6.4.22. Nearby residential development will be located at 14m from the Site. To ensure that the noise level at potentially affected NSRs will comply with the statutory requirement under Noise Control Ordinance stipulated in IND-TM, all on-site planned fixed plant within the Proposed development shall be controlled and designed to meet the HKPSG requirement, i.e. 5 dB below ANL or the prevailing background noise level, whichever is the lower.

6.5. Railway Noise Impact Assessment

Introduction

6.5.1. This railway NIA is prepared to assess the potential railway noise impact on the noise sensitive uses of the proposed development and recommend mitigation measures where practicable to attenuate the noise impact, if any. Potential railway noise impact associated with the proposed development will arise from the existing Tung Chung Line (TCL) and Airport Express Line (AEL) which are located about 170m to the south of the Subject Site. A section of existing TCL will be diverted from the planned Tung Chung Line Extension (TCLE) with the provision of a new TCE Station.

Assessment Criteria

6.5.2. Noise planning standards for rail noise have been specified in Table 4.1 of the HKPSG Chapter 9, i.e. $L_{eq(24hr)}$ of 65 dB(A) and $L_{max(2300\text{-}0700hours)}$ of 85 dB(A). Besides, ANL are also stipulated in the IND-TM issued under the NCO as shown in **Table 6-12**.

Table 6-12 Noise Criteria for Rail Noise

Area Sensitivity Rating	Time Period [1]	Acceptable Noise Levels, $L_{eq(30mins)}$, dB(A) under IND-TM	Maximum A-weighted SPL, $L_{max(2300\text{-}0700hrs)}$ dB(A), under HKPSG	Maximum A-weighted SPL, $L_{eq(24hrs)}$ dB(A), under HKPSG
A	Daytime & Evening	60	85	65
	Night-time	50		
B	Daytime & Evening	65		
	Night-time	55		
C	Daytime & Evening	70		
	Night-time	60		

Note: [1] Daytime: 0700 to 1900 hours, Evening: 1900 to 2300 hours, Night-time: 2300 to 0700 hours

6.5.3. As shown in Figure 6.4 and Section 6.4.5 to 6.4.7, the ASR of "B" and "C" are proposed for Tower 1 and Tower 2. The ASR assigned in this PER report is for assessment purpose only and shall not prejudice the Authority's decision on enforcement based on contemporary conditions.

Review of Potential Rail Noise Impact

6.5.4. The TCLE is a Designated Project under the EIAO. An EIA was conducted and approved under the EIAO on 12 July 2022 (AEIAR-235/2022).

6.5.5. The planned TCLE are located at about 170m to the south of the subject site as shown in **Figure 5.2**. The committed commercial development at Area 129 and 130, G/IC developments at Area 131, 132, 136 and 137 are located between the railway and the subject site. Shielding can be provided by these developments.

6.5.6. With reference to the approved TCLE EIA (AEIAR-235/2022), rail noise impact assessment was conducted. The railway noise contours of $L_{eq\ (30min)}$ / L_{max} at 7.2mPD, 15mPD and 30mPD are extracted and reviewed as shown in **Appendix 6.6**.

6.5.7. For daytime criteria, LA_{eq} 65dB and 70dB for ASR of "B" and "C" is adopted for Tower 1 and Tower 2. With reference to the predicted railway noise levels at 7.2mPD, 15mPD and 30mPD from TCLE EIA report in **Appendix 6.6 (daytime)**, the worst affected Southeast façade of Tower 2 is assigned with ASR of "C" and fall into the contour of LA_{eq} 55dB. The corrected noise level of this contour line shall refer LA_{eq} 57.5dB which has taken the 2.5dB façade correction into consideration. It is thus anticipated that the predicted noise levels at all the units at Tower 1 and Tower 2 are below the criteria of LA_{eq} 65dB and 70dB in view of the predicted railway noise level at the worst affected façade in the application site is below 57.5 dB, the rail noise impact during daytime could comply with the noise standard of HKPSG.

6.5.8. The night criterion of ASR "C" in Tower 1 and Tower 2 is LA_{eq} 60dB. With reference to the predicted railway noise levels at 7.2mPD, 15mPD and 30mPD from TCLE EIA report in **Appendix 6.6 (night-time)**, the worst affected Southeast façade of Tower 2 fall into the contour of LA_{eq} 55dB. The corrected noise level of this contour line shall refer to LA_{eq} 57.5dB which has taken the 2.5dB façade correction into consideration. The predicted noise level of the worst affected ASR "C" in the proposed development is below the criterion of LA_{eq} 60dB, the rail noise impact during night-time could comply with the noise standard of HKPSG.

6.5.9. The night criterion of ASR "B" in Tower 1 and Tower 2 is LA_{eq} 55dB. With reference to the railway noise contours given in the TCLE EIA report in **Appendix 6.6 (night-time),** the worst affected façade assigned with ASR "B" would be southwest façade of Tower 1. The contours demonstrated that the said façade is fall beyond the contour for LA_{eq} 55 dB (corrected LA_{eq} 57.5 dB). In order to demonstrate the full compliance of 55 dB(A) for rooms with ASR of "B" for nighttime, further review is conducted by making reference to railway noise impact assessment conducted for Area 133C in the approved EIA Report AEIAR-196/2016 for Tung

Chung New Town Extension which is of similar separation distance and view angle to railway.

6.5.10. Railway noise impact assessment was conducted for Area 133C, which is in the immediate west to the Proposed Development, including the potential railway noise impact on the façade of NAP "C2-1-03". "NAP "C2-1-03" is considered comparable to NAP "T1-O33" and "T2-O19" within the Application Site which are considered as the worst affected NAPs having the most stringent noise criteria for ASR of "B" and shortest separation distance. The NAP "C2-1-03" is assigned with ASR "B", and has no direct angle of view to rail track with a separation distance to the nearest rail track of approximately 180m, the unmitigated predicted noise levels for day and night time are LA_{eq} 49-55 dB for openings up to 33F (100.6mPD) which could comply with the railway noise criteria of HKPSG. The NAPs of ASR "B" in Tower 1 and Tower 2 (NAP T1-O33 and T2-O19) have a minimum separation distance of 176m and the angle of view are either blocked by the buildings in Area 129 and Area 130 or blocked by the façade of Tower 1 or Tower 2. The NAPs of ASR "B" in the proposed development have the tilted vision to the railway tracks and are screened by full height architectural fins in T1-O33 and T2-O19 as noise mitigation measures in **Figure 6.3**. Given the similar angle of view and similar separation distance from the rail track in the Proposed Development and NAP "C2-1-03" of EIA Report AEIAR-196/2016, and the additional architectural fins, the railway noise impact of NAPs of ASR "B" in Tower 1 and Tower 2 shall comply with the night-time criterion of LA_{eq} 55dB.

6.5.11. With reference to the predicted railway noise levels at 7.2mPD, 15mPD and 30mPD from TCLE EIA report in **Appendix 6.6 (L_{max})**, the distance from rail track to the contour line of LA_{max} 85dB is 25m, while the distance between the project site and the rail track is 170m. According to acoustic principles, the sound pressure level will decay by 3dB per doubling the distance of a line source. The sound pressure level is assumed to decay by 8dB from 25m to 170m separation. Thus, the rail noise impact of LA_{max} 85dB could comply with the noise standard of HKPSG.

6.5.12. Therefore, potential rail noise impact is not anticipated on the current scheme.

Conclusions

6.5.13. Potential railway noise impact on the proposed development has been assessed. According to the railway noise impact assessment result from TCLE EIA report (AEIAR-235/2022) and Tung Chung New Town Extension EIA Report (AEIAR-196/2016), the proposed development would not subject to significant adverse railway noise impact on the current scheme. The railway noise impact will be reviewed again in the detailed design stage.

6.6. Review on Helicopter Noise Assessment

Introduction

6.6.1. Helicopter noise assesment is prepared to assess the potential helicopter noise impact on the noise sensitive uses of the proposed development and recommend mitigation measures where practicable to attenuate the noise impact, if any. Helicopter noise will be generated during manoeuvring over the helipad and during lateral (approach/departure) flight. With reference to the TCNTE EIA Report (AEIAR- 196/2016), potential helicopter noise impacts are anticipated due to Government Flying Services (GFS) and business helicopter operations.

Assessment Criteria

6.6.2. In accordance with the HKPSG, a helipad should not be located in such a way that the daytime (07:00- 19:00 hours) maximum noise levels at sensitive uses will be exceeded.

Table 6-13 Daytime Helicopter Noise Assessment Criteria

Uses	Assessment Criteria Lmax, dB(A)
All domestic premises	85
Hotels and Hostels	85
Offices	90
Educational institutions including kindergartens, nurseries and all others where unaided voice communication is required	85
Places of public worship and courts of law	85
Hospitals, clinics, convalescences and homes for the aged, diagnostic rooms, wards	85

Evaluation of Potential Helicopter Noise Impact

6.6.3. For the area in Tung Chung in particular, the helicopters operated by both Government Flying Services (GFS) and commercial company would be using the airspace in the vicinity. GFS has a headquarters within the Hong Kong International Airport (HKIA) and its helicopters serve both routine and emergency services. According to the information given in the TCNTE EIA report, all the routine services (including flying support for all bureau and departments) would be conducted during daytime period only while emergency services (including air ambulance, Search & Rescue (SAR), supporting law enforcement agencies, fire fighting) have to be conducted on an as-required basis to suit actual circumstances.

6.6.4. Hong Kong Business Aviation Centre (HKBAC) is a helicopter landing services company providing a facility for commercial helicopters to use. According to the TCNTE EIA report, there had only been 2 flight events between HKIA and Macau, and another 2 flights between HKIA and Kowloon during daytime period.

6.6.5. GFS and HKBAC are located at the south-western of the Hong Kong International Airport (HKIA). The separation distances from the GFS and HKBAC to the nearest NSR (T1-O03) are 5.5km and 5.2km respectively as shown in **Figure 6.7**. Noise impact generated from helicopter approaching, take-off and manoeuvring are not anticipated.

6.6.6. The helicopter holding areas are identified which may generate helicopter noise by flyover mode as shown in ***Table 6-14*** and ***Appendix 6.7***. The flight paths extracted from TCNTE EIA report are given in ***Appendix 6.7*** and ***Figure 6.6***.

Table 6-14 Location of Helicopter Holding Areas

ID	Location
H5	Pak Mong
H6	Cathay City
H7	Freight Centre
H10	Tung Chung Bay

6.6.7. According to the helicopter noise assessment in the TCNTE EIA report, the first layer of NSRs within 130m horizontal to the helicopter flight path are identified for assessment and results demonstrated that the maximum predicted noise levels at the identified NSRs ranged from 79 - 81 dB(A), which is below the assessment criteria of L_{max} 85dB(A).

6.6.8. For the application site, the shortest separation distance from the flight path is maintained at 290m (i.e. NAP T2-O12). It is anticipated that the application site is not exposed to helicopter noise impact and no mitigation measures are required.

Conclusions

6.6.9. Potential helicopter noise impact on the proposed development has been reviewed. According to the helicopter noise impact assessment result from TCNTE EIA report (AEIAR-196/2016), the proposed development would not subject to significant adverse helicopter noise impact on the current scheme and no mitigation measures are proposed.

6.7. Review on Aircraft Noise Assessment

Introduction

6.7.1. Aircraft noise assessment is prepared to assess the potential aircraft noise impact on the noise sensitive uses of the proposed development and recommend mitigation measures where practicable to attenuate the noise impact, if any. Hong Kong International Airport is located to the northwest of the application site. The minimum separation distance from the southern runway and the nearest NSR is 3,071m (NSR T1-O08) as shown in ***Figure 6.7***.

Assessment Criteria

6.7.2. In accordance with the HKPSG, NSRs relying on opened windows for ventilation should be planned beyond the NEF25 contour, except for offices which should be beyond the NEF30 contour, as shown in ***Table 6-15***.

Table 6-15 Assessment Criteria for Aircraft Noise

Uses	Aircraft Noise (Noise Exposure Forecast : NEF)
All domestic premises	25
Hotels and Hostels	25
Offices	30
Educational institutions including kindergartens, nurseries and all others where unaided voice communication is required	25
Places of public worship and courts of law	25
Hospitals, clinics, convalescences and homes for the aged, diagnostic rooms, wards	25

Evaluation of Potential Aircraft Noise Impact

6.7.3. Based on the NEF results from approved EIA report TCNTE (AEIAR-196/2016), the predicted NEF 25 contours of the 3 Runway System (3RS) for year 2030 and 2032 would be away from the boundary of TCE upon the full commissioning of the 3RS in year 2024. The relevant contours are given in ***Appendix 6.8***. The boundary of the application site will be away from the predicted NEF 25 contours under the operation of 3RS. Adverse aircraft noise impact is therefore not anticipated. No mitigation measures are required.

Conclusion

6.7.4. Potential aircraft noise impact on the proposed development has been reviewed. According to the aircraft noise impact assessment result from TCNTE EIA report (AEIAR-196/2016), the proposed development would not subject to significant adverse aircraft noise impact on the current scheme and no mitigation measures are proposed.

7. Water Quality Impact Assessment

7.1. Introduction

7.1.1. This section assesses the potential water quality impacts in association with the proposed development.

7.2. Legislation and Standards on Water Quality

7.2.1. The Water Pollution Control Ordinance (WPCO, Cap.358) provides a mechanism for setting effluent standards as specified in the "Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters". All discharges into government sewerage systems, marine and inland waters are required to comply with the standards stipulated in this Technical Memorandum. The entire Hong Kong waters are divided into ten Water Control Zones (WCZs) and four supplementary WCZs. Each WCZ has a designated set of statutory Water Quality Objectives (WQOs) designed to protect the inland and/or marine environment and its users. The Application Site is in the North Western WCZ. The corresponding WQOs are listed in **Table 7-1**.

Table 7-1 Summary of Water Quality Objectives for North Western WCZ

Parameters	Objectives	Sub-Zone
Offensive Odour, Tints	Not to be present	Whole zone
Visible foam, oil scum, litter	Not to be present	Whole zone
Dissolved Oxygen (DO) within 2 m of the seabed	Not less than 2.0 mg L^{-1} for 90% of samples	Marine waters
Depth-averaged DO	Not less than 4.0 mg L^{-1}	Tuen Mun (A), Tuen Mun (B) and Tuen Mun (C) subzones, water gathering ground subzones and other inland waters
	Not less than 4.0 mg L^{-1} for 90% of samples	Marine waters
pH	To be in the range of 6.5 - 8.5, change due to human activity not to exceed 0.2	Marine waters excepting bathing beach subzones
	To be in the range of 6.5 - 8.5	Tuen Mun (A), Tuen Mun (B) and Tuen Mun (C) subzones and water gathering ground subzones

Parameters	Objectives	Sub-Zone
	To be in the range of 6.0 –9.0	Other inland waters
	To be in the range of 6.0 –9.0 for 95% of samples	Bathing beach subzones
Salinity	Change due to human activity not to exceed 10% of ambient	Whole zone
Temperature	Change due to human activity not to exceed 2 ^{o}C	Whole zone
Suspended solids (SS)	Not to raise the ambient level by 30% caused by human activity	Marine waters
	Change due to waste discharges not to exceed 20 mg/l of annual median	Tuen Mun (A), Tuen Mun (B) and Tuen Mun (C) subzones and water gathering ground subzones
	Change due to waste discharges not to exceed 25 mg L^{-1} of annual median	Inland waters
Unionized ammonia (UIA)	Annual mean not to exceed 0.021 mg L^{-1} as unionized form	Whole zone
Nutrients	Shall not cause excessive algal growth	Marine waters
Total inorganic nitrogen (TIN)	Annual mean depth-averaged inorganic nitrogen not to exceed 0.3 mg L^{-1}	Castle peak bay subzone
	Annual mean depth-averaged inorganic nitrogen not to exceed 0.5 mg L^{-1}	Marine waters excepting castle peak bay subzone
E. coli Bacteria	Not exceed 610 per 100 ml, calculated as the geometric mean of all samples collected in one calendar year	Secondary contact recreation subzones
	Should be less than 1 per 100 ml, calculated as the geometric mean of the most recent 5 consecutive samples taken between 7 and 21 days.	Tuen Mun (A) and Tuen Mun (B) subzones and water gathering ground subzones
	Not exceed 1000 per 100 ml, calculated as the geometric mean of the most recent 5 consecutive samples taken between 7 and 21 days	Tuen Mun (C) subzone and other inland waters
	Not exceed 180 per 100 ml, calculated as the geometric mean of all samples collected from March to October inclusive.	Bathing beach subzones
Colour	Change due to waste discharges not to exceed 30 Hazen units	Tuen Mun (A) and Tuen Mun (B) subzones and water gathering ground subzones
	Change due to waste discharges not to exceed 50 Hazen units	Tuen Mun (C) subzone and other inland waters

Parameters	Objectives	Sub-Zone
5-Day biochemical oxygen demand (BOD_5)	Change due to waste discharges not to exceed 3 mg L^{-1}	Tuen Mun (A), Tuen Mun (B) and Tuen Mun (C) subzones and water gathering ground subzones
	Change due to waste discharges not to exceed 5 mg L^{-1}	Inland waters
Chemical Oxygen Demand (COD)	Change due to waste discharges not to exceed 15 mg L^{-1}	Tuen Mun (A), Tuen Mun (B) and Tuen Mun (C) subzones and water gathering ground subzones
	Change due to waste discharges not to exceed 30 mg L^{-}	Inland waters
Toxins	Should not cause a risk to any beneficial uses of the aquatic environment	Whole zone
	Waste discharge shall not cause the toxins in water significant to produce toxic carcinogenic, mutagenic or teratogenic effects in humans, fish or any other aquatic organisms.	Whole zone
Phenol	Quantities shall not sufficient to produce a specific odour or more than 0.05 mg L^{-} as C_6H_5OH	Bathing beach subzones
Turbidity	Shall not reduce light transmission substantially from the normal level	Bathing beach subzones

Source: Statement of Water Quality Objectives (North Western Water Control Zone).

7.2.2. Chapter 9 of HKPSG sets out the guidelines for sewage collection and disposal whereby public sewers should be used as it is considered the most efficient and safe means of disposing sewage.

7.2.3. The Professional Persons Environmental Consultative Committee Practice Note 2/24 Construction Site Drainage (ProPECC PN2/24) provides guidelines for the handling and disposal of construction discharges. It is applicable to this study for control of site runoff and wastewater generated during the construction phase. The types of discharges from construction sites outlined in the ProPECC PN2/24 include:

- Surface runoff;
- Groundwater;
- Boring and drilling water;
- Wastewater from concrete batching;
- Wheel washing water;
- Bentonite slurries;

- Water for testing and sterilization of water retaining structures and water pipes;
- Wastewater from building construction and site facilities; and
- Acid cleaning, etching and pickling wastewater.

7.2.4. The Professional Persons Environmental Consultative Committee Practice Note 1/23 Drainage Plans subject to Comment by the Environmental Protection Department (ProPECC PN 1/23) provides guidelines for Drainage Plans and practices for handling, treatment and disposal of various effluent discharges of the Proposed development to stormwater drains and foul sewers during the operation phase. The design of site drainage and disposal of various site effluents generated with the Proposed development should follow the relevant guidelines and practices as given in the ProPECC PN1/23.

7.3. Surrounding Environmental Context and Water Sensitive Receivers

7.3.1. The proposed development is located on reclaimed flat land. No WSRs including water intakes, country parks, water gathering grounds, beaches or water uses for agriculture within 500m study area of the proposed development, except 3 ecological valuable water bodies. Key WSRs and Coastal Protection Area (CPA) within 500m from the boundary of the Project were identified at **Table 7-2** below and their respective locations are illustrated in ***Figure 7.1***.

Table 7-2 Summary of Representative Water Sensitive Receivers

ID	Location	Distance(m)
WSR01	Tai Ho Wan Inlet (inside)	265
WSR02	Tai Ho Wan Inlet (outside)	440
WSR03	Coastal Protection Area (CPA) within Tai Ho Wan	360

7.3.2. It should be noted that the proposed development would not involve any construction works at/ within the identified water sensitive receivers and CPA.

7.4. Potential Impacts During Construction Phase

7.4.1. MiC will be proposed for the construction of the Project. No deep excavation and foundation expected. Wastewater will be likely generated from groundwater extraction during foundation works and construction site surface run-off which will be mainly laden with suspended solids such as silt and mud. The water quality of effluent will be affected by the following:

i. General Construction Activities;
ii. Wash water from vehicles, equipment and dust suppression sprays;
iii. Potential minor oil leaks or spills from vehicles and plants;
iv. Site surface runoff and erosion of exposed bare soil and earth, drainage channels, earth working areas and stockpiles; and
v. Sewage generated from on-site workforce.

7.5. Mitigation Measures and Good Site Practice

7.5.1. There is a need to apply to EPD for a discharge license for the discharge of effluent from the construction site under the WPCO. Any surface runoff and wastewater generated from the works area during the construction phase should be treated and discharged in accordance with the requirements of the discharge license.

7.5.2. Runoff and drainage shall be avoided or minimised with the implementation of mitigation measures and good site practices outlined in ProPECC PN 2/24 which shall include but not limited to the following.

i. Providing perimeter channels to intercept storm runoff from outside the site. These shall be constructed in advance of site formation works and earthworks.
ii. Providing sand/silt removal facilities such as sand traps, silt traps and sediment basins to remove sand/silt particles from runoff to meet the requirements of the standard in Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters under the WPCO. These facilities shall be properly and regularly maintained. Channels or earth bunds or sand bag barriers shall be provided on site to properly direct storm water to such silt removal facilities
iii. Minimising soil excavation works by careful programming of works during rainy seasons
iv. Protecting exposed soil surface by paving as practical to reduce the potential of soil erosion

v. Protecting temporary access roads by crushed gravel and exposed slope surfaces shall be protected when rainstorms are likely to occur

vi. Avoiding trench excavation in the wet season as far as practicable, and, if necessary, these trenches shall be excavated and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.

vii. Covering the open stockpiles of construction materials on site with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.

viii. Vehicle wheel washing facilities should be provided at the site exit such that mud, debris, etc. attached to the vehicle wheels or body can be washed off before the vehicle leaves the work site". Settling out the sand and silt in the wash water from the vehicles leaving the wheel washing facility, which ensures no earth, mud and debris is deposited on the road, before discharging into the storm drain. The section of the road between the wheel washing bay and the public road shall be paved with a back-fall to prevent wash water or other site runoff from entering the public area.

ix. Planning ahead the temporary site drainage management and wastewater treatment system for collection, treatment, reuse and discharge of surface runoff and wastewater before the construction works start.

x. Groundwater pumped out of wells, etc. for the lowering of ground water level in basement or foundation construction should be discharged into storm drains after the removal of silt in silt removal facilities.

General Construction Activities

7.5.3. Debris and rubbish generated on site shall be collected, handled, and disposed of properly. All fuel tanks shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. Open storm water drains and culverts near the works area shall be covered to block the entrance of large debris and refuse.

7.5.4. Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.

Sewage Generated from On-site Workforce

7.5.5. The sewage from construction work force is expected to be handled by portable chemical toilets. Portable toilets shall be provided by licensed contractors who shall be responsible for appropriate disposal of collected sewage and maintenance of these facilities.

Evaluation of Impact

7.5.6. The construction phase of the Project will be land-based which does not involve any marine works or works at the streams identified. Therefore, it is unlikely that the Project will have any adverse water quality impact from construction work, given good site practices properly implemented on site by Contractor.

7.5.7. The mitigation measures and good site practices will be included in the contract for contractor's implementation. With the provision and implementation of abovementioned mitigation measures, adverse water quality impact during construction phase is not anticipated.

7.6. Potential Impacts During Operation Phase

7.6.1. During the operation phase of the proposed development, surface run-off and sewage generated by the residents are the main sources of water quality impacts. Surface run-off on site will be properly collected via stormwater drains and discharged to the existing drainage system. The sewage will be discharged to existing public sewerage manhole PLUG C0.2. The design of site drainage and disposal of various site effluents generated with the proposed development should follow the relevant guidelines and practices as given in the ProPECC PN1/23. Effluent arising from proposed development is subject to the control of WPCO, and the effluent discharge should be in compliance with the WPCO-TM and WPCO discharge license conditions.

7.6.2. As refer to the sewerage impact assessment conducted separately, the ADWF and peak flow from the Application Site are 315.3m^3/day and 0.022m^3/s respectively. A sewerage network comprising gravity sewer is proposed to convey the collected sewage to the planned Eastern Sewage Pumping System (ESPS) with design ADWF capacity of 35,727 m^3/day.

7.6.3. The assessment results in the SIA report demonstrated that all sewers and ESPS have sufficient sewer capacity to cope with the sewage flow from catchments and the proposed development. Therefore, significant sewerage impact arising from the proposed development on the existing sewers is not expected, no mitigation measures are considered

necessary for the existing sewers.

Surface Runoff

7.6.4. The Application Site is a reclaimed land with no existing vegetation. Surface runoff within the Application Site will be collected and discharged into the existing public stormwater drainage network at the terminal manhole (CTC-4424). Provision of greenery area will be provided at the proposed development which will increase the filtration of stormwater and minimize surface runoff.

7.6.5. In order to minimize the pollution loading, silt/sand traps should be provided for the drainage systems of open areas. Moreover, the pollution loading of runoff could be controlled by best management practice. The operator should manage the cleaning of roads and open areas within the Site before heavy rain. To further minimise pollution loading, cleaning should be carried out during low traffic periods. Cleaning methods for road/open areas, such as manual cleaning or mechanical methods and including street sweepers are recommended to be adopted. The substances during cleaning should be collected as far as practicable for off-site disposal at landfill sites. After the removal of the substances, the pollution loading of runoff would be reduced.

7.7. Conclusion

7.7.1. The Project would not involve any construction works at/ within the water sensitive receivers. Therefore, the water source of the existing WSRs is not expected to be affected during the construction and operation phases of the Project.

7.7.2. For construction phase, water quality impact is expected to be minimal when appropriate mitigation measures and good site practice are implemented to properly discharge site run-offs.

7.7.3. The contractor shall apply for a Discharge License from EPD under the WPCO. All site discharges should be treated as necessary in accordance with the terms and conditions of the Discharge License.

7.7.4. With the implementation of the above mitigation measures, water quality impact is not anticipated during construction phase and operation phase of the proposed development.

8. Land Contamination

8.1. Guidelines

8.1.1. This site appraisal is prepared in accordance with the following guidance:

- Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management (Guidance Manual), dated December 2007, Revised in April 2023;
- Guidance Note for Contaminated Land Assessment and Remediation (Guidance Note), dated 15 August 2007, Revised in April 2023; and
- Practice Guide for Investigation and Remediation of Contaminated Land (Practice Guide), dated August 2011, Revised in April 2023.

8.2. Site Appraisal

8.2.1. The Site Appraisal has been conducted to assess the potential land contamination impact at the Application Site due to current and historical land uses, on and off-site activities that could result in contamination of the site.

8.3. Review of Historical Aerial Photos and Past Land Use

8.3.1. The Application Site was the sea in 1973 and was then developed since 2020. The aerial photos are attached in ***Appendix 7.1***. A summary of the land use of the Application Site is given in **Table 8-1 Summary Table of Land UseTable 8-1**.

Table 8-1 Summary Table of Land Use

Year	Land Use	Sources of Information
1973 - 2020	The Subject Site was the sea	Aerial photo from LandSD
2020	Reclamation at Application Site started since 2020.	
2024 - now	The Application Site was a vacant land until now	

8.4. Information from Government Departments

8.4.1. The following HKSAR Government Departments have been enquired on the latest update on the availability of land use status and records of land contamination and/or spillage for the site. The summary of correspondence is presented in

8.4.2. ***Table 8-2*** below. Copy of the letters replied from various Government Departments are included in ***Appendix 8.2*** for reference.

Table 8-2 Enquiries and Responses on Land Contamination Related Records in the Application Site

Consultant's Letter Ref.	Department	Response Letter Ref.	Response Date	Summary
2240/ 24-0001	Environmental Protection Department	( ) in Ax (3) to EP771/E1/116 Pt.2	5 Dec 2024	No registered chemical waste producer for the captioned area
2240/ 24-0002	Fire Services Department	(125) in FSD GR 6-5/4 R Pt. 56	24 Dec 2024	- Neither records of dangerous goods license, fire accidents nor incidents of spillage/ leakage of dangerous goods were found at the subject location.
2240/ 24-0003	Planning Department	By email	15 May 2025	- The site is located on newly reclaimed land in Tung Chung East and is zoned "Government, Institution or Community" ("G/IC") under the approved Outline Zoning Plan (No. S/I-TCE/2). - There has been no change in zoning since the first plan was gazetted on 8 January 2016.
2240/ 24-0004	Lands Department	By email	17 Mar 2025	- LandsD has not received any reported spillage accidents, illegal/contaminating issues in respect of the concerned site. - The site is currently allocated to Civil Engineering and Development Department ("CEDD") under Simplified Temporary Land Allocation ("STLA") to carry out "Tung Chung New Town Extension - Reclamation and Advance Works" since 20 December 2017.

8.4.3. As advised by EPD, there is no record of the registered chemical waste producer were found within the Application Site.

8.4.4. For the dangerous goods records provided by FSD, no dangerous goods are stored on-site Also, the Application Site is used as vacant land at present. Therefore, no land contamination potential upon the dangerous goods records. For the fire incident records provided by FSD, no on-site fire accident records. Therefore, no land contamination potential upon the fire incident records.

8.5. Conclusion

8.5.1. According to the government's response, no active chemical waste producers and no chemical spillage accident were recorded at the Application Sites and its immediate surroundings. The Application Site is an existing empty land, with no dangerous goods and chemical storage on-site. It is anticipated no potential land contamination issues at the Application Site.

8.5.2. The Application Site was the sea before 2020. Land reclamation works commenced in 2020 and the site has remained vacant since then. No chemical manufacturing or dangerous goods storage was expected on the site and no potential contamination sources were anticipated. Therefore, no potential contamination issues are anticipated from the past and current uses of the Application Site.

9. Waste Management

9.1. Legislation and Standards on Waste Management

Waste Disposal Ordinance (WDO) (Cap. 354)

9.1.1. Waste Disposal Ordinance, Cap. 354 provides legislative control on pollution caused by all forms of wastes such as livestock wastes, chemical waste etc. It provides the statutory framework for the planning, management and control of wastes in Hong Kong.

Public Health and Municipal Services Ordinance (Cap.132)

9.1.2. The Public Cleansing and Prevention of Nuisances Regulation provides control on illegal tipping of waste on unauthorized (unlicensed) sites.

Waste Disposal (Chemical Waste) (General) Regulation (Cap.354C)

9.1.3. Under the WDO, Waste Disposal (Chemical Waste) (General) Regulation (Cap.354C) provides regulations for chemical waste control, and administers the possession, storage, collection, transport and disposal of chemical waste. EPD has also issued the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes (1992), which details how the chemical waste producers should comply with the regulations on chemical waste.

Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap.354N)

9.1.4. Under the Waste Disposal (Charges for Disposal of Construction Waste) Regulation, construction waste delivered to a landfill for disposal must not contain more than 50% by weight of inert material; construction waste delivered to a sorting facility for disposal must contain more than 50% by weight of inert material; and construction waste delivered to a Public Fill Reception Facilities for disposal must consist entirely of inert material.

Other Environmental Regulations / Guidelines

- Trip Ticket System for Disposal of Construction & Demolition Materials (DEVB TC(W) No. 6/2010)
- Environmental Management on Construction Sites (ETWB TC(W) No. 19/2005)
- Public Filling Facilities (WBTC No. 2/93B)
- Fill Management (WBTC No. 12/2000)
- Code of Practice on the Packaging, Labeling and Storage of Chemical Waste
- DevB TCW No. 8/2010 "Enhanced Specification for Site Cleanliness and Tidiness

- Management of Construction and Demolition Materials (Technical Circular No. 11/2019) published by CEDD
- CEDD's Project Administration Handbook for Civil Engineering Works
- Monitoring of Solid Waste in Hong Kong – Waste Statistics for 2023

9.2. Assessment Approach and Criteria

9.2.1. The assessment of waste management implications from the construction and operation of the Project includes the following tasks:

- Identification of types and quantities of waste arising from various construction activities based on the latest understandings;
- Evaluation of opportunities for waste reduction, re-use and recycling on-site or off-site;
- Identification of disposal options for each type of waste;
- Evaluation of potential impacts from the handling (including stockpiling, labelling, packaing and storage), collection, transportation and reuse/disposal of waste with respect to potential hazards, air and odour emissions, noise, wastewater discharges and public transport; and
- Proposing mitigation measures and evaluation of residual impact.

9.3. Potential Impacts during Construction Phase

9.3.1. The construction works of the Project mainly include foundation works and superstructure construction. Construction & Demolition (C&D) materials generated from the construction works comprises of inert and non-inert materials. For inert C&D materials (or public fills), such as soil, rock, concrete, etc., could be reused on-site as filling materials or off-site as public fill at public fills reception facilities. For non-inert C&D materials, such as timber, paper, etc., should be reused or recycled as far as possible before landfill disposal, which should only be considered as the last resort for waste handling.

9.3.2. Waste management planning is needed prior to the commencement of construction works. Construction waste management strategy is to avoid, minimize, reuse, re-cycle and finally dispose of waste with the desirability descending in this order. Contractor(s) will be required to implement effective waste management measures to ensure their practices are in line with the strategies. In order to minimize the generation of wood waste, steel is recommended to be used for formworks.

9.3.3. Chemical waste from maintenance and servicing of construction equipment/plant may be generated. If chemical waste is produced, it will be disposed of according to Code of Practice on the Packaging, Labelling and Storage of Chemical Waste. Special handling and temporary storage of chemical waste is required before removal from site. A licensed collector will be employed to deliver these wastes at EPD licensed chemical waste treatment facility.

9.3.4. General refuse such as food scraps, waste paper, empty containers, etc. would be generated from the workforce during the construction phase. General refuse should be stored in enclosed bins separately from C&D materials and chemical wastes. Recycling bins should also be placed to encourage recycling. Enclosed and covered areas should be provided for general refuse collection to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problem. Also, routine cleaning for these areas should be implemented to keep areas clean, so that intentional or accidental release to the surrounding environment does not occur with proper management.

Estimation on C&D Materials Quantity

9.3.5. The majority of C&D materials will be generated from the key construction activities mentioned in ***Section 9.3.1***. Demolition waste is not anticipated since the site is currently vacant. Based on the project nature, it is not anticipated that significant quantities of C&D waste will be generated. Where possible, inert C&D materials will be re-used on site and sent to public fill reception facilities as a last resort.

9.3.6. As advised by project team, the quantities of C&D materials generated will be subject to further design development and contractor's operation procedure/practices. The estimated quantities for all types of waste to be generated is summarized in the table below.

Table 9-1 Summary of Construction Waste Generated

Type of Waste	Total Waste Generation Quantity	On-Site Reused Quantity	Handling Arrangement and Outlets	Remark
Inert C&D Materials [1]	7,131 m^3	1,426m^3 (assume 20% of reusable rate)	Delivered to the public fill reception facilities	With reference to "A Guide for Managing and Minimizing Building and Demolition Waste" published by the Hong Kong Polytechnic University in May 2001, the construction waste generation rate for Housing Projects in Hong Kong is 0.250m^3/m^2 GFA (including non-inert C&D materials (or C&D wastes)). According to Hong Kong Waste Statistics for 2023, a total of 90% of construction waste generated will be used as public fill. (65% of C&D waste was delivered to public fill reception facilities, while 25% of C&D waste was transferred to other projects for direct reuse) Tentative GFA = 31,694 m^2. Inert C&D Waste Generation Index: = 0.9 × 0.250 m^3/m^2 GFA = 0.225m^3/m^2 GFA Total Quantity = Inert C&D waste index × GFA = 0.225 × 31,694
Non-inert C&D Materials (or C&D waste) Generated [2]	713m^3	Recycled and reused as much as practicable	Disposed of at the landfill	With reference to "A Guide for Managing and Minimizing Building and Demolition Waste," published by the Hong Kong Polytechnic University in May 2001, the construction waste generation rate for Housing Projects in Hong Kong is 0.250 m^3/m^2 GFA (including non-inert C&D materials (or C&D wastes)). According to Hong Kong Waste Statistics for 2023, 9% of C&D waste was disposed of at landfill. Tentative GFA: 31,694 m^2 Non-inert C&D Waste Generation Index: = 0.09 × 0.250 m^3/m^2 GFA = 0.0225m^3/m^2 GFA Total Quantity = Non-inert C&D waste index × GFA = 0.0225 × 31,694
Chemical Waste[3]	few cubic metres per month	-	Collected by licensed collector for the disposal of at licensed treatment facilities (e.g. Chemical Waste Treatment Centre (CWTC) at Tsing Yi)	Advised by project team
General Refuse from Workforce[4]	74 kg/day	Recycled as much as Practicable	Disposed of at the landfill	Assumed maximum of 135 workers working simultaneously at the Application Site. According to Hong Kong Waste Statistics for 2023, the generation rate of industrial and commercial waste is 0.55 kg/person/day

Note:
[1] Includes, but not limited to excavated soil, broken concrete, granular materials etc.
[2] Includes, but not limited to, bamboo, timber, paper and plastic, etc.
[3] Includes, but not limited to, scrap batteries or acid/alkali from construction plant maintenance activities; used paints, engine oils, hydraulic fluids and waste fuel, etc.
[4] Includes, but not limited to, food waste, aluminum cans, waste paper, etc.

9.3.7. In this project, it is estimated that the total amount of 713 m^3 of non-inert C&D materials will be generated and imported fill is not required for the Project works during construction stage. The Contractor shall develop and implement their Environmental Plan (EMP) and Waste Management Plan (which is part of the EMP) to control any potential adverse impact associated with the construction waste as far as possible.

Marine Sediment

9.3.8. The Application Site is situated on reclaimed land within the Designated Area of Northshore Lantau, where complex geological conditions are known to exist. Based on the existing borehole logs from the vicinity of the site have been retrieved from the CEDD Digital Geotechnical Information, marine deposits and in situ completely decomposed rock are present at depths ranging from 20 to 50 m. Below this layer, slightly to moderately decomposed igneous rocks are present, predominantly granite with minor Feldsparphyric rhyolite, at depths between 4 to 20 m (approximately -20 to -50 mPD). No metamorphic rocks, such as marble, were identified in these boreholes.

9.3.9. As confirmed with the project team, the proposed foundation works will be limited to approximately 4.5m and will not disturb the underlying marine sediment layer during construction phase of the Project.

9.4. Mitigation Measures to Control Construction Waste Impact

General

9.4.1. All C&D materials shall be sorted on-site into inert and non-inert C&D waste materials, where the materials can be recycled or reused shall be re-used on site as far as possible. Inert C&D materials shall be delivered to the public fill reception facilities as far as practicable. Any remaining non-inert C&D materials shall be delivered to sorting facilities and landfills. In order to facilitate process of transferring the construction waste to Government waste disposal facilities (e.g. public fill reception facilities, sorting facilities and landfills), waste sorting and segregation shall be carried out on site in accordance with the following categories:

- Hard rock and large broken concrete suitable for reuse on the Site or recycling;
- Metals (i.e. aluminium can, steel metal, ferrous metal, and non-ferrous metal);
- Plastic (i.e. plastic bag, plastic bottle, plastic packaging, etc.)
- Paper;
- Chemical waste;
- Materials suitable for disposal at public fill reception facilities, sorting facilities and landfills

9.4.2. In addition, the Contractor is required to implement good EMP and practices on handling and disposal of waste, including but not limited to,

- Handle, store and dispose of all wastes in accordance with the Waste Disposal Ordinance;
- Handle, store and dispose of chemical waste in accordance with the EPD recommended Codes of Practice on the Packaging, Labelling & Storage of Chemical Wastes and Waste Disposal (Chemical Waste) (General) Regulation under the Waste Disposal Ordinance;
- Store general refuse in enclosed bins or compaction units separate from C&D materials and chemical wastes. A reputable waste collector should be employed to collect and dispose of general refuse from the site on a daily or every second day basis;
- Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste;
- Waste storage areas within the Application Site should be well maintained and cleaned regularly to prevent cross-contamination;
- Cover trucks with tarpaulin and transporting waste in enclosed containers to minimize windblown litter and dust during transportation;
- Maintain temporary stockpiles and ensure with well cover to prevent inclement weather (e.g. heavy rain).

9.4.3. To clearly spell out the types and amount of waste generated and its associated mitigation measures, a Waste Management Plan (WMP), as part of EMP should be prepared in accordance with ETWB TC(W) No.19/2005 and submitted to the Project / Site Engineer for approval. The recommended mitigation measures should form the basis of the WMP.

C&D Materials/Waste

9.4.4. It is presently anticipated that most of the C&D materials/waste will need to be transported off-site for re-use, recycling and disposal by trucks. With the implementation of the recommended dust and noise control / mitigation measures presented in the air quality and noise sections, such as covering and stockpiling materials to avoid dust and other nuisance impacts from truck movements, these secondary environmental factors are not expected to be a concern.

9.4.5. C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at Public Fill Reception Facilities areas or reclamation site. The following mitigation measures should be implemented in handling the excavated and C&D materials:

- Maintain temporary stockpiles and ensure with well cover to prevent inclement weather;
- Reuse excavated fill material for backfilling;
- Carry out on-site sorting; and
- According to the DEVB TC(W) No. 6/2010, implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials/waste is properly documented and verified.

Chemical Waste

9.4.6. If chemical wastes are produced at the construction site, the Contractor would be required to register with the EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosives, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. Chemical waste should be collected by a licensed collector and to be disposed of at a licensed chemical waste treatment and disposal facility in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.

9.4.7. Mitigation measures will also include the provision of protective gloves and clothing to site workers, use of bulk earth movers to remove contaminated materials to prevent any possible human contact, provision of adequate washing facilities and the use of licensed chemical waste collectors to ensure legal disposal of waste, etc.

General Refuse

9.4.8. Recycling bins should also be placed to encourage recycling. Enclosed and covered areas should be provided for general refuse collection to prevent waste materials from being blown around by the wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problem. Also, routine cleaning for these areas should be implemented to keep areas clean, so that intentional or accidental release into the surrounding environment does not occur without proper management.

9.4.9. With the implementation of good waste management practices at the Site, and the abovementioned mitigation measures at the Application Site, adverse environmental impacts are not expected to arise from the storage, handling and transportation of C&D materials, chemical waste and general refuse generated during construction phase.

9.5. Potential Impacts and Mitigation Measures during Operation Phase

General Refuse

9.5.1. The major type of waste generated from the operation phase is general refuse. With reference to *Monitoring of Solid Waste in Hong Kong - Waste* Statistics *for 2023* by EPD, the disposal rate of domestic waste was 0.89 kg/person/day. The estimated quantities of general refuse anticipated will be 1,040.4 kg/day (0.89 kg/person/day x 1,169 residents).

9.5.2. General refuse will be removed on regular basis to minimize odour, pest and litter impacts. To promote the recycling of waste paper, aluminium cans and plastic bottles, the 3-coloured waste separation bins for the collection of recyclable municipal waste will be clearly labelled and placed at convenient locations. The recyclable materials will then be collected by reliable waste recycling agents on a regular basis. Waste generated will be disposed of at government waste disposal facilities such as WENT Landfill in Nim Man. Hence, adverse waste management implication is not anticipated during the operation phase.

9.5.3. Food waste is the main source of generating unpleasant odour and causing environmental hygiene concerns during operation phase. The Project Team will explore the feasibility of providing separate recycling bins for food waste to facilitate the recycling of food waste on-site or off-site in a hygienic manner in detailed design stage. The collected food waste will be disposed of at Organic Resources Recovery Centre (ORRC).

9.6. Conclusion

9.6.1. During the construction phase, the major waste types generated by the construction activities for this project will include C&D materials from the construction of foundation works, substructure and superstructures work; chemical waste from maintenance and servicing of construction site and equipment; general refuse from the workforce. Provided that all these identified wastes are reused and recycled if appropriate, handled, transported and disposed of in strict accordance with the relevant legislative and recommended requirements and that the recommended good site practices and mitigation measures are properly implemented, no adverse environmental impact is expected during the construction phase.

9.6.2. During the operation phase, the key waste types generated will be general refuse. Provided that all these wastes are reused and recycled if appropriate, handled, transported and disposed of in strict accordance with the relevant legislative requirements and the recommended mitigation measures are properly implemented, no adverse environmental impact is expected during the operation phase.

10. Conclusion

10.1.1. The potential environmental noise impacts from nearby road traffic, railway noise, aircraft noise, helicopter noise and fixed noise sources on the proposed development have been evaluated.

10.1.2. For traffic noise impact assessment, all NSRs in the Proposed development will comply with the relevant traffic noise standard stipulated in HKPSG with the implementation of mitigation measures, including architectural fins and BAW. The Proposed development would not subject to significant adverse traffic noise impact.

10.1.3. Potential railway noise impact on the Proposed development has been assessed and the Proposed development would not subject to significant adverse railway noise impact on the current scheme.

10.1.4. Potential aircraft and helicopter noise impacts on the Proposed Development have been assessed. Given the large separation distance between the noise sources and the Proposed Development, no significant adverse aircraft and helicopter noise impacts are anticipated under the current scheme.

10.1.5. Fixed noise impact assessment has been carried out for the Proposed development. The results of the assessment have indicated that the predicted fixed noise levels of all NSRs would comply with the fixed noise standard under the Noise Control Ordinance.

10.1.6. The current scheme has allowed adequate setback distance for all air sensitive uses from the major roads to meet the minimum requirement as stipulated in HKPSG. There is also no chimney found within 500m of the study area. Fugitive dust due to construction works and gaseous emission from construction equipment would make insignificant air quality impacts to the nearby air sensitive receivers, with the implementation of air quality control measures and good site practice as stipulated under Air Pollution Control (Construction Dust) Regulation, Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation and Air Pollution Control (Fuel Restriction) Regulations. Hence, no adverse air quality impact is anticipated.

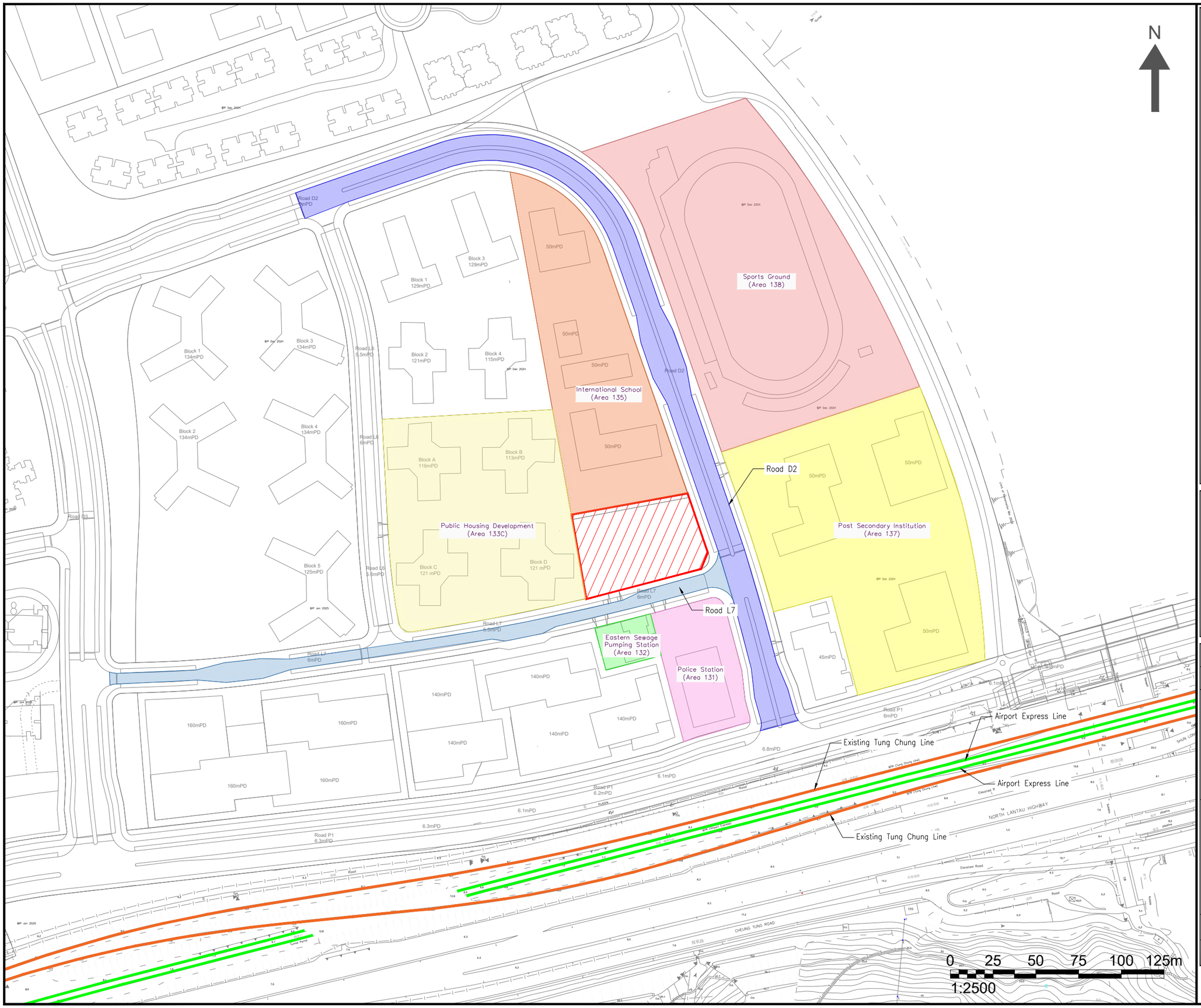
10.1.7. For water quality assessment, the Project would not involve any construction works at/within the above identified water bodies. Therefore, it is not expected to be affected during the construction of the Project.

10.1.8. The Application Site is currently situated on reclaimed land with no existing vegetation. Based on the information gathered, no chemical manufacturing or dangerous goods storage was expected on the site, and the past and current uses are not considered potential hotspots. According to replies from HKSAR Departments, there are no records of chemical storage/spillage accidents, or submissions relating to land contamination at the Application Site. Thus, no contamination activities are anticipated for the past and current use and no potential sources and signs of contamination have been discovered. No land contamination impact is anticipated.

10.1.9. For waste management during construction phase, C&D waste will be properly sorted on-site into inert and non-inert waste for recycling and disposed of at designated facilities. Top priority should be given to waste avoidance, followed by minimization, reuse/recycling, treatment and disposal of waste as a last resort. During the operation phase, general refuse will be the major waste type. Recycling bins will be provided to promote separation of recyclables and will be collected regularly by recycling agents. The Project Team will explore feasibility of providing separate bins for food waste with disposal to the ORRC. Provided that all these wastes are reused and recycled if appropriate, handled, stored and disposed of in strict accordance with the relevant legislative requirements and the recommended mitigation measures are properly implemented, no adverse waste impact is anticipated during construction and operation phases.

10.1.10. It is concluded that there are no adverse environmental impacts on the Proposed development at Tung Chung Areas 134 and 135.

Figures



NOTES :

Subject Site

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :
S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :
LOCATION OF APPLICATION SITE AND ITS ENVIRON

Drawing No :	Revision :
FIGURE 3.1	1
Scale : AS SHOWN	Date : AUG 2025

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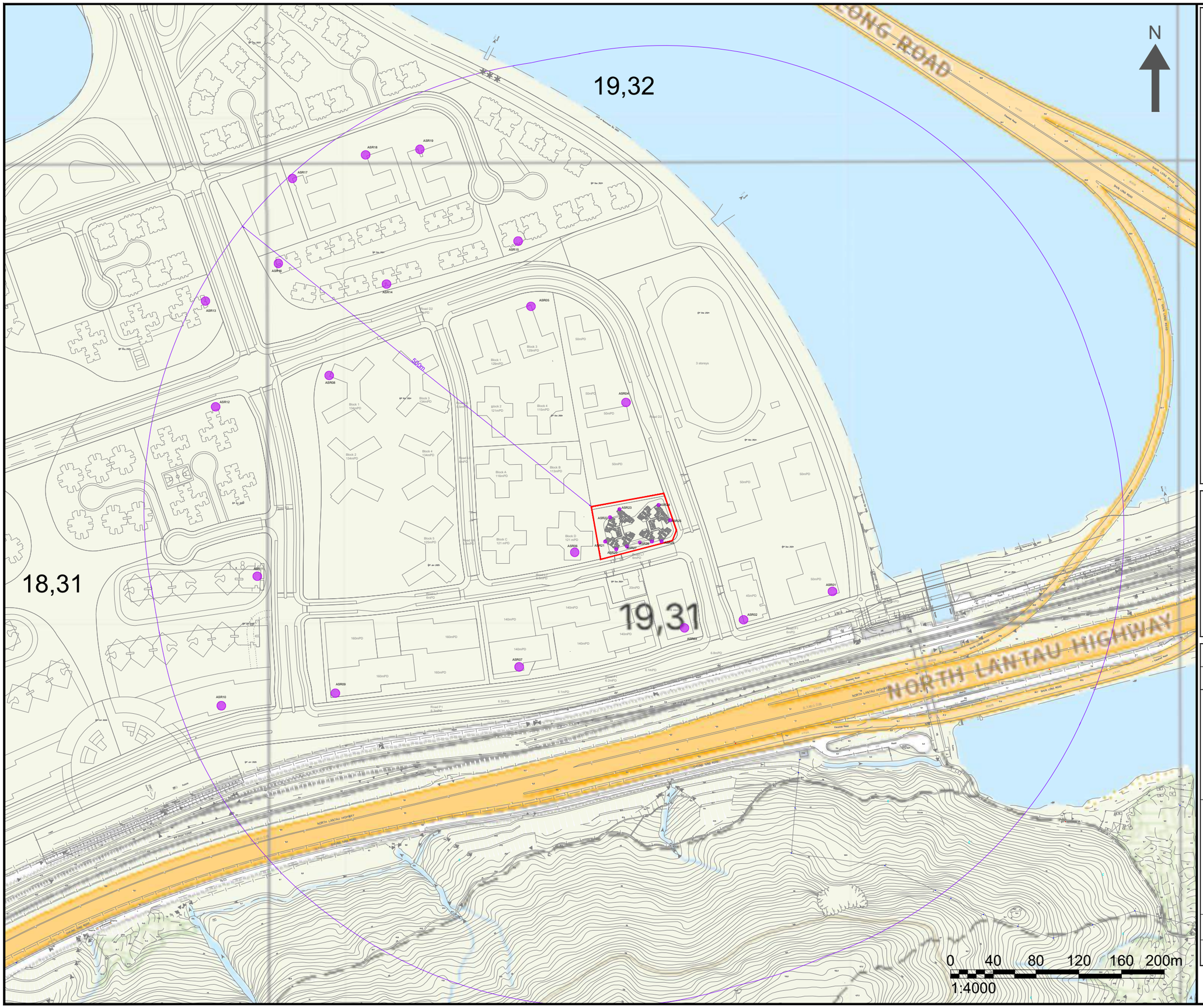

NOTES :

Subject Site

500m assessment area

Air Senstive Receiver (ASR)

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF AIR SENSITIVE RECEIVERS (ASRs)

Drawing No : FIGURE 5.1	Revision : 2
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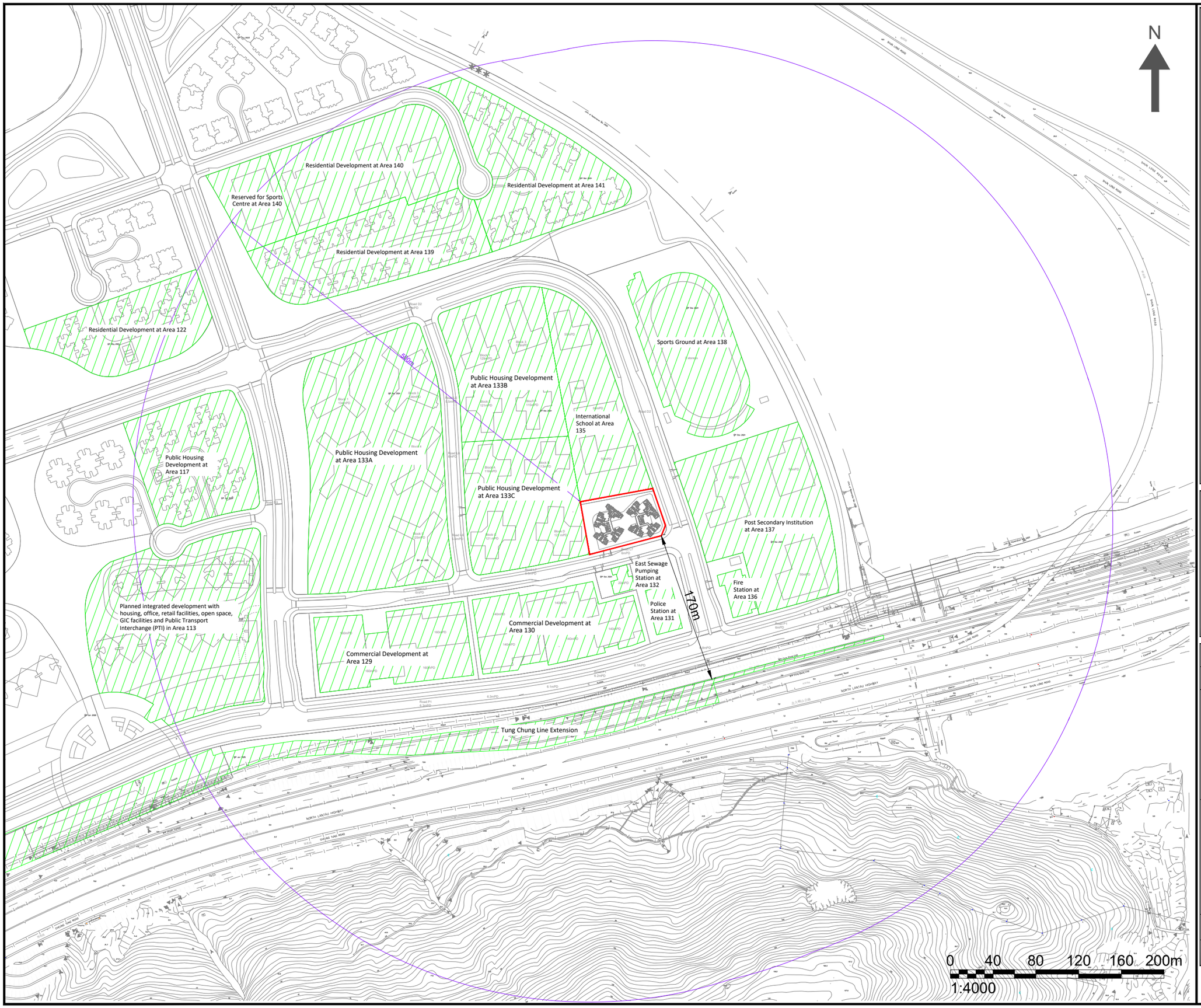

NOTES :

Subject Site

Concurrent Projects

500m assessment area

Consultant

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Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF CONCURRENT PROJECTS

Drawing No : FIGURE 5.2	Revision : 1
Scale : AS SHOWN	Date : AUG 2025

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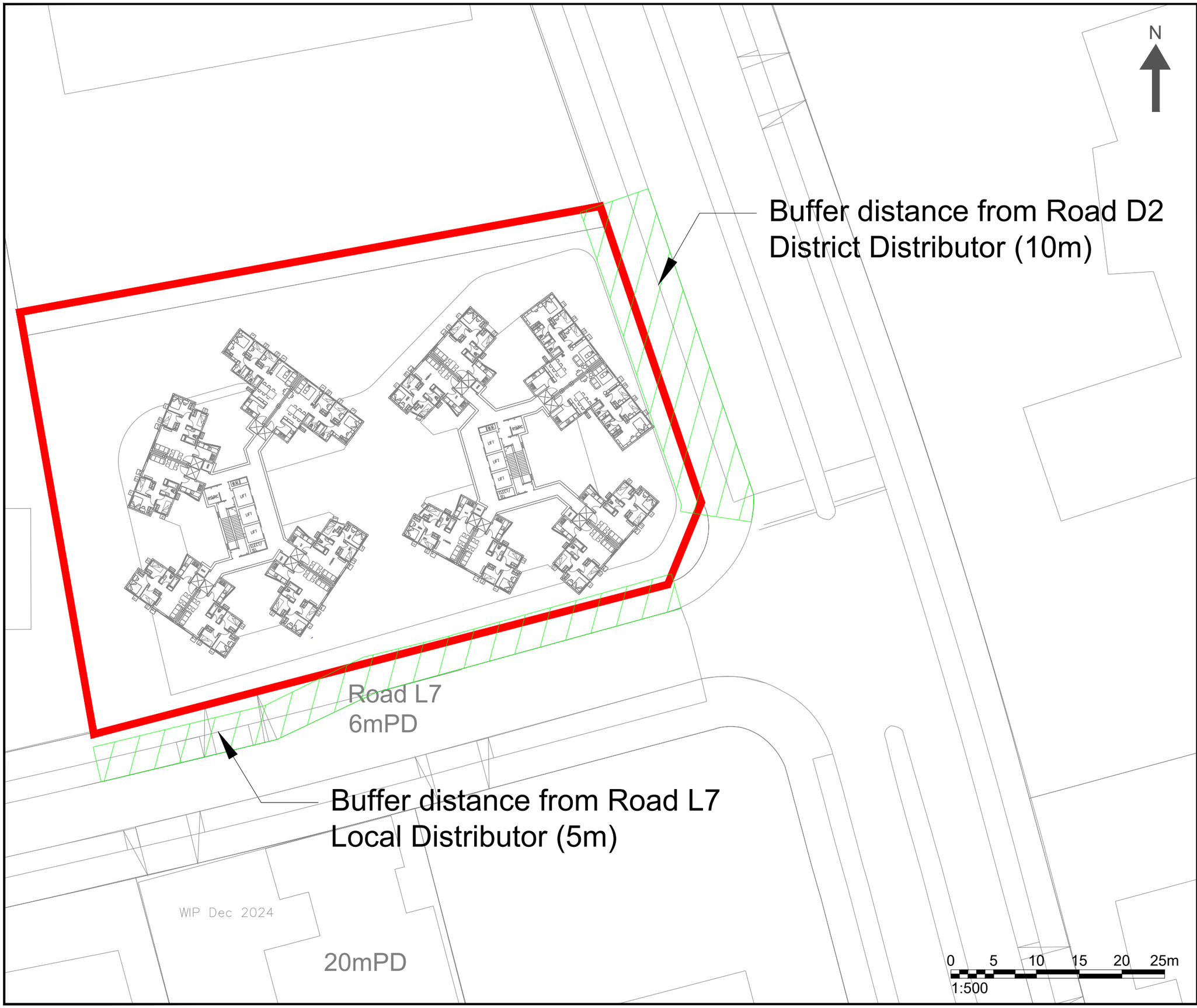

NOTES :

Subject Site

Buffer Distance of Adjacent Road

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

BUFFER DISTANCE FROM NEARBY ROADS

Drawing No :	Revision :
FIGURE 5.3	1
Scale : AS SHOWN	Date : AUG 2025

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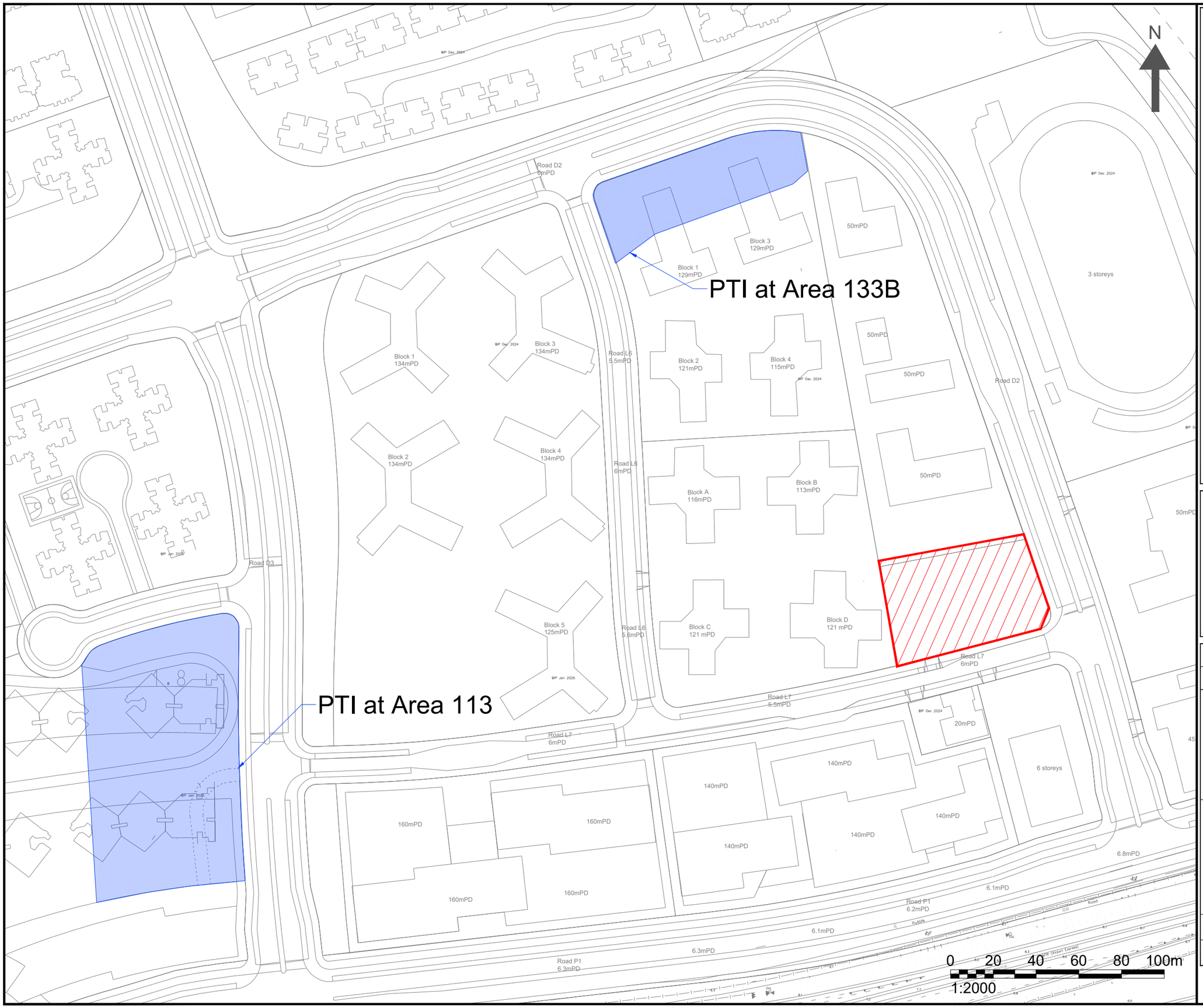

NOTES :

Subject Site

Public Transport Interchange (PTI)

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PUBLIC TRANSPORT INTERCHANGE (PTI)

Drawing No : FIGURE 5.4	Revision : 0
Scale : AS SHOWN	Date : AUG 2025

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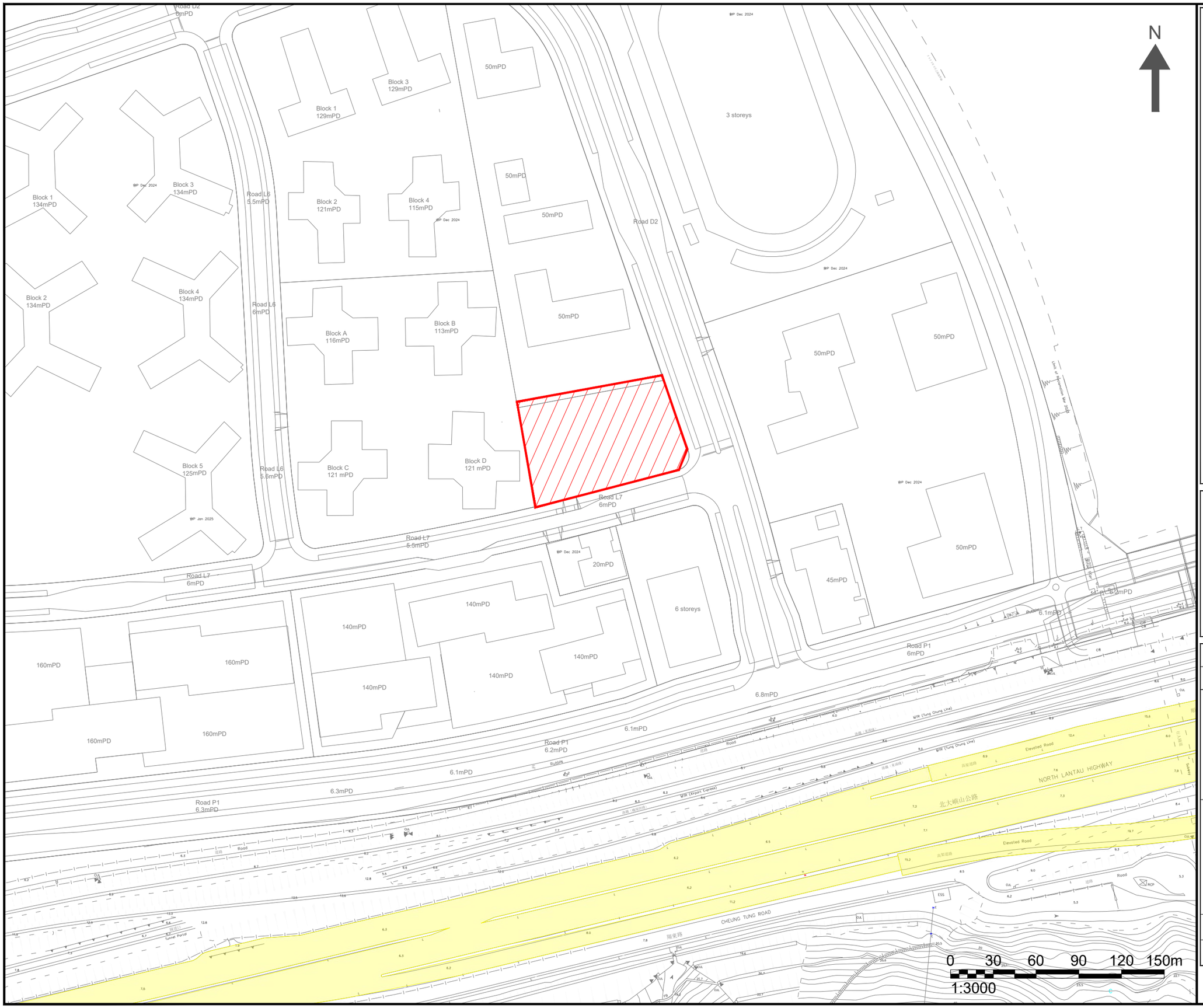

NOTES :

Subject Site

Low Noise Road Surfacing

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

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Drawing Title :

EXISTING LOW NOISE ROAD SURFACING (LNRS) AT NORTH LANTAU HIGHWAY AND SHUN LONG ROAD

Drawing No :	Revision :
FIGURE 6.1	0
Scale :	Date :
AS SHOWN	APRIL 2025

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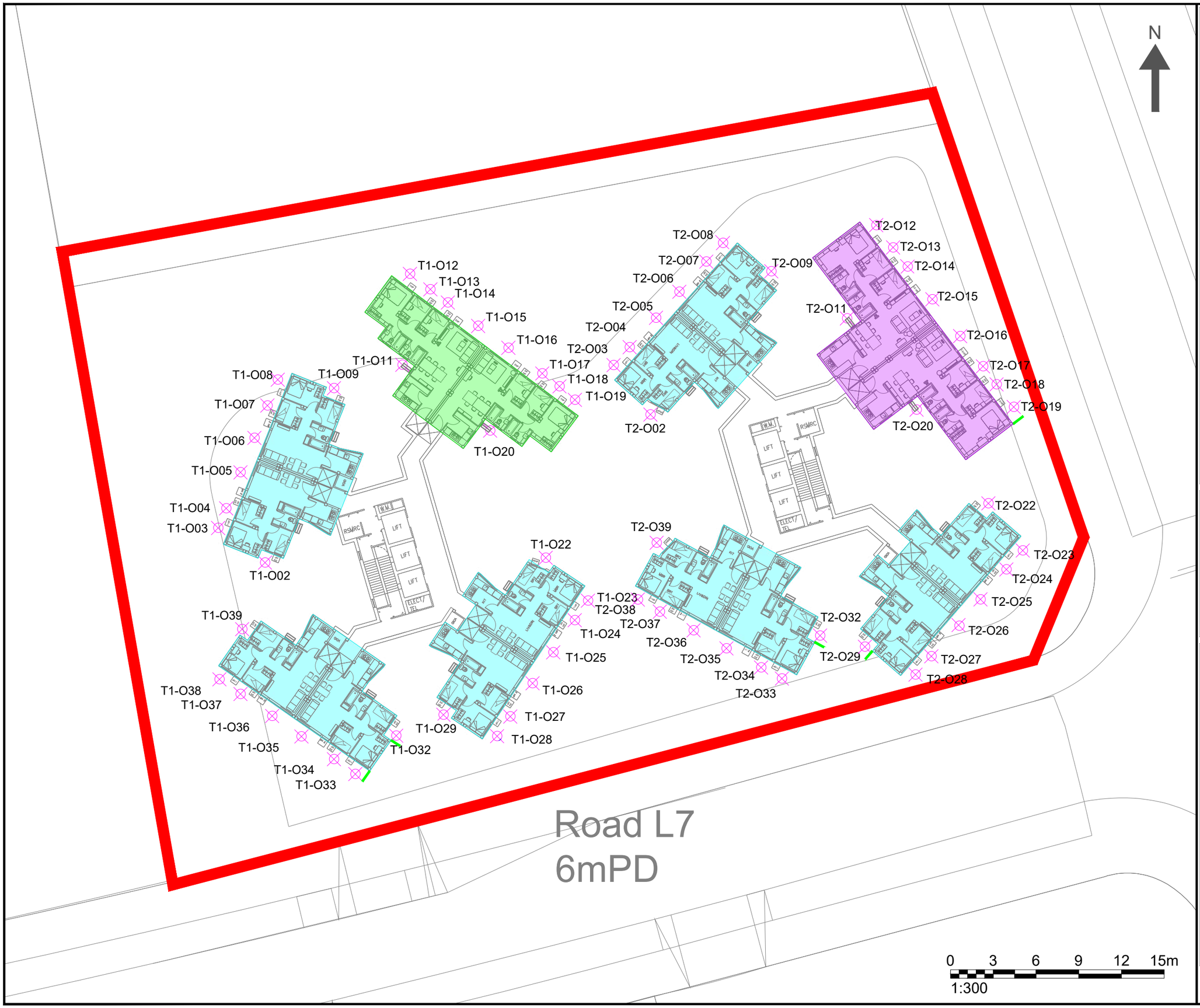

NOTES :

- Subject Site
- Noise Assessment Point (NAP)
- Flat E
- Flat F
- Flat G

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATIONS OF NOISE ASSESSMENT POINTS

Drawing No : FIGURE 6.2	Revision : 1
Scale : AS SHOWN	Date : AUGUST 2025

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A3 420 x 297

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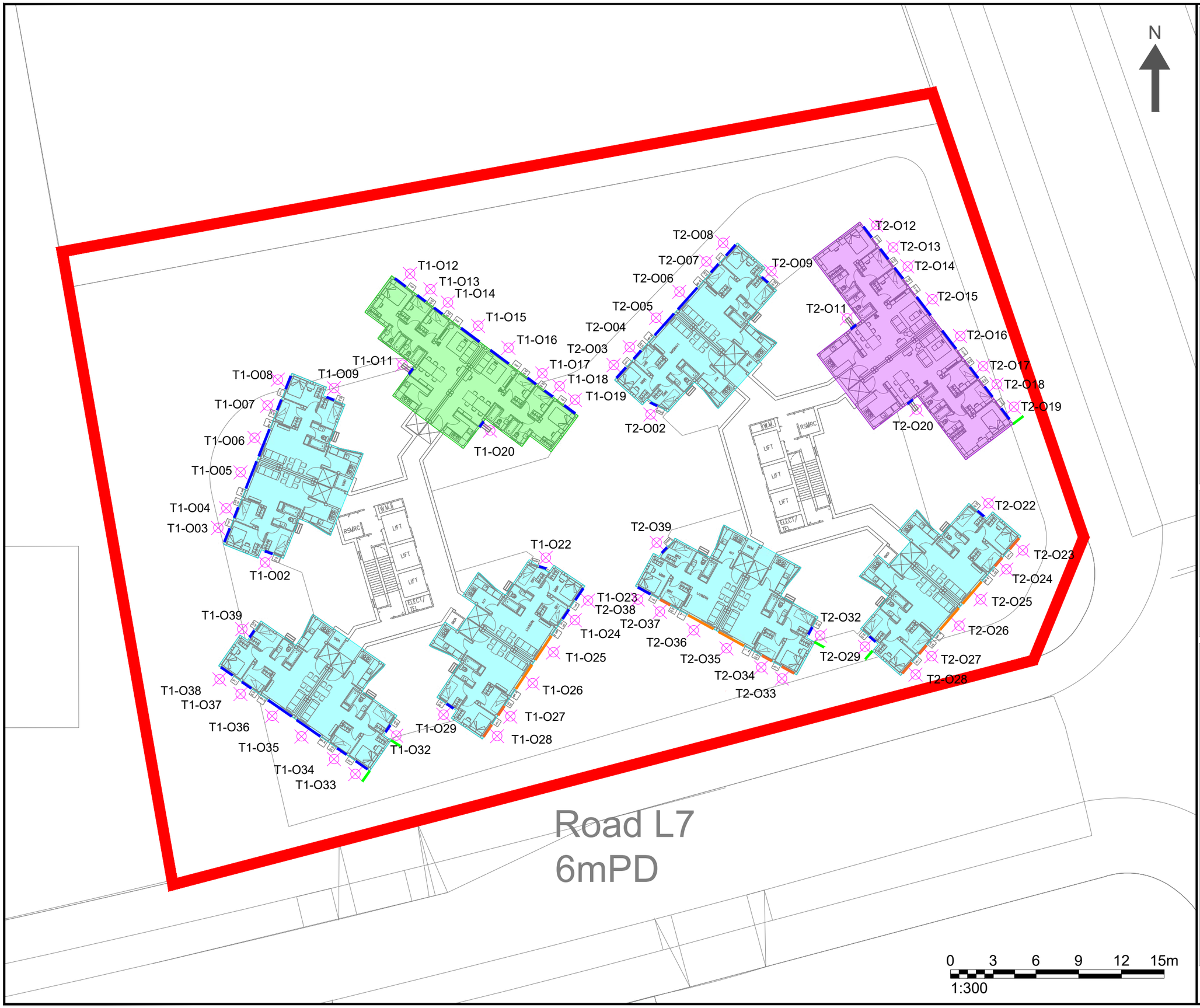

NOTES :

- Subject Site
- Noise Assessment Point (NAP)
- Architectural fins
- Acoustic Window (Baffle Type)
- Openable Window
- Flat E
- Flat F
- Flat G

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATIONS OF ARCHITECTURAL FINS AND BAW

Drawing No : FIGURE 6.3	Revision : 1
Scale : AS SHOWN	Date : AUGUST 2025

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A3 420 x 297

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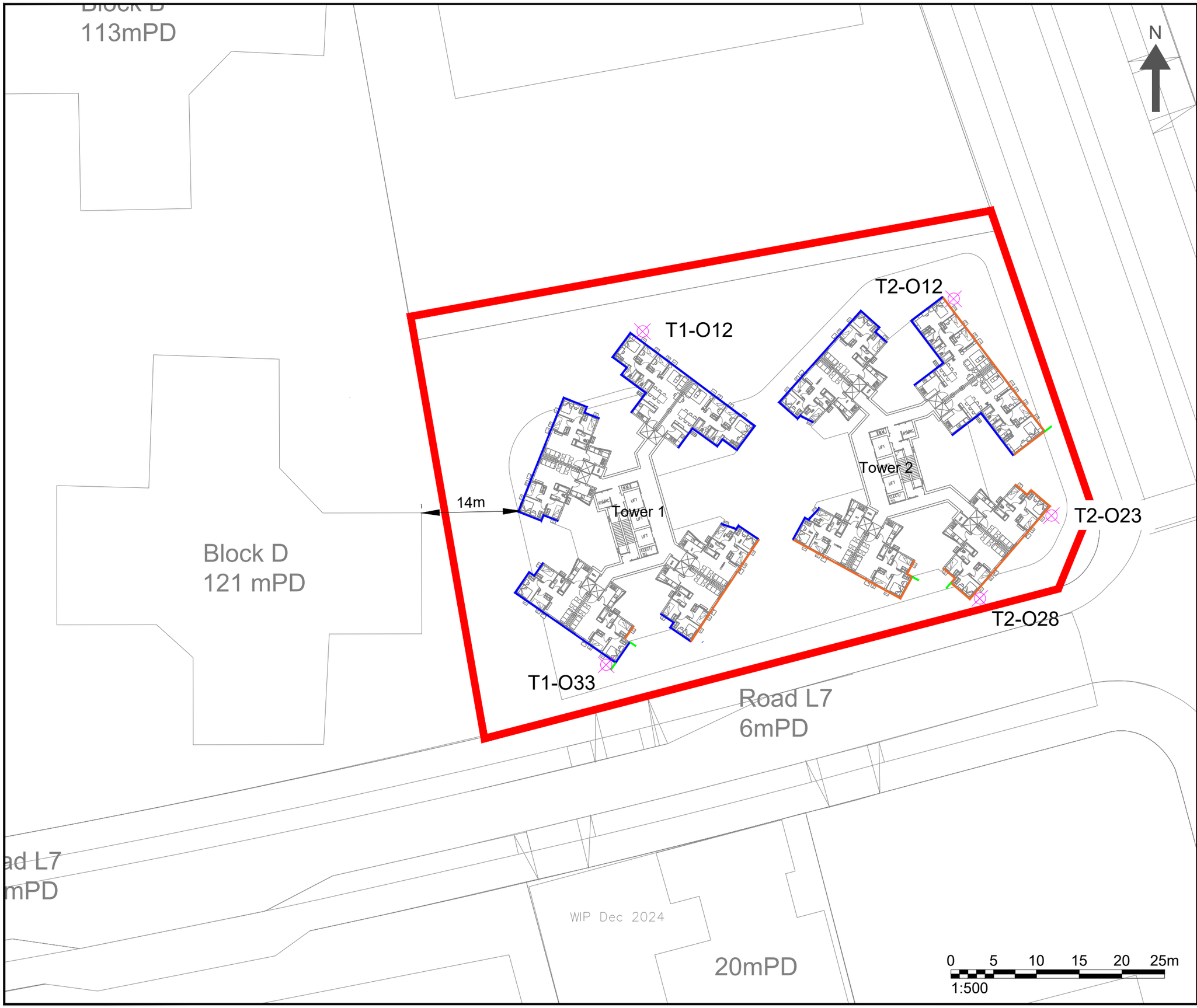

NOTES :

- Subject Site
- Noise Sensitive Receiver (NSR)
- Facade with ASR "B" rating
- Facade with ASR "C" rating
- Architectural fins

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

ASR RATINGS OF PROPOSED DEVELOPMENT FOR TOWER 1 AND TOWER 2

Drawing No :	Revision :
FIGURE 6.4	0
Scale :	Date :
AS SHOWN	APRIL 2025

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A3 420 x 297

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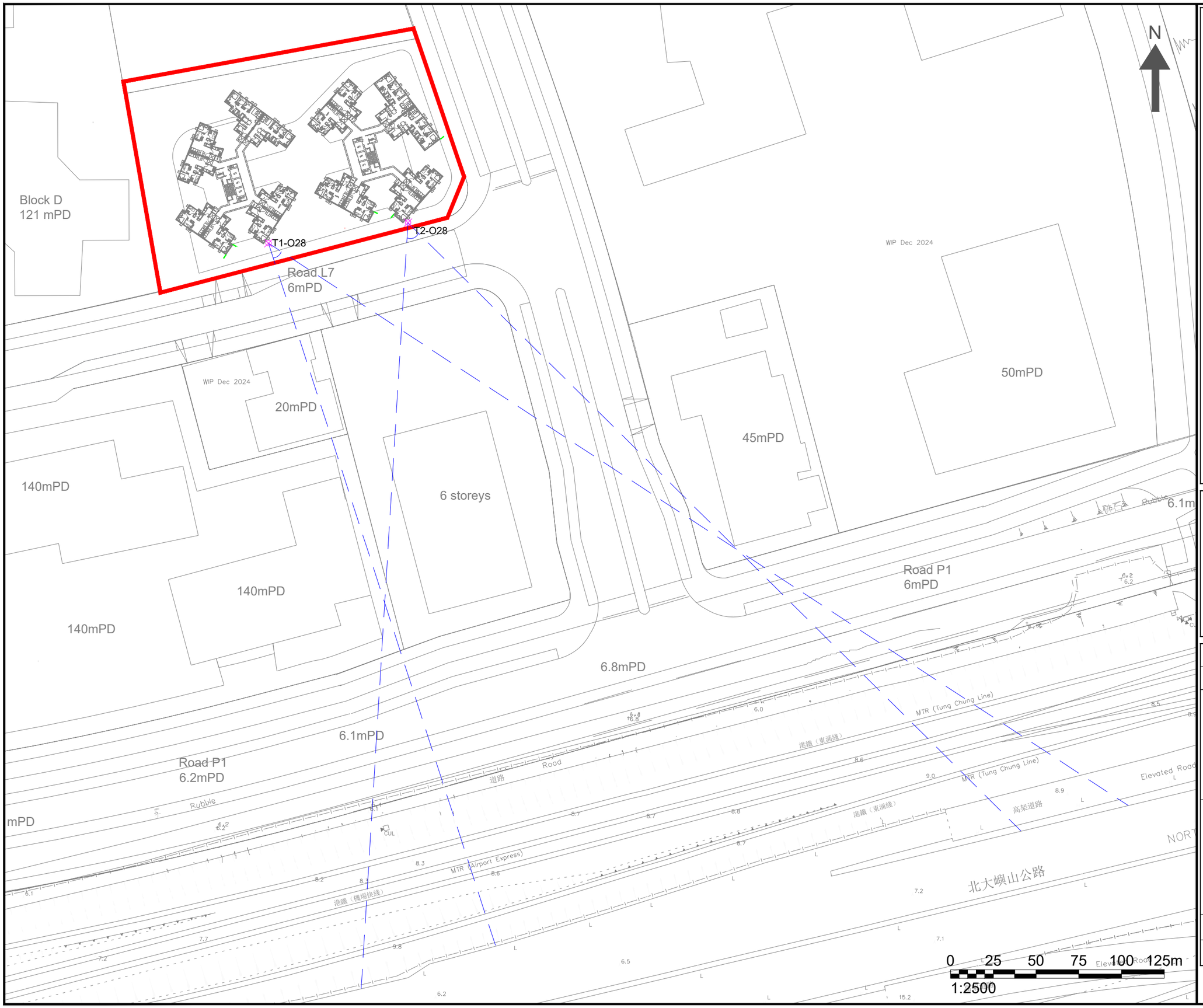

NOTES :

Subject Site

Noise Sensitive Receiver (NSR)

Architectural fins

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

ASR RATINGS OF PROPOSED DEVELOPMENT FOR TOWER 1 AND TOWER 2

Drawing No :	Revision :
FIGURE 6.4a	1
Scale : AS SHOWN	Date : AUG 2025

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A3 420 x 297

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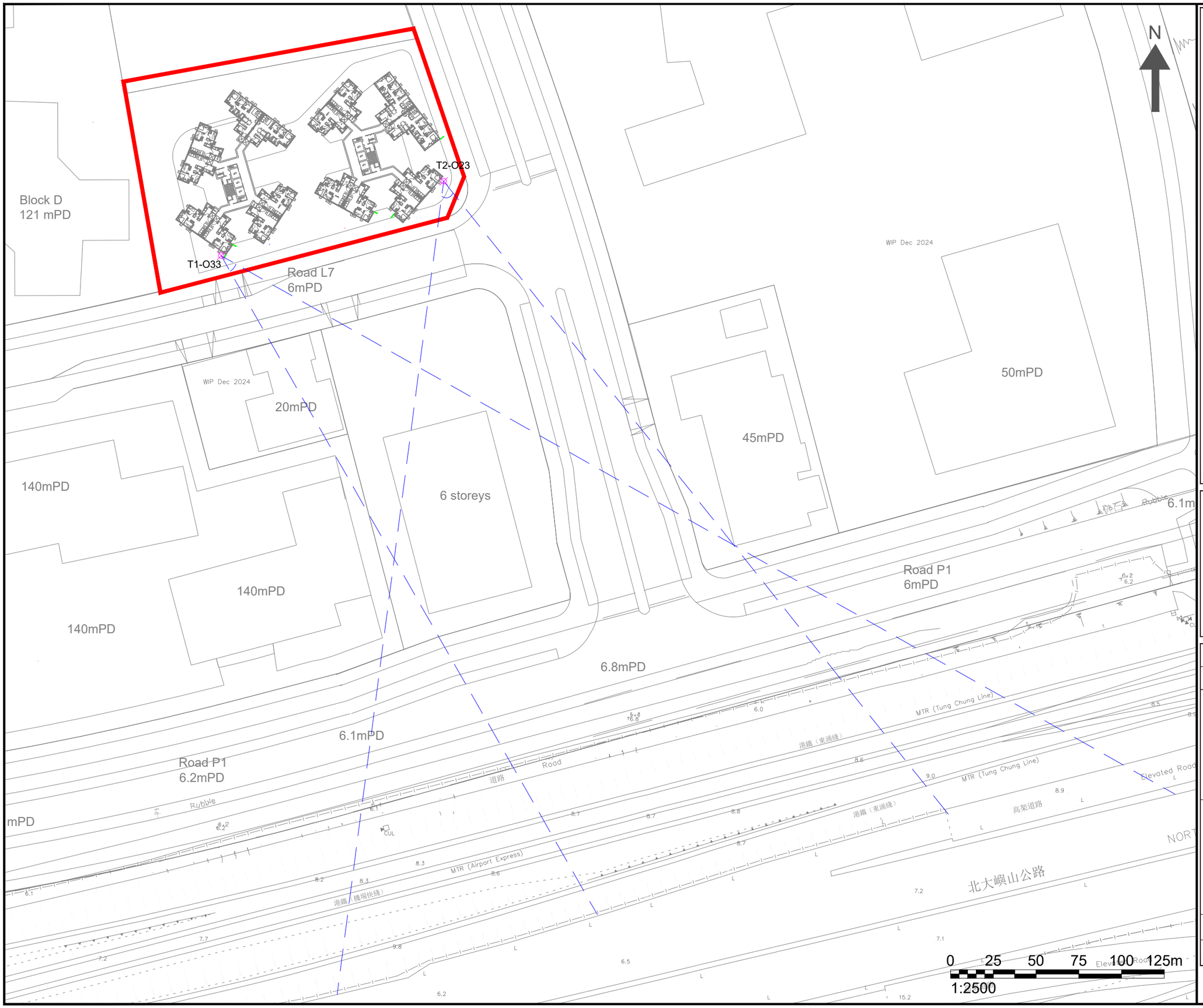

NOTES :

Subject Site

Noise Sensitive Receiver (NSR)

Architectural fins

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

ASR RATINGS OF PROPOSED DEVELOPMENT FOR TOWER 1 AND TOWER 2

Drawing No :	Revision :
FIGURE 6.4b	1
Scale :	Date :
AS SHOWN	AUG 2025

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A3 420 x 297

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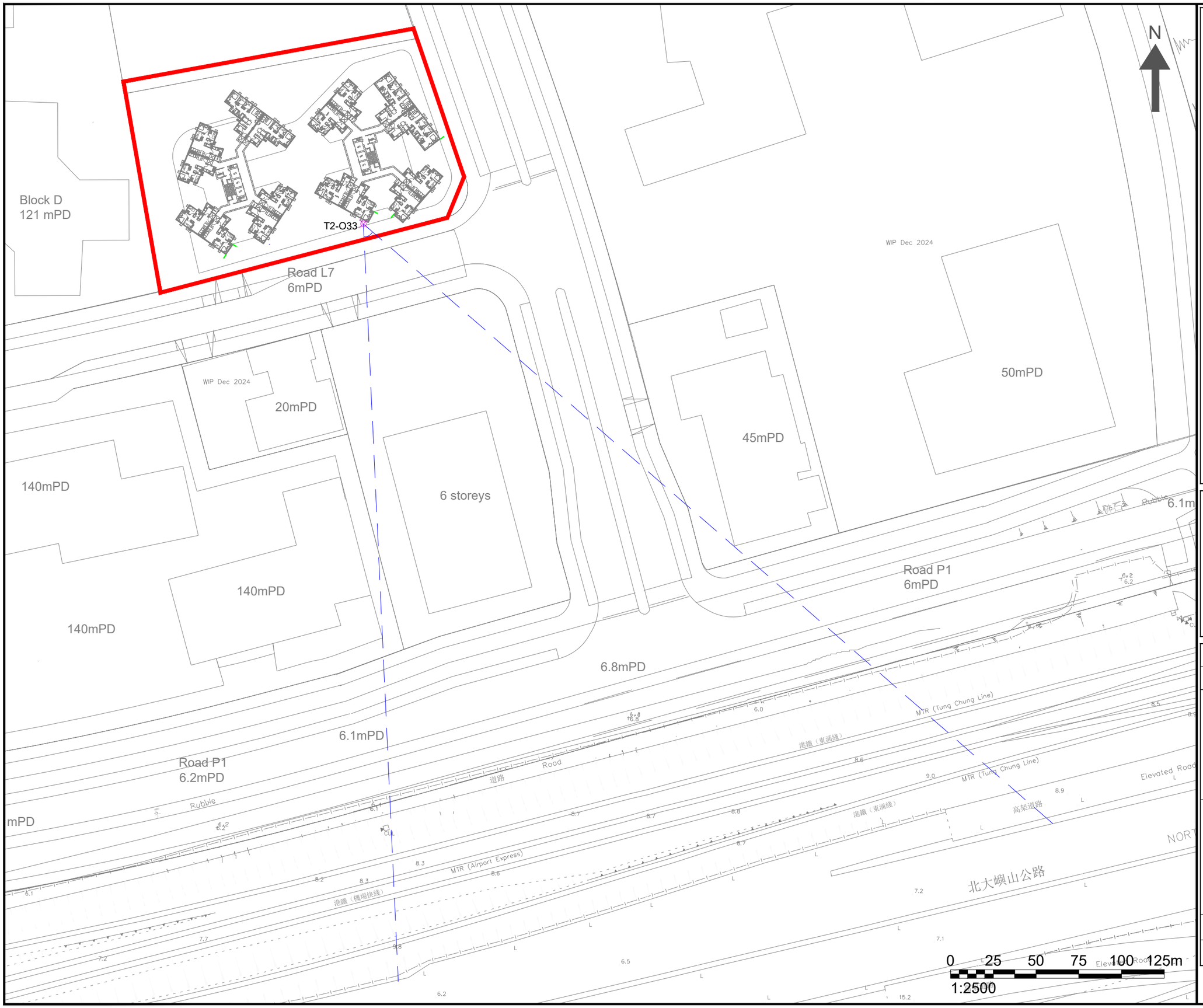

NOTES :

Subject Site

Noise Sensitive Receiver (NSR)

Architectural fins

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :
S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :
ASR RATINGS OF PROPOSED DEVELOPMENT FOR TOWER 1 AND TOWER 2

Drawing No :	Revision :
FIGURE 6.4c	1
Scale : AS SHOWN	Date : AUG 2025

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A3 420 x 297

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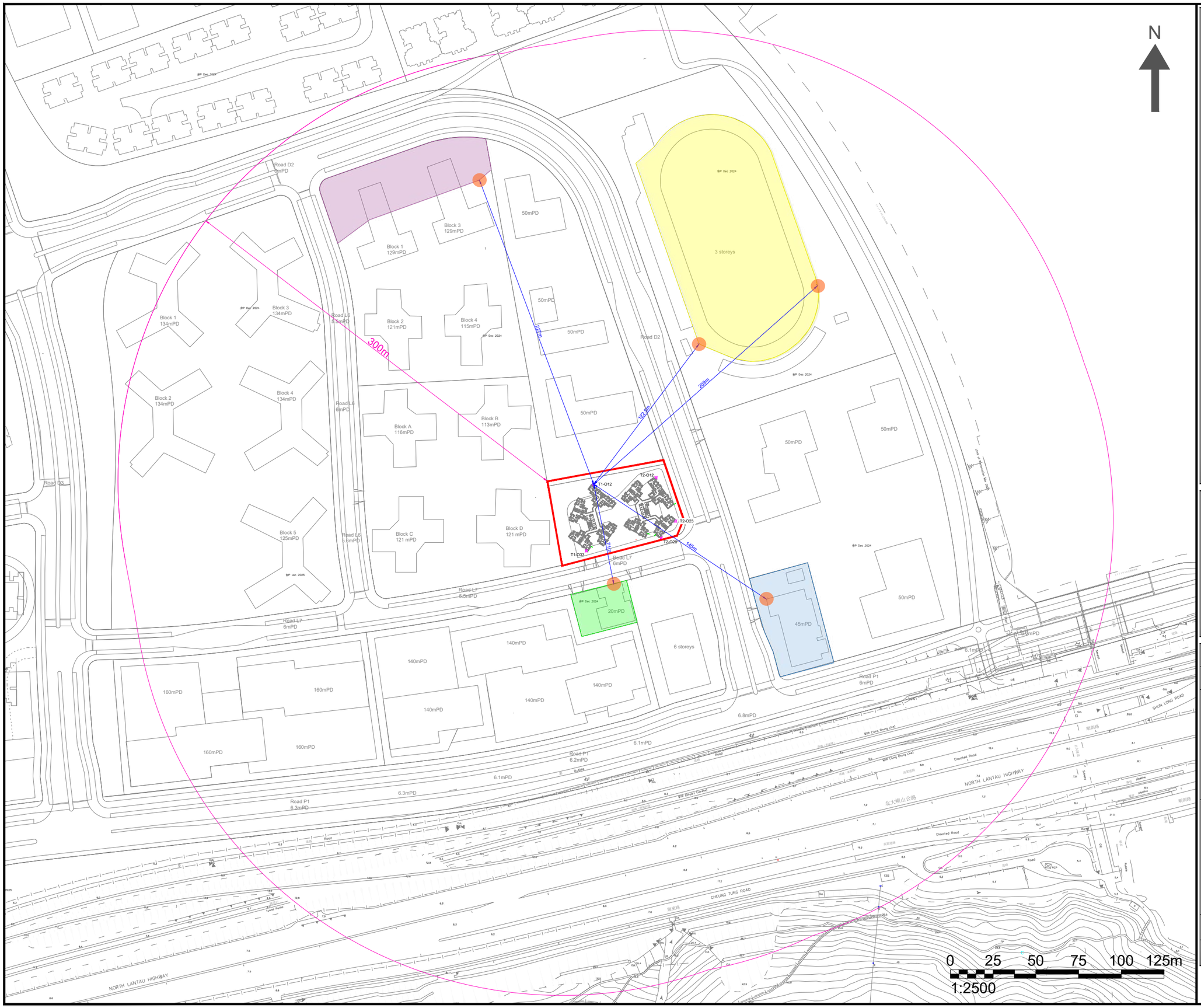

NOTES :

- Subject Site
- 300m asssessment area
- Sports Ground (Area 138)
- Fire Station (Area 136)
- Eastern Sewage Pumping Station (Area 132)
- Public Transport Interchange (PT1) (Area 133B)
- Noise Sensitive Receiver (NSR)
- Architectural fins
- Noise Assessment Point of Fixed Noise sources

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PLANNED FIXED NOISE SOURCES

Drawing No : FIGURE 6.5a	Revision : 1
Scale : AS SHOWN	Date : AUG 2025

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A3 420 x 297

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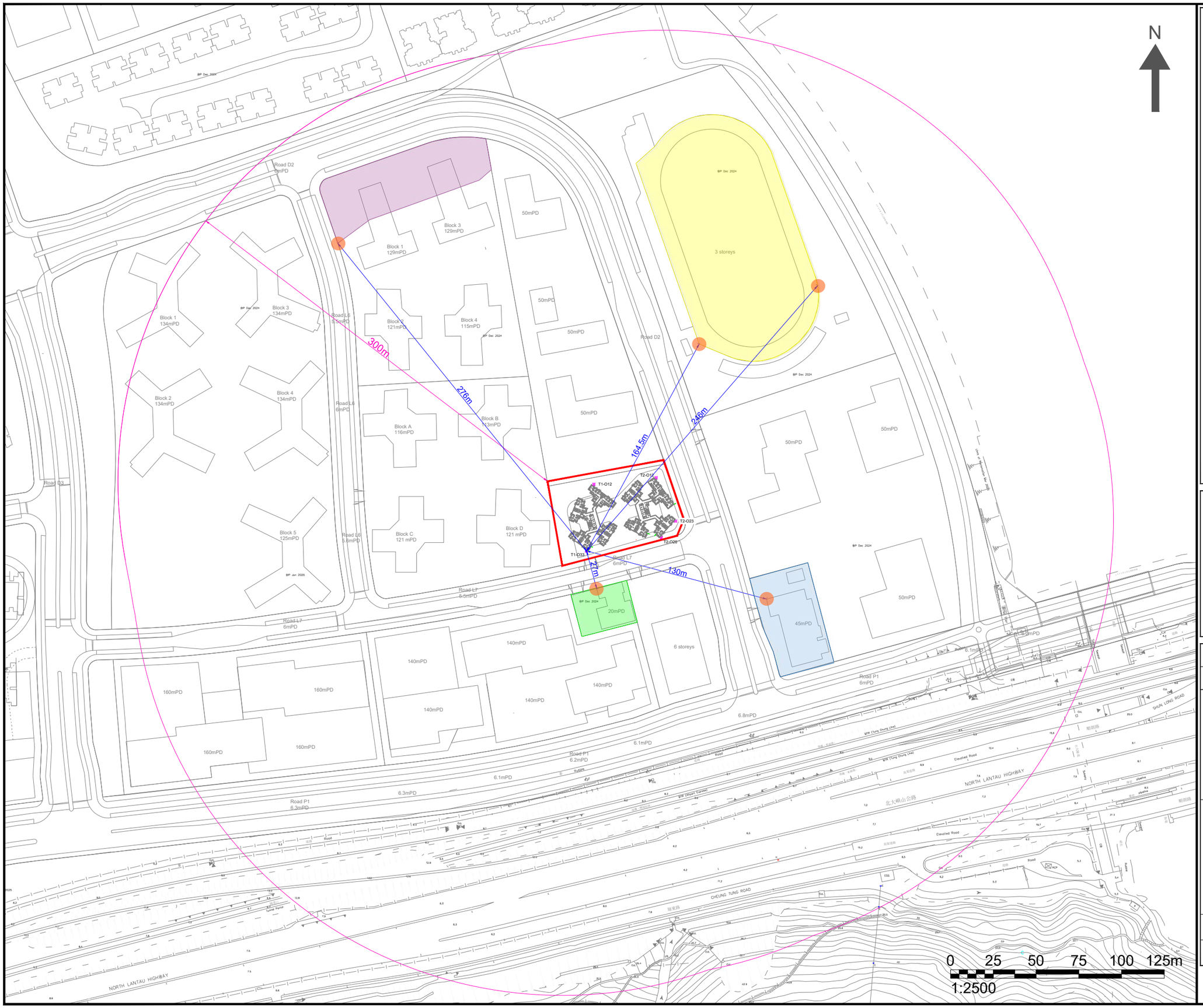

NOTES :

- Subject Site
- 300m asssessment area
- Sports Ground (Area 138)
- Fire Station (Area 136)
- Eastern Sewage Pumping Station (Area 132)
- Public Transport Interchange (PT1) (Area 133B)
- Noise Sensitive Receiver (NSR)
- Architectural fins
- Noise Assessment Point of Fixed Noise sources

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PLANNED FIXED NOISE SOURCES

Drawing No : FIGURE 6.5b	Revision : 1
Scale : AS SHOWN	Date : AUG 2025

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A3 420 x 297

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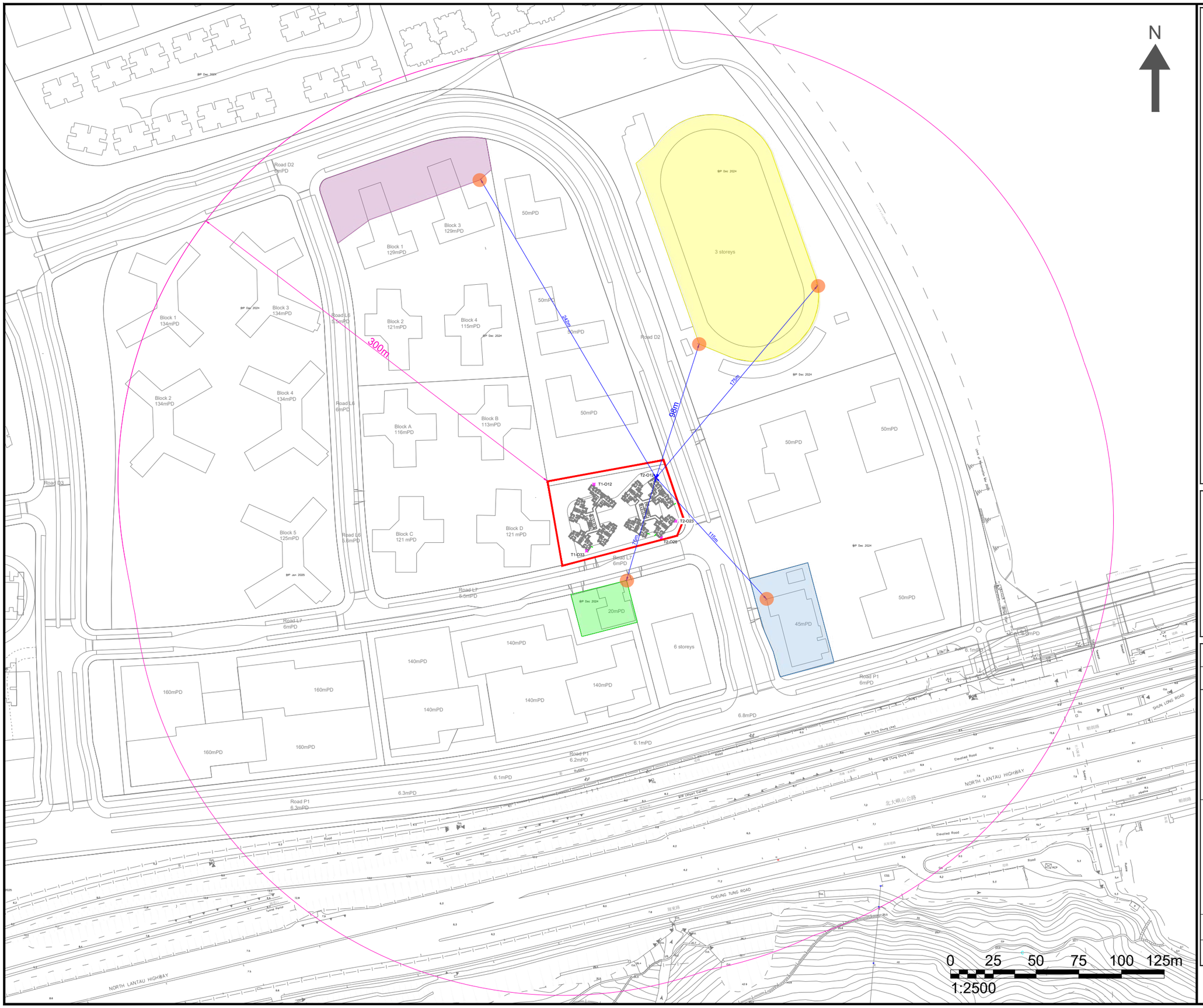

NOTES :

- Subject Site
- 300m asssessment area
- Sports Ground (Area 138)
- Fire Station (Area 136)
- Eastern Sewage Pumping Station (Area 132)
- Public Transport Interchange (PT1) (Area 133B)
- Noise Sensitive Receiver (NSR)
- Architectural fins
- Noise Assessment Point of Fixed Noise sources

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PLANNED FIXED NOISE SOURCES

Drawing No : FIGURE 6.5c	Revision : 1
Scale : AS SHOWN	Date : AUG 2025

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A3 420 x 297

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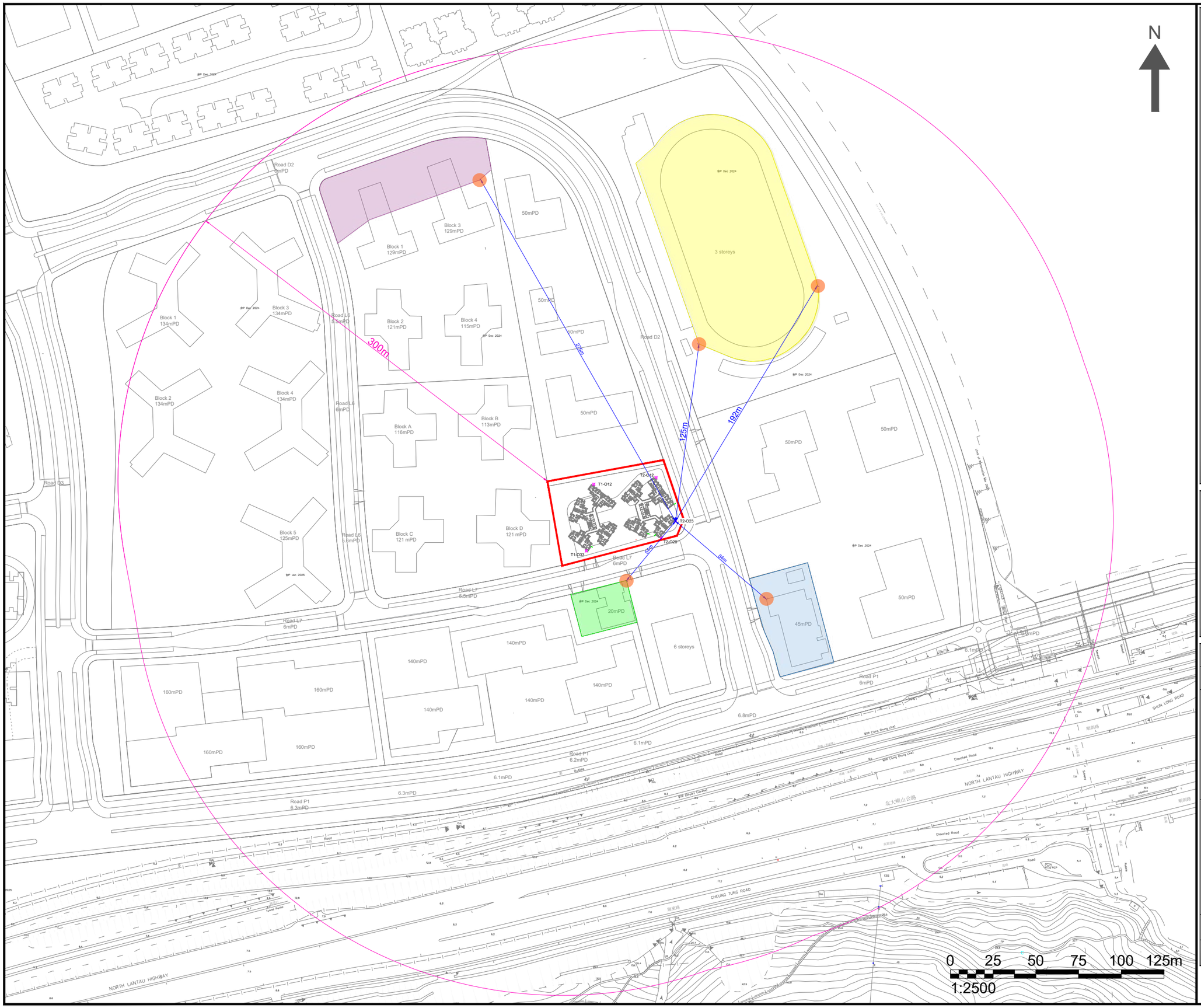

NOTES :

- Subject Site
- 300m asssessment area
- Sports Ground (Area 138)
- Fire Station (Area 136)
- Eastern Sewage Pumping Station (Area 132)
- Public Transport Interchange (PT1) (Area 133B)
- Noise Sensitive Receiver (NSR)
- Architectural fins
- Noise Assessment Point of Fixed Noise sources

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PLANNED FIXED NOISE SOURCES

Drawing No : FIGURE 6.5d	Revision : 1
Scale : AS SHOWN	Date : AUG 2025

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A3 420 x 297

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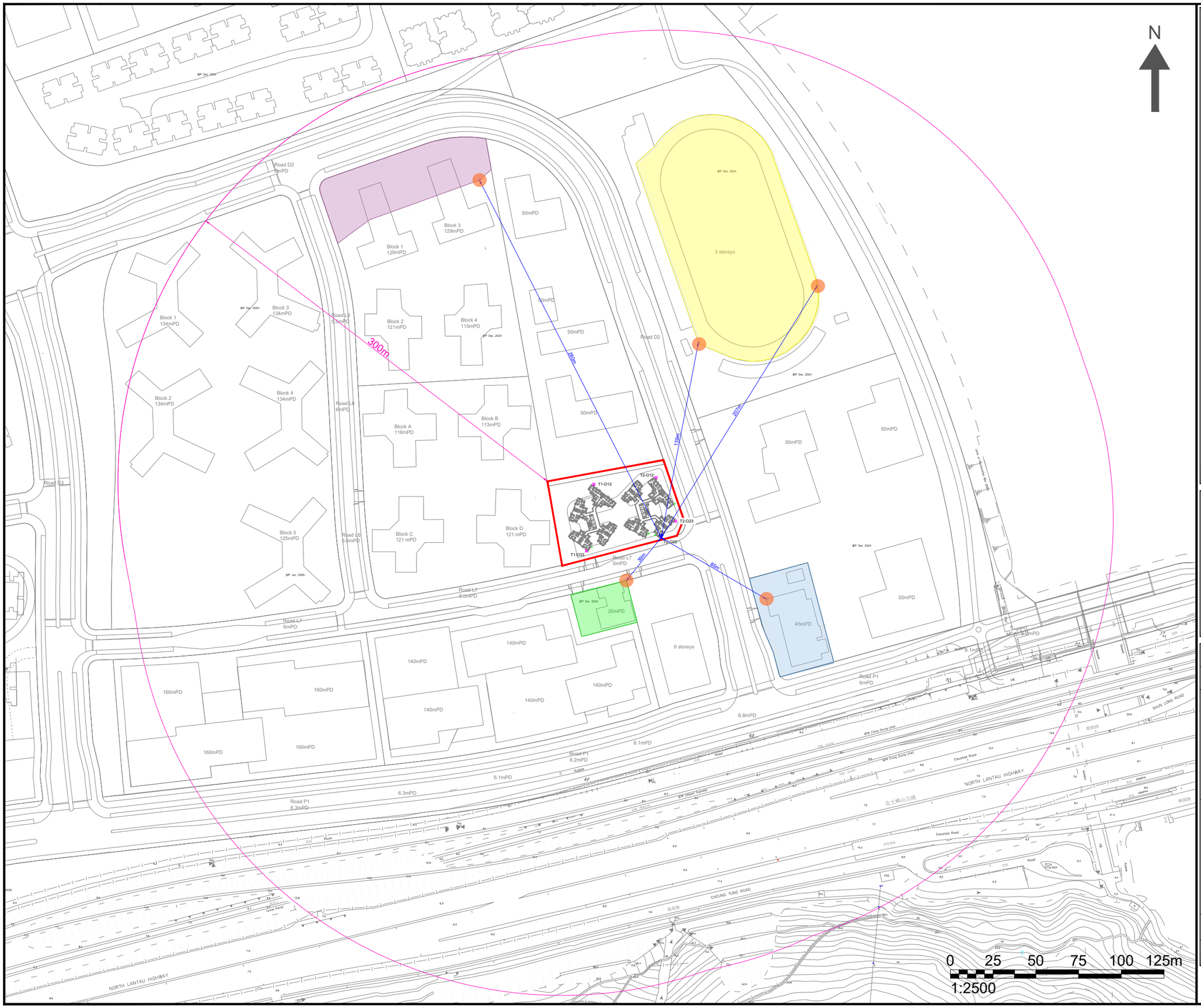

NOTES :

- Subject Site
- 300m asssessment area
- Sports Ground (Area 138)
- Fire Station (Area 136)
- Eastern Sewage Pumping Station (Area 132)
- Public Transport Interchange (PT1) (Area 133B)
- Noise Sensitive Receiver (NSR)
- Architectural fins
- Noise Assessment Point of Fixed Noise sources

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PLANNED FIXED NOISE SOURCES

Drawing No : FIGURE 6.5e	Revision : 1
Scale : AS SHOWN	Date : AUG 2025

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A3 420 x 297

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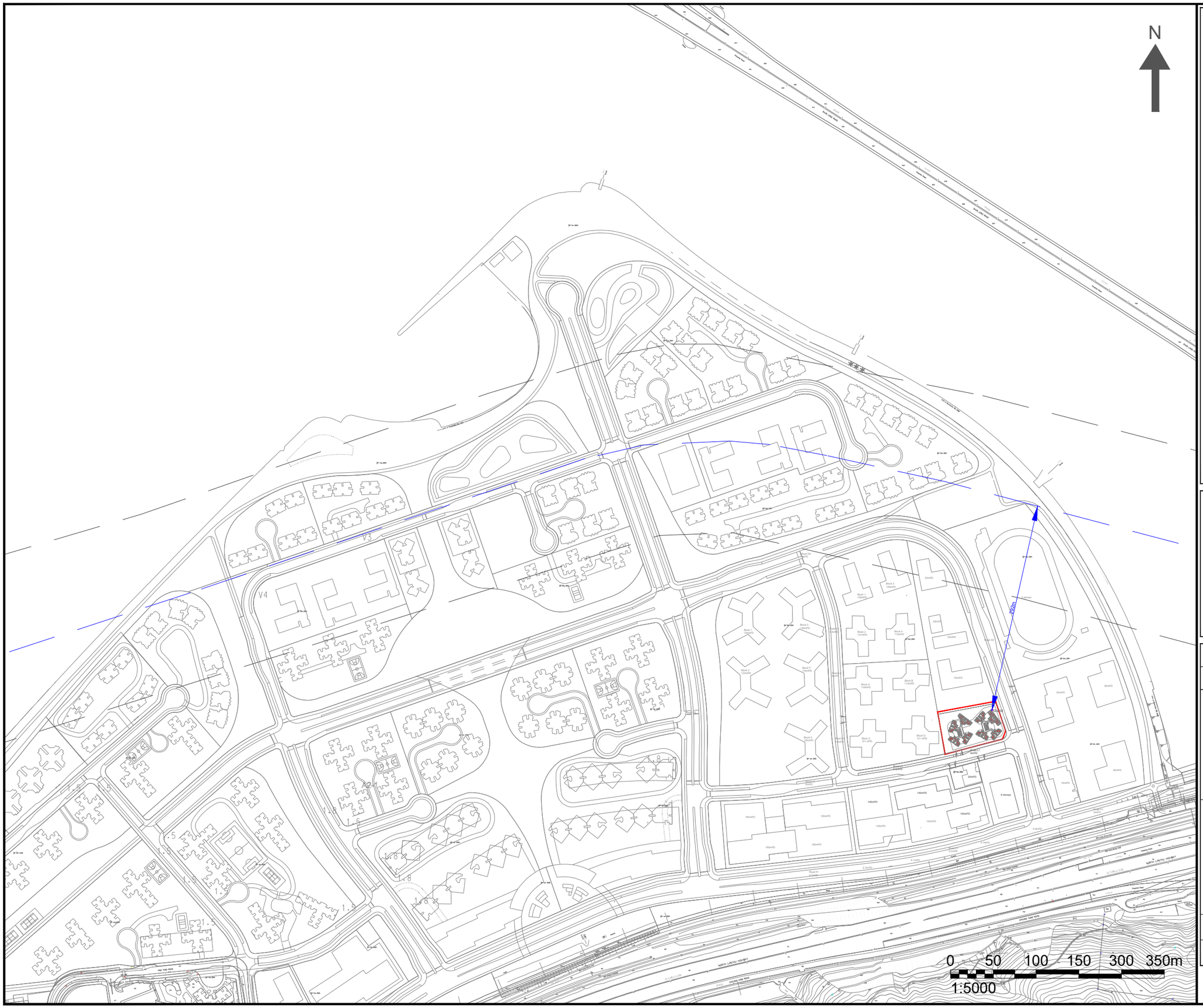

NOTES :

Subject Site

Noise Sensitive Receiver (NSR)

Assessment Area

Helicopter Flight Path

Consultant

AEC

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF NEAREST NSR TO HELICOPTER FLIGHT PATH

Drawing No :	Revision :
FIGURE 6.6	0
Scale : AS SHOWN	Date : AUG 2025

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A3 420 x 297

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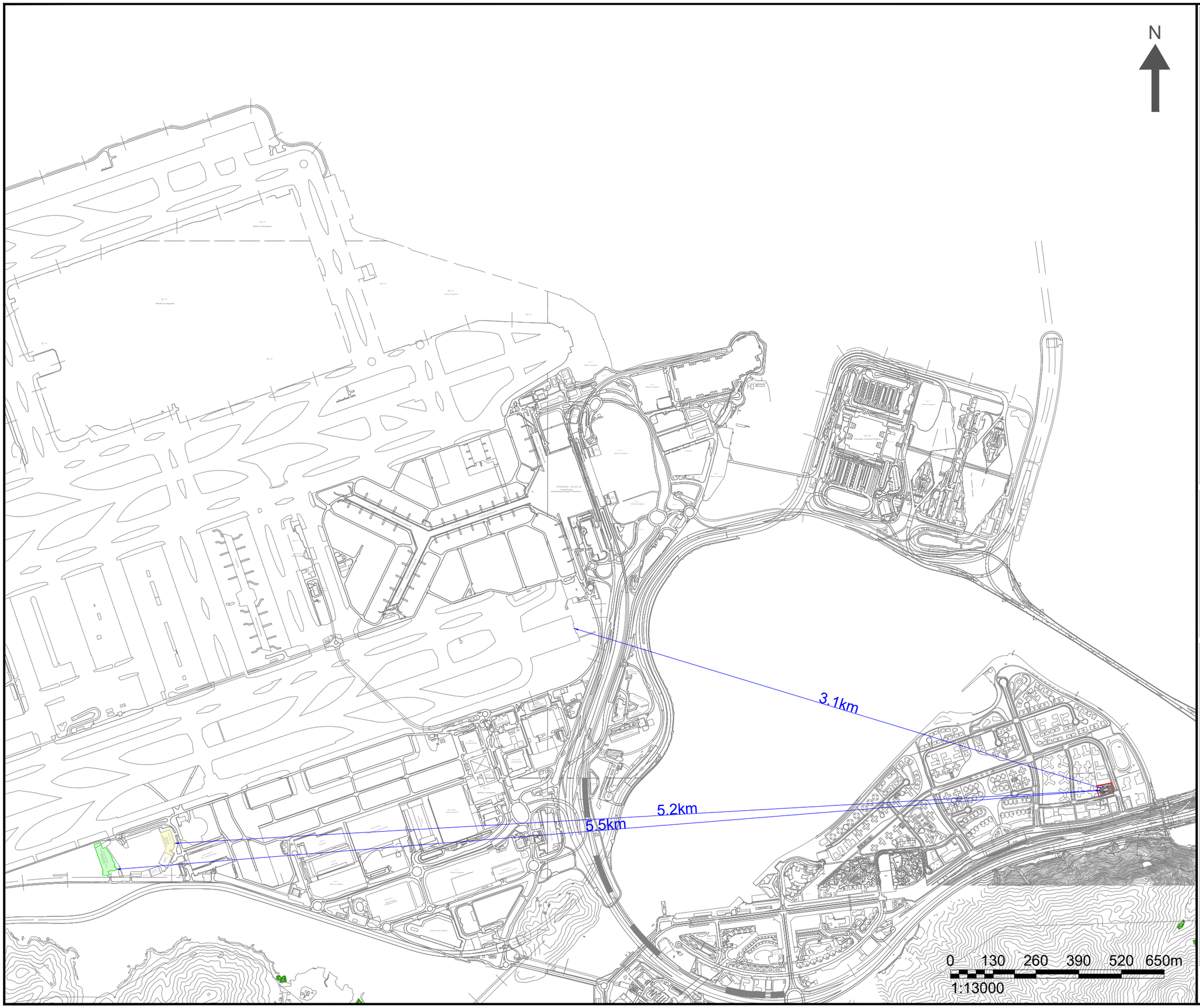

NOTES :

Subject Site

Noise Sensitive Receiver (NSR)

Hong Kong Business Aviation Centre (HKBAC)

Government Flying Services (GFS)

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF NEAREST NSR TO HONG KONG INTERNATIONAL AIRPORT, HONG KONG BUSINESS AVIATION CENTRE (HKBAC) AND GOVERNMENT FLYING SERVICES (GFS)

Drawing No : FIGURE 6.7	Revision : 1
Scale : AS SHOWN	Date : OCT 2025

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A3 420 x 297

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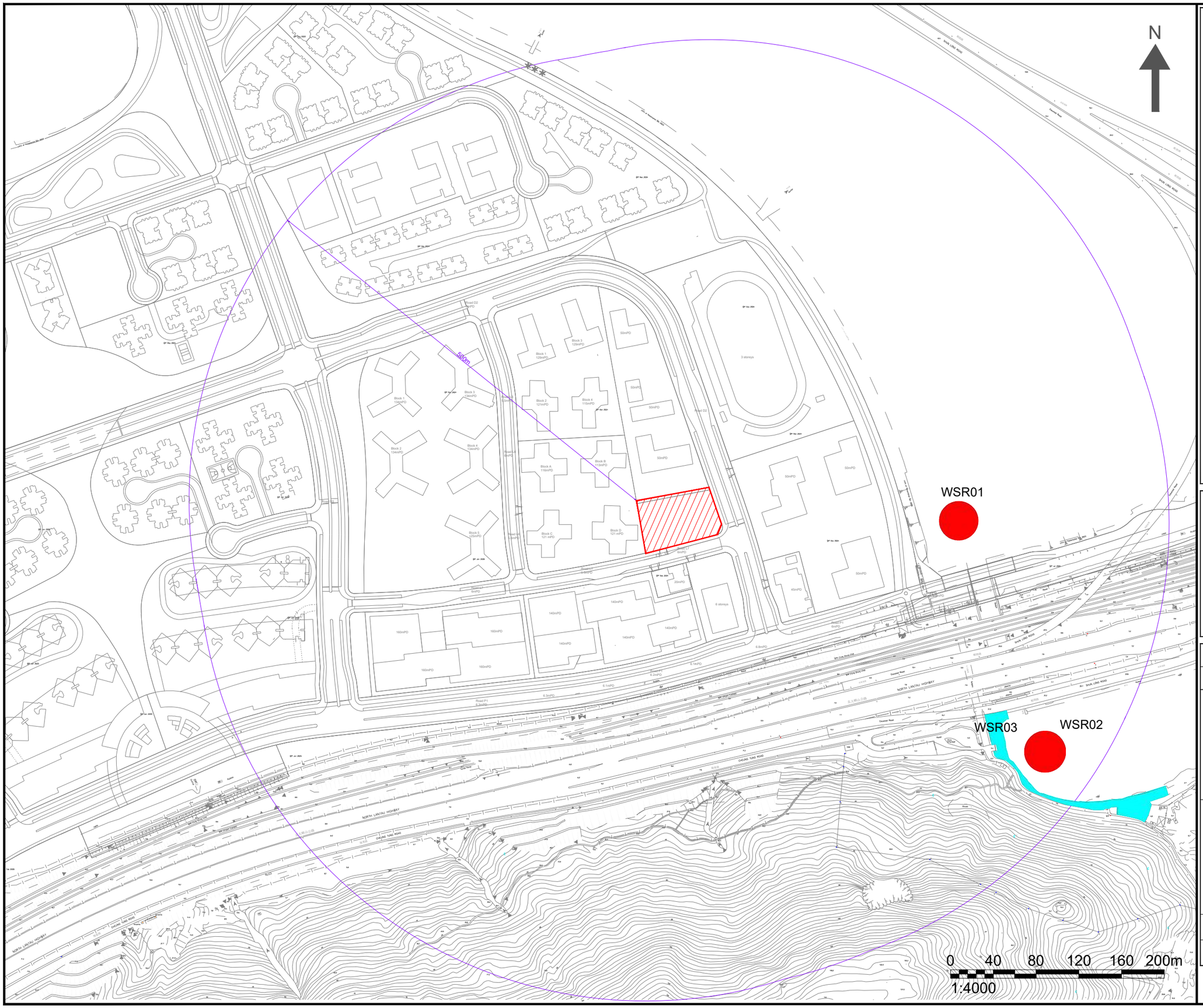

NOTES :

- Subject Site
- Water Senstive Receiver (WSR)
- 500m Assessment Area
- Coastal Protection Area

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF WATER SENSITIVE RECEIVERS (WSRs) & COASTAL PROTECTION AREA

Drawing No :	Revision :
FIGURE 7.1	1
Scale : AS SHOWN	Date : AUGUST 2025

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A3 420 x 297

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Appendix 3.1

Layout Design Scheme of the Proposed Development

(Please refer to Appendix 1 of Supplementary Planning Statement)

Appendix 5.1

Extract of Proposed Marina & Existing Local Vessels from TCNTE EIA Report (AEIAR 196/2016)

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.
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PROPOSED EXPANSION OF
HONG KONG INTERNATIONAL AIRPORT
(BY OTHERS)

HONG KONG
INTERNATIONAL AIRPORT

HK BOUNDARY CROSSING
FACILITIES OF HZMB
(BY OTHERS)

TMCLK LINK
(BY OTHERS)

LOCATION OF MARINA

500m assessment area

Subject Site

OWTF(Phase 1)

TAI HO WAN

PROPOSED LANTAU LOGISTICS PARK
(BY OTHERS)
(REF. REVISED CONCEPT PLAN
FOR LANTAU)

HK LINK ROAD OF HZMB
(BY OTHERS)

TUNG CHUNG PIER

N

0 500 1000m

LEGEND

- POSSIBLE DEVELOPMENT AREA
- WORKS AREA FOR ROAD P1 (TUNG CHUNG - TAI HO SECTION)
- 500M ASSESSMENT AREA
- CHIMNEY
- PROPOSED MARINA
- MARINE EMISSION
- MARINE ROUTE
- VENTILATION BUILDING
- TUNNEL PORTAL

Rev	Description	By	Date
B	SECOND ISSUE	GL	08/15
A	FIRST ISSUE	GL	05/15

Consultant
ARUP

Project title
Tung Chung
New Town Extension

Drawing title
Locations of Chimney, Proposed Marina and Existing Local Vessel

Drawing no.	Rev.
Figure 3.15	B

Drawn	Date	Checked	Approved
GL	08/15	LK	FC

Scale: 1:30000 @A3
Status: PRELIMINARY

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

Printed by : 10/30/2015
Filename : G:\env\project\219844-70\13 Drawing Deliverables\24 Environmental Impact Assessment\Figure 3.15 - Locations of Chimney, Proposed Marina and Existing Local Vessel.dgn

Appendix 5.2

Endorsement from Transport Department

----- Forwarded by Sandy Lai Shan WONG/ARCHSD/HKSARG on 20/08/2025 02:34 PM -----

From: Lap Man LEE/TD/HKSARG@TD
To: Sandy Lai Shan WONG/ARCHSD/HKSARG@ARCHSD
Cc: Vivian Wai Yan WAN/PLAND <vwywan@pland.gov.hk>, WM WONG/TD/HKSARG@TD
Date: 20/08/2025 12:39 PM
Subject: Re: Fw: Pre-Submission Enquiry of Section 16 Planning Application for Proposed Junior Police Officers Married Quarters with Minor Relaxation of Building Height Restriction at Tung Chung Area 134, Lantau Island [TD's endorsement of traffic flow data for PER]

Dear Sandy,

I refer to your subject email.

2. Please note that the noise impact assessment under Preliminary Environmental Review is not under our purview. We are not in a position to offer comments on the traffic figures tailor-made for the noise impact assessment study.

3. Notwithstanding the above, I have no comments on the methodology of the traffic forecast provided that the traffic data of the technical note shall tally with those for the Traffic Impact Assessment (TIA) report. In case there is any discrepancy in the traffic data between the TIA report and the noise impact assessment, please highlight it for further consideration.

Regards,
Raymond LEE
E/Is2, TD

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Appendix 6.1

Traffic Forecast of Year 2046

Appendix A

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

812800 E

814000 E

819200 N

818000 N

816800 N

LEGEND:

KEY JUNCTION

KEY ROAD LINK

N

SEA

TUNG CHUNG

NORTH LANTAU HIGHWAY

TAI HO INTERCHANGE

J1A J1B J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14 J15 J16 J17 J18 J19 J20 J21 J22 J23 J24 J25

L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12 L13 L14 L15 L16 L17 L18 L19 L20 L21 L22 L23 L24 L25 L26 L27 L28 L29 L30 L31 L32 L33 L34 L35 L36

ROAD L1 ROAD L2 ROAD L3 ROAD L4 ROAD L5 ROAD L6 ROAD L7 ROAD L8 ROAD P1 ROAD P2 ROAD 01 ROAD 02 ROAD 03 ROAD 04

L001 L002 L003 L004 L005 L006 L007 L008 L009 L010 L011 L012 L013 L014 L015 L016

INSET
SCALE 1 : 16000

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AECOM

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

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

CONSULTANT
工程顧問公司
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核

STATUS
階段

SCALE 比例: A1 1 : 6000
DIMENSION UNIT 尺寸單位: METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60507694
CONTRACT NO. 合約編號: CE 69/2015 (CE)

SHEET TITLE
圖紙名稱
KEY JUNCTIONS AND ROAD LINKS ASSESSED IN 2031 & 2036

SHEET NUMBER
圖紙編號
FIGURE 1.2

30-December-2024
PATH: \\wf1aecom-as-pw.bentley.com:AECOM_DS02-ASDocuments\60507694 TCNTE - D&C\CAD PRODUCTION\DRAWING\REPORT\PI11\PI11_515.dgn
Plot File by: LIUH9
$PLTDRVL$

TABLE E – PEAK HOUR TRAFFIC FLOW AND VEHICLE COMPOSITION

YEAR 2046 TRAFFIC DATA (DRAFT)

Job No.: J7372

Link ID	Road Section	From Road	To Road	AM Peak Hour		
				Traffic Flows	Vehicle Composition	
				(veh/hr)	LV	HV
L001	Road L7 (EB)	Road L6	Road D2	46	50.7%	49.3%
L002	Road L7 (WB)	Road D2	Road L6	579	79.9%	20.1%
L003	Road D2 (NB)	Road L7	Road L6	74	60.6%	39.4%
L004	Road D2 (SB)	Road L6	Road L7	817	87.6%	12.4%
L005	Road D2 (NB)	Road P1	Road L7	86	65.8%	34.2%
L006	Road D2 (SB)	Road L7	Road P1	1,322	88.3%	11.7%
L007	Road L6 (SB)	Road D2	Road L7	319	77.6%	22.4%
L008	Road L6 (NB)	Road L7	Road D2	211	65.9%	34.1%
L009	Road D1 (EB)	Road D1	Road L6	86	40.0%	60.0%
L010	Road D1 (WB)	Road L6	Road D1	774	82.6%	17.4%
L011	Road L7 (EB)	Road D3	Road L6	523	71.2%	28.8%
L012	Road L7 (WB)	Road L6	Road D3	99	43.0%	57.0%
L013	Road P1 (EB)	Road D3	Road D2	1,217	83.4%	16.6%
L014	Road P1 (WB)	Road D2	Road D3	1,691	73.8%	26.2%
L015	Road P1 (EB)	Road D2	North Lantau Highway	2,453	86.7%	13.3%
L016	Road P1 (WB)	North Lantau Highway	Road D2	1,691	73.8%	26.2%
L017	Shun Long Road (EB)	North Lantau Highway	Tuen Mun Chek Lap Kok Tunnel	222	68.5%	31.5%
L018	North Lantau Highway (EB)	Tai Ho Interchange	Shun Long Road	2,256	80.8%	19.2%
L019	North Lantau Highway (EB)	Tung Chung Eastern Interchange	Shun Long Road	2,478	79.7%	20.3%
L020	North Lantau Highway (WB)	Tai Ho Interchange	Tung Chung Eastern Interchange	3,521	74.1%	25.9%
L021	Cheung Tung Road (WB)	Tai Ho Interchange	Tung Chung Eastern Interchange	46	81.0%	19.0%
L022	Shun Long Road (WB)	Tuen Mun Chek Lap Kok Tunnel	North Lantau Highway	288	67.7%	32.3%

Note: "LV" includes motorcycle, private car and taxi
"HV" includes light / medium / heavy goods vehicle, public / private light bus, non-franchised bus and franchised bus

YEAR 2046 TRAFFIC DATA (DRAFT)

Job No.: J7372

Link ID	Road Section	From Road	To Road	PM Peak Hour		
				Traffic Flows	Vehicle Composition	
				(veh/hr)	LV	HV
L001	Road L7 (EB)	Road L6	Road D2	76	64.7%	35.3%
L002	Road L7 (WB)	Road D2	Road L6	365	70.1%	29.9%
L003	Road D2 (NB)	Road L7	Road L6	42	36.7%	63.3%
L004	Road D2 (SB)	Road L6	Road L7	512	79.9%	20.1%
L005	Road D2 (NB)	Road P1	Road L7	107	84.0%	16.0%
L006	Road D2 (SB)	Road L7	Road P1	891	77.4%	22.6%
L007	Road L6 (SB)	Road D2	Road L7	145	47.4%	52.6%
L008	Road L6 (NB)	Road L7	Road D2	309	78.9%	21.1%
L009	Road D1 (EB)	Road D1	Road L6	44	8.4%	91.6%
L010	Road D1 (WB)	Road L6	Road D1	452	73.1%	26.9%
L011	Road L7 (EB)	Road D3	Road L6	536	75.8%	24.2%
L012	Road L7 (WB)	Road L6	Road D3	83	29.6%	70.4%
L013	Road P1 (EB)	Road D3	Road D2	921	76.7%	23.3%
L014	Road P1 (WB)	Road D2	Road D3	1,520	82.7%	17.3%
L015	Road P1 (EB)	Road D2	North Lantau Highway	1,704	76.6%	23.4%
L016	Road P1 (WB)	North Lantau Highway	Road D2	1,520	82.7%	17.3%
L017	Shun Long Road (EB)	North Lantau Highway	Tuen Mun Chek Lap Kok Tunnel	252	52.3%	47.7%
L018	North Lantau Highway (EB)	Tai Ho Interchange	Shun Long Road	3,383	82.8%	17.2%
L019	North Lantau Highway (EB)	Tung Chung Eastern Interchange	Shun Long Road	3,635	80.7%	19.3%
L020	North Lantau Highway (WB)	Tai Ho Interchange	Tung Chung Eastern Interchange	3,097	79.5%	20.5%
L021	Cheung Tung Road (WB)	Tai Ho Interchange	Tung Chung Eastern Interchange	31	76.6%	23.4%
L022	Shun Long Road (WB)	Tuen Mun Chek Lap Kok Tunnel	North Lantau Highway	198	61.9%	38.1%

Note: "LV" includes motorcycle, private car and taxi
"HV" includes light / medium / heavy goods vehicle, public / private light bus, non-franchised bus and franchised bus

Appendix 6.2

Predicted Traffic Noise Levels for Residential Blocks
(Base Scheme Scenario)

Road Traffic Impact Assessment

Project No: 2240 Tung Chung JPOMQ
Scenario: AM base case
Traffic Date: 2046
Scheme: Scheme (rev J)_20250522 , 20250428 Elevation

T1 summary	
Max Noise Level	72
Total no. of unit with exceedance	74
Total no. of units	216
Compliance rate	66

T2 summary	
Max Noise Level	74
Total no. of unit with exceedance	135
Total no. of units	216
Compliance rate	38

Overall summary	
Max Noise Level	74
Total no. of unit with exceedance	209
Total no. of units	432
Compliance rate	52

70 Compliance
71 Non-compliance

| Tower | | Tower 1 | | |

Appendix 6.3

Predicted Traffic Noise Levels for Residential Blocks
(Mitigated Scenario)

Road Traffic Impact Assessment

Project No: 2240 Tung Chung JPOMQ
Scenario: AM mit case (with fin & BAW)
Traffic Date: 2046
Scheme: Scheme (rev J)_20250522 , 20250428 Elevation

T1 summary	
Max Noise Level	70
Total no. of unit with exceedance	0
Total no. of units	216
Compliance rate	100

T2 summary	
Max Noise Level	70
Total no. of unit with exceedance	0
Total no. of units	216
Compliance rate	100

Overall summary	
Max Noise Level	70
Total no. of unit with exceedance	0
Total no. of units	432
Compliance rate	100

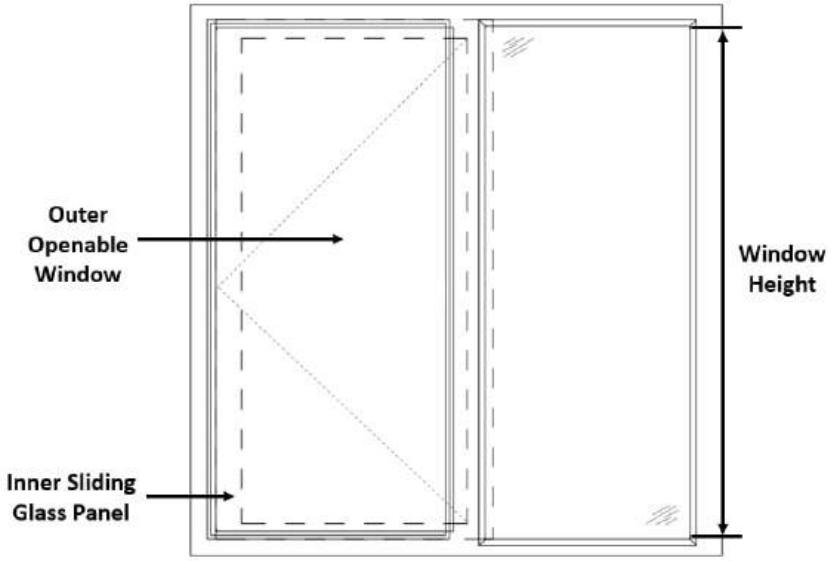
70 Compliance
71 Non-compliance

1.0m fin
1.2m fin
BAW Configuration 1
BAW Configuration 2

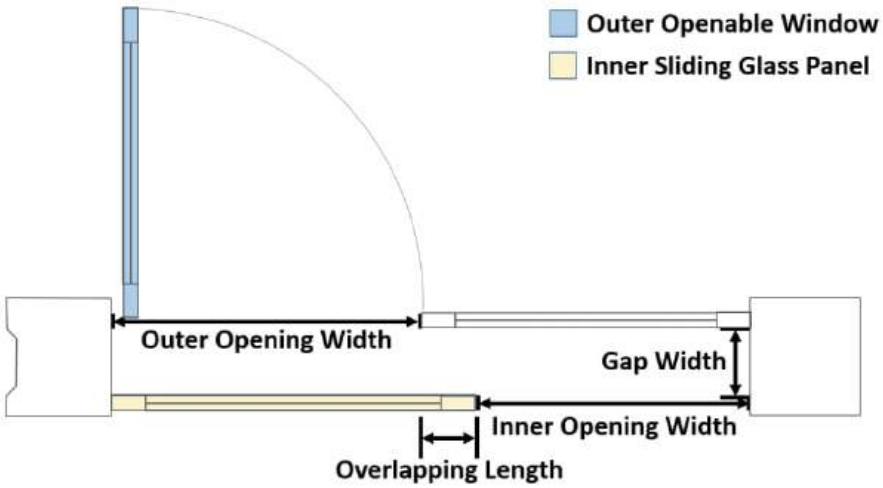
| Tower | | Tower 1 | | |

Appendix 6.4

Indicative Design of Proposed Acoustic Window (Baffle Type)



INTERNAL VIEW (NOT TO SCALE)



PLAN (NOT TO SCALE)

Window Configuration 2:
PN BAW1 w/o SAM

Possible Designs of "Acoustic Window (Baffle Type)" for 8m² and 18m² rooms					
Room Size (m^2)	**Room Dimensions (mm^3)**	**Inner Window Opening (mm^2)**	**Outer Window Opening (mm^2)**	**Overlapping Length (mm)**	**Gap Width (mm)**
8	**3200 (W) x 2500 (D) x 3400 (H)**	**580 (W) x 870 (H)**	**600 (W) x 870 (H)**	**≥ 100**	**100 to 175**
18	**5300 (W) x 3390 (D) x 3400 (H)**	**750 (W) x 1500 (H)**	**750 (W) x 1500 (H)**	**≥ 100**	**100 to 175**

Notes:

a. These are feasible designs of AW(BT) for 8m² and 18m² rooms.

b. For optimum performance of noise reduction, the air gap should have a pane-to-pane overlapping length of ≥ 100mm and a gap width between 100mm and 175mm, with the inner sliding glass panel in a closed position. The window pane shall be ≥ 6mm in thickness.

Window Configuration 1:
PN BAW2 w/o SAM

Appendix 6.5

Fixed Noise Calculation

Predicted Sound Pressure Level from Sports Ground

Project No.: **2240**

Project: **Junior Police Office Married Head Quarters (JPOMQ)**

Assessment Point	Spectator	SWL, dB(A)	Distance, D (m)	Dimensions		Conformal Area		Correction				
				Length, L (m)	Width, W (m)	Area, A (m2) [4]	Correction, dB(A) [5]	Façade, dB(A) [6]	Directivity, dB(A) [2]	SPL, dB(A) [1]	Daytime Criteria,dB(A) [3]	Compliance
T1-O12	NW	105.0	122.5	150	10	157362	-52	3	0	56		
	SE	101.0	209	87	10	339015	-55	3	0	49		
Predicted Total SPL dB(A)										**57**	**65**	**YES**
T1-O33	NW	105.0	164.5	150	10	254211	-54	3	0	54		
	SE	101.0	246	87	10	456068	-57	3	0	47		
Predicted Total SPL dB(A)										**55**	**65**	**YES**
T2-O12	NW	105.0	98	150	10	111104	-50	3	0	58		
	SE	101.0	175	87	10	246621	-54	3	0	50		
Predicted Total SPL dB(A)										**58**	**70**	**YES**
T2-O23	NW	105.0	125	150	10	162507	-52	3	0	56		
	SE	101.0	192	87	10	291002	-55	3	0	49		
Predicted Total SPL dB(A)										**57**	**70**	**YES**
T2-O28	NW	105.0	139	150	10	192766	-53	3	0	55		
	SE	101.0	207	87	10	333178	-55	3	0	49		
Predicted Total SPL dB(A)										**56**	**70**	**YES**

Remarks:

[1] Noise calculation is made reference to the approved TCNTE EIA (AEIAR-196/2016)

[2] Directivity correction of 5dB(A) is applied when the spectator is at more than 90 degree from the NSR, 10dB(A) is applied when the spectator is completely not facing the NSR.

[3] According to the approved TCNTE EIA (AEIAR-196/2016), Sports Ground are operated during daytime and evening time only

[4] The following formula was used for calculating the conformal area:

$A = (L+W)(2C + \pi\ d) + 2\pi\ d(C+d) + (DL)$

C = measured noise level, assume same height as noise receiver, C = 0m

[5] Correction factor for conformation area (dB(A)) = - 10 log (area)

[6] Façade Correction (dB(A)) = + 3

Fixed Noise Impact Assessment Calculation

Project No.: **2240**

Project: **Junior Police Office Married Head Quarters (JPOMQ)**

NAP ID T1-O12

ASR B

Day-time Criterion: **65 dB(A)**

Fixed Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
Source Location	Source Description	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814365.5	817885.7	24.5	88.0	[1][4]	814351.2	817955.3	24.5	71	0	71	100%	-45	0	3	3	0	0	-10	0	39	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82.0	[1][3]	814351.2	817955.3	24.5	227	0	227	100%	-55	0	3	3	0	0	-10	0	23	
G0-3	Tung Chung East Fire Station	814472.1	817875.1	24.5	97.0	[1] [2]	814351.2	817955.3	24.5	145	0	145	100%	-51	0	3	3	0	0	-10	0	42	
																					Overall	44	YES

Night-time Criterion: **55 dB(A)**

Fixed Plant Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
ID	Name	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814365.5	817885.7	24.5	88	[1][4]	814351.2	817955.3	24.5	71	0	71	100%	-45	0	3	3	0	0	-10	0	39	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82	[1][3]	814351.2	817955.3	24.5	227	0	227	100%	-55	0	3	3	0	0	-10	0	23	
																					Overall	39	YES

Remarks for SWLs:

[1] The following formula was used for calculating the SPLs at NSRs :
SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))
SWL Sound Power Level (dB(A))
QC Correction factor for quantity (dB(A)) = + 10 log (quantity)
DC Distance Attenuation (dB(A)) = SWL - 20 log (distance) - 8
FC Façade Correction (dB(A)) = + 3
BC Barrier Correction (dB(A)): While NSR with no direct line of sight to the source/opening, a -10dB(A) correction would be applied. While NSR is partially screened, a -5dB(A) correction would be applied.
OC Correction for Percentage on-time over 30 minutes (dB(A)) = - 10 log (on-time %)
TC Correction for Tonality (dB(A))
IMC Correction for Impulsiveness (dB(A))
INTC Correction for Intermittency (dB(A))

[2] Based on the information provided by Fire Service Department, the proposed daily activities to be carried out at the fire station will take place during daytime only

[3] With reference to HKHA Report, Planned PTI at Area 133B will be covered under a podium decking with full height double bank louvre, solid boundary wall and hanger louver/fins at vehicular and pedestrian accesses, to avoid line of sights to the planned noise sensitive uses in the proximity as far as practicable.

[4] With reference to deliverable PI49 (Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – Case 2) of CEDD, the latest design of proposed SPS will enclose the pumps within building.

Fixed Noise Impact Assessment Calculation

Project No.: **2240**

Project: **Junior Police Office Married Head Quarters (JPOMQ)**

NAP ID T1-O33

ASR B

Day-time Criterion: **65 dB(A)**

Fixed Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
Source Location	Source Description	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814353.4	817882.5	24.5	88.0	[1][4]	814346.5	817908.8	24.5	27	0	27	100%	-37	0	3	3	0	0	-10	0	47	
C2-2	Tung Chung East Public Transport Interchange	814172.6	818123.6	24.5	82.0	[1][3]	814346.5	817908.8	24.5	276	0	276	100%	-57	0	3	3	0	0	-10	0	21	
G0-3	Tung Chung East Fire Station	814472.1	817875.1	24.5	97.0	[1] [2]	814346.5	817908.8	24.5	130	0	130	100%	-50	0	3	3	0	0	-5	0	48	
																					Overall	51	YES

Night-time Criterion: **55 dB(A)**

Fixed Plant Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
ID	Name	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814353.4	817882.5	24.5	88	[1][4]	814346.5	817908.8	24.5	27	0	27	100%	-37	0	3	3	0	0	-10	0	47	
C2-2	Tung Chung East Public Transport Interchange	814172.6	818123.6	24.5	82	[1][3]	814346.5	817908.8	24.5	276	0	276	100%	-57	0	3	3	0	0	-10	0	21	
																					Overall	47	YES

Remarks for SWLs:

[1] The following formula was used for calculating the SPLs at NSRs :
SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))
SWL Sound Power Level (dB(A))
QC Correction factor for quantity (dB(A)) = + 10 log (quantity)
DC Distance Attenuation (dB(A)) = SWL - 20 log (distance) - 8
FC Façade Correction (dB(A)) = + 3
BC Barrier Correction (dB(A)): While NSR with no direct line of sight to the source/opening, a -10dB(A) correction would be applied. While NSR is partially screened, a -5dB(A) correction would be applied.
OC Correction for Percentage on-time over 30 minutes (dB(A)) = - 10 log (on-time %)
TC Correction for Tonality (dB(A))
IMC Correction for Impulsiveness (dB(A))
INTC Correction for Intermittency (dB(A))

[2] Based on the information provided by Fire Service Department, the proposed daily activities to be carried out at the fire station will take place during daytime only

[3] With reference to HKHA Report, Planned PTI at Area 133B will be covered under a podium decking with full height double bank louvre, solid boundary wall and hanger louver/fins at vehicular and pedestrian accesses, to avoid line of sights to the planned noise sensitive uses in the proximity as far as practicable.

[4] With reference to deliverable PI49 (Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – Case 2) of CEDD, the latest design of proposed SPS will enclose the pumps within building.

Fixed Noise Impact Assessment Calculation

Project No.: **2240**

Project: **Junior Police Office Married Head Quarters (JPOMQ)**

NAP ID T2-O12

ASR C

Day-time Criterion: **70 dB(A)**

Fixed Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
Source Location	Source Description	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814374.3	817888.1	24.5	88.0	[1][4]	814395	817959.8	24.5	75	0	75	100%	-46	0	3	3	0	0	-10	0	39	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82.0	[1][3]	814395	817959.8	24.5	242	0	242	100%	-56	0	3	3	0	0	-10	0	22	
G0-3	Tung Chung East Fire Station	814472.1	817875.1	24.5	97.0	[1] [2]	814395	817959.8	24.5	115	0	115	100%	-49	0	3	3	0	0	0	0	54	
																					Overall	54	YES

Night-time Criterion: **60 dB(A)**

Fixed Plant Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
ID	Name	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814374.3	817888.1	24.5	88	[1][4]	814395	817959.8	24.5	75	0	75	100%	-46	0	3	3	0	0	-10	0	39	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82	[1][3]	814395	817959.8	24.5	242	0	242	100%	-56	0	3	3	0	0	-10	0	22	
																					Overall	39	YES

Remarks for SWLs:

[1] The following formula was used for calculating the SPLs at NSRs :
SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))
SWL Sound Power Level (dB(A))
QC Correction factor for quantity (dB(A)) = + 10 log (quantity)
DC Distance Attenuation (dB(A)) = SWL - 20 log (distance) - 8
FC Façade Correction (dB(A)) = + 3
BC Barrier Correction (dB(A)): While NSR with no direct line of sight to the source/opening, a -10dB(A) correction would be applied. While NSR is partially screened, a -5dB(A) correction would be applied.
OC Correction for Percentage on-time over 30 minutes (dB(A)) = - 10 log (on-time %)
TC Correction for Tonality (dB(A))
IMC Correction for Impulsiveness (dB(A))
INTC Correction for Intermittency (dB(A))

[2] Based on the information provided by Fire Service Department, the proposed daily activities to be carried out at the fire station will take place during daytime only

[3] With reference to HKHA Report, Planned PTI at Area 133B will be covered under a podium decking with full height double bank louvre, solid boundary wall and hanger louver/fins at vehicular and pedestrian accesses, to avoid line of sights to the planned noise sensitive uses in the proximity as far as practicable.

[4] With reference to deliverable PI49 (Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – Case 2) of CEDD, the latest design of proposed SPS will enclose the pumps within building.

Fixed Noise Impact Assessment Calculation

Project No.: **2240**

Project: **Junior Police Office Married Head Quarters (JPOMQ)**

NAP ID T2-O23

ASR C

Day-time Criterion: **70 dB(A)**

Fixed Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
Source Location	Source Description	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814374.3	817888.1	24.5	88.0	[1][4]	814408.6	817929.5	24.5	54	0	54	100%	-43	0	3	3	0	0	-10	0	41	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82.0	[1][3]	814408.6	817929.5	24.5	275	0	275	100%	-57	0	3	3	0	0	-10	0	21	
G0-3	Tung Chung East Fire Station	814472.1	817875.1	24.5	97.0	[1] [2]	814408.6	817929.5	24.5	84	0	84	100%	-46	0	3	3	0	0	0	0	57	
																					Overall	57	YES

Night-time Criterion: **60 dB(A)**

Fixed Plant Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
ID	Name	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814374.3	817888.1	24.5	88	[1][4]	814408.6	817929.5	24.5	54	0	54	100%	-43	0	3	3	0	0	-10	0	41	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82	[1][3]	814408.6	817929.5	24.5	275	0	275	100%	-57	0	3	3	0	0	-10	0	21	
																					Overall	41	YES

Remarks for SWLs:

[1] The following formula was used for calculating the SPLs at NSRs :
SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))
SWL Sound Power Level (dB(A))
QC Correction factor for quantity (dB(A)) = + 10 log (quantity)
DC Distance Attenuation (dB(A)) = SWL - 20 log (distance) - 8
FC Façade Correction (dB(A)) = + 3
BC Barrier Correction (dB(A)): While NSR with no direct line of sight to the source/opening, a -10dB(A) correction would be applied. While NSR is partially screened, a -5dB(A) correction would be applied.
OC Correction for Percentage on-time over 30 minutes (dB(A)) = - 10 log (on-time %)
TC Correction for Tonality (dB(A))
IMC Correction for Impulsiveness (dB(A))
INTC Correction for Intermittency (dB(A))

[2] Based on the information provided by Fire Service Department, the proposed daily activities to be carried out at the fire station will take place during daytime only

[3] With reference to HKHA Report, Planned PTI at Area 133B will be covered under a podium decking with full height double bank louvre, solid boundary wall and hanger louver/fins at vehicular and pedestrian accesses, to avoid line of sights to the planned noise sensitive uses in the proximity as far as practicable.

[4] With reference to deliverable PI49 (Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – Case 2) of CEDD, the latest design of proposed SPS will enclose the pumps within building.

Fixed Noise Impact Assessment Calculation

Project No.: **2240**

Project: **Junior Police Office Married Head Quarters (JPOMQ)**

NAP ID T2-O28

ASR C

Day-time Criterion: **70 dB(A)**

Fixed Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
Source Location	Source Description	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814374.3	817888.1	24.5	88.0	[1][4]	814398.6	817918	24.5	39	0	39	100%	-40	0	3	3	0	0	-10	0	44	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82.0	[1][3]	814398.6	817918	24.5	280	0	280	100%	-57	0	3	3	0	0	-10	0	21	
G0-3	Tung Chung East Fire Station	814472.1	817875.1	24.5	97.0	[1] [2]	814398.6	817918	24.5	85	0	85	100%	-47	0	3	3	0	0	0	0	56	
																					Overall	57	YES

Night-time Criterion: **60 dB(A)**

Fixed Plant Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
ID	Name	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814374.3	817888.1	24.5	88	[1][4]	814398.6	817918	24.5	39	0	39	100%	-40	0	3	3	0	0	-10	0	44	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82	[1][3]	814398.6	817918	24.5	280	0	280	100%	-57	0	3	3	0	0	-10	0	21	
																					Overall	44	YES

Remarks for SWLs:

[1] The following formula was used for calculating the SPLs at NSRs :
SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))
SWL Sound Power Level (dB(A))
QC Correction factor for quantity (dB(A)) = + 10 log (quantity)
DC Distance Attenuation (dB(A)) = SWL - 20 log (distance) - 8
FC Façade Correction (dB(A)) = + 3
BC Barrier Correction (dB(A)): While NSR with no direct line of sight to the source/opening, a -10dB(A) correction would be applied. While NSR is partially screened, a -5dB(A) correction would be applied.
OC Correction for Percentage on-time over 30 minutes (dB(A)) = - 10 log (on-time %)
TC Correction for Tonality (dB(A))
IMC Correction for Impulsiveness (dB(A))
INTC Correction for Intermittency (dB(A))

[2] Based on the information provided by Fire Service Department, the proposed daily activities to be carried out at the fire station will take place during daytime only

[3] With reference to HKHA Report, Planned PTI at Area 133B will be covered under a podium decking with full height double bank louvre, solid boundary wall and hanger louver/fins at vehicular and pedestrian accesses, to avoid line of sights to the planned noise sensitive uses in the proximity as far as practicable.

[4] With reference to deliverable PI49 (Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – Case 2) of CEDD, the latest design of proposed SPS will enclose the pumps within building.

Appendix 6.6

Extract of Railway Noise Contour from TCLE EIA Report

(AEIAR-235/2022)

Remark: facade correction of 2.5 dB(A) is not included in the contour showed. To represent the predicted noise levels at the NAPs in the proposed development. additional 2.5 dB(A) is to be added.

Acceptable Noise Levels, $L_{eq(30mins)}$, dB(A) under IND-TM
ASR of "C"= 70 dB(A)
ASR of "B" = 65 dB(A)

55+2.5 = 57.5dB(A)

NORTH LANTAU HIGHWAY

LEGEND
- TCL REALIGNMENT - DOWN TRACK
- TCL REALIGNMENT - UP TRACK
- TCL EXISTING ALIGNMENT - DOWN TRACK
- TCL EXISTING ALIGNMENT - UP TRACK
- AEL ALIGNMENT - DOWN TRACK
- AEL ALIGNMENT - UP TRACK
- 300m ASSESSMENT AREA
- COUNTRY PARK
- -60.0- NOISE CONTOUR

0 20 40 60 80 100 METRES

NOTE: FACADE CORRECTION IS EXCLUDED IN THE NOISE CONTOUR.

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CADD REF. Appendix 4.6.8W.dgn

TITLE
MITIGATED RAIL NOISE Leq - SCENARIO D (DAYTIME) AT 7.2mPD

SCALE 1 : 4000 (A3)
DRAWING NO. APPENDIX 4.6.8W
REV. C

Remark: facade correction of 2.5 dB(A) is not included in the contour showed.
To represent the predicted noise levels at the NAPs in the proposed development. additional 2.5 dB(A) is to be added.

Acceptable Noise Levels, $L_{eq(30mins)}$, dB(A) under IND-TM
ASR of "C"= 70 dB(A)
ASR of "B" = 65 dB(A)

55+2.5 = 57.5dB(A)

NORTH LANTAU HIGHWAY

NOTE: FACADE CORRECTION IS EXCLUDED IN THE NOISE CONTOUR.

LEGEND
- TCL REALIGNMENT - DOWN TRACK
- TCL REALIGNMENT - UP TRACK
- TCL EXISTING ALIGNMENT - DOWN TRACK
- TCL EXISTING ALIGNMENT - UP TRACK
- AEL ALIGNMENT - DOWN TRACK
- AEL ALIGNMENT - UP TRACK
- 300m ASSESSMENT AREA
- COUNTRY PARK
- -60.0- NOISE CONTOUR

0 20 40 60 80 100 METRES

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CADD REF. Appendix 4.6.80.dgn

TITLE
MITIGATED RAIL NOISE Leq - SCENARIO D (DAYTIME) AT 15mPD

SCALE 1 : 4000 (A3)
DRAWING NO. APPENDIX 4.6.80
REV. C

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Remark: facade correction of 2.5 dB(A) is not included in the contour showed.
To represent the predicted noise levels at the NAPs in the proposed development. additional 2.5 dB(A) is to be added.

Acceptable Noise Levels, $L_{eq(30mins)}$, dB(A) under IND-TM
ASR of "C"= 70 dB(A)
ASR of "B" = 65 dB(A)

55+2.5 = 57.5dB(A)

NORTH LANTAU HIGHWAY

LEGEND
- TCL REALIGNMENT - DOWN TRACK
- TCL REALIGNMENT - UP TRACK
- TCL EXISTING ALIGNMENT - DOWN TRACK
- TCL EXISTING ALIGNMENT - UP TRACK
- AEL ALIGNMENT - DOWN TRACK
- AEL ALIGNMENT - UP TRACK
- 300m ASSESSMENT AREA
- COUNTRY PARK
- -60.0- NOISE CONTOUR

0 20 40 60 80 100
METRES

NOTE: FACADE CORRECTION IS EXCLUDED IN THE NOISE CONTOUR.

REV	DESCRIPTION	BY	DATE	APPROVED
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TITLE
MITIGATED RAIL NOISE Leq - SCENARIO D (DAYTIME) AT 30mPD

SCALE 1 : 4000 (A3)
DRAWING NO. APPENDIX 4.6.8G
REV. C

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Remark: facade correction of 2.5 dB(A) is not included in the contour showed.
To represent the predicted noise levels at the NAPs in the proposed development. additional 2.5 dB(A) is to be added.

Acceptable Noise Levels, $L_{eq(30mins)}$, dB(A) under IND-TM
ASR of "C"= 60 dB(A)
ASR of "B" = 55 dB(A)

55+2.5 = 57.5dB(A)

NORTH LANTAU HIGHWAY

NOTE: FACADE CORRECTION IS EXCLUDED IN THE NOISE CONTOUR.

LEGEND
- TCL REALIGNMENT - DOWN TRACK
- TCL REALIGNMENT - UP TRACK
- TCL EXISTING ALIGNMENT - DOWN TRACK
- TCL EXISTING ALIGNMENT - UP TRACK
- AEL ALIGNMENT - DOWN TRACK
- AEL ALIGNMENT - UP TRACK
- 300m ASSESSMENT AREA
- COUNTRY PARK
- -60.0- NOISE CONTOUR

0 20 40 60 80 100 METRES

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CADD REF. Appendix 4.6.8X.dgn

TITLE
MITIGATED RAIL NOISE Leq - SCENARIO D (NIGHTTIME) AT 7.2mPD

SCALE 1 : 4000 (A3)

DRAWING NO. APPENDIX 4.6.8X

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Remark: facade correction of 2.5 dB(A) is not included in the contour showed.
To represent the predicted noise levels at the NAPs in the proposed development. additional 2.5 dB(A) is to be added.

Acceptable Noise Levels, $L_{eq(30mins)}$, dB(A) under IND-TM
ASR of "C"= 60 dB(A)
ASR of "B" = 55 dB(A)

55+2.5 = 57.5dB(A)

NORTH LANTAU HIGHWAY

LEGEND
- TCL REALIGNMENT - DOWN TRACK
- TCL REALIGNMENT - UP TRACK
- TCL EXISTING ALIGNMENT - DOWN TRACK
- TCL EXISTING ALIGNMENT - UP TRACK
- AEL ALIGNMENT - DOWN TRACK
- AEL ALIGNMENT - UP TRACK
- 300m ASSESSMENT AREA
- COUNTRY PARK
- -60.0- NOISE CONTOUR

0 20 40 60 80 100 METRES

NOTE: FACADE CORRECTION IS EXCLUDED IN THE NOISE CONTOUR.

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TITLE
MITIGATED RAIL NOISE Leq - SCENARIO D (NIGHTTIME) AT 15mPD

SCALE 1 : 4000 (A3)
DRAWING NO. APPENDIX 4.6.8P
REV. C

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Remark: facade correction of 2.5 dB(A) is not included in the contour showed.
To represent the predicted noise levels at the NAPs in the proposed development. additional 2.5 dB(A) is to be added.

Acceptable Noise Levels, $L_{eq(30mins)}$, dB(A) under IND-TM
ASR of "C"= 60 dB(A)
ASR of "B" = 55 dB(A)

55+2.5 = 57.5dB(A)

NORTH LANTAU HIGHWAY

LEGEND
- TCL REALIGNMENT - DOWN TRACK
- TCL REALIGNMENT - UP TRACK
- TCL EXISTING ALIGNMENT - DOWN TRACK
- TCL EXISTING ALIGNMENT - UP TRACK
- AEL ALIGNMENT - DOWN TRACK
- AEL ALIGNMENT - UP TRACK
- 300m ASSESSMENT AREA
- COUNTRY PARK
- -60.0- NOISE CONTOUR

0 20 40 60 80 100 METRES

NOTE: FACADE CORRECTION IS EXCLUDED IN THE NOISE CONTOUR.

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Appendix 4.6.8H.dgn

TITLE
MITIGATED RAIL NOISE Leq - SCENARIO D (NIGHTTIME) AT 30mPD

SCALE 1 : 4000 (A3)

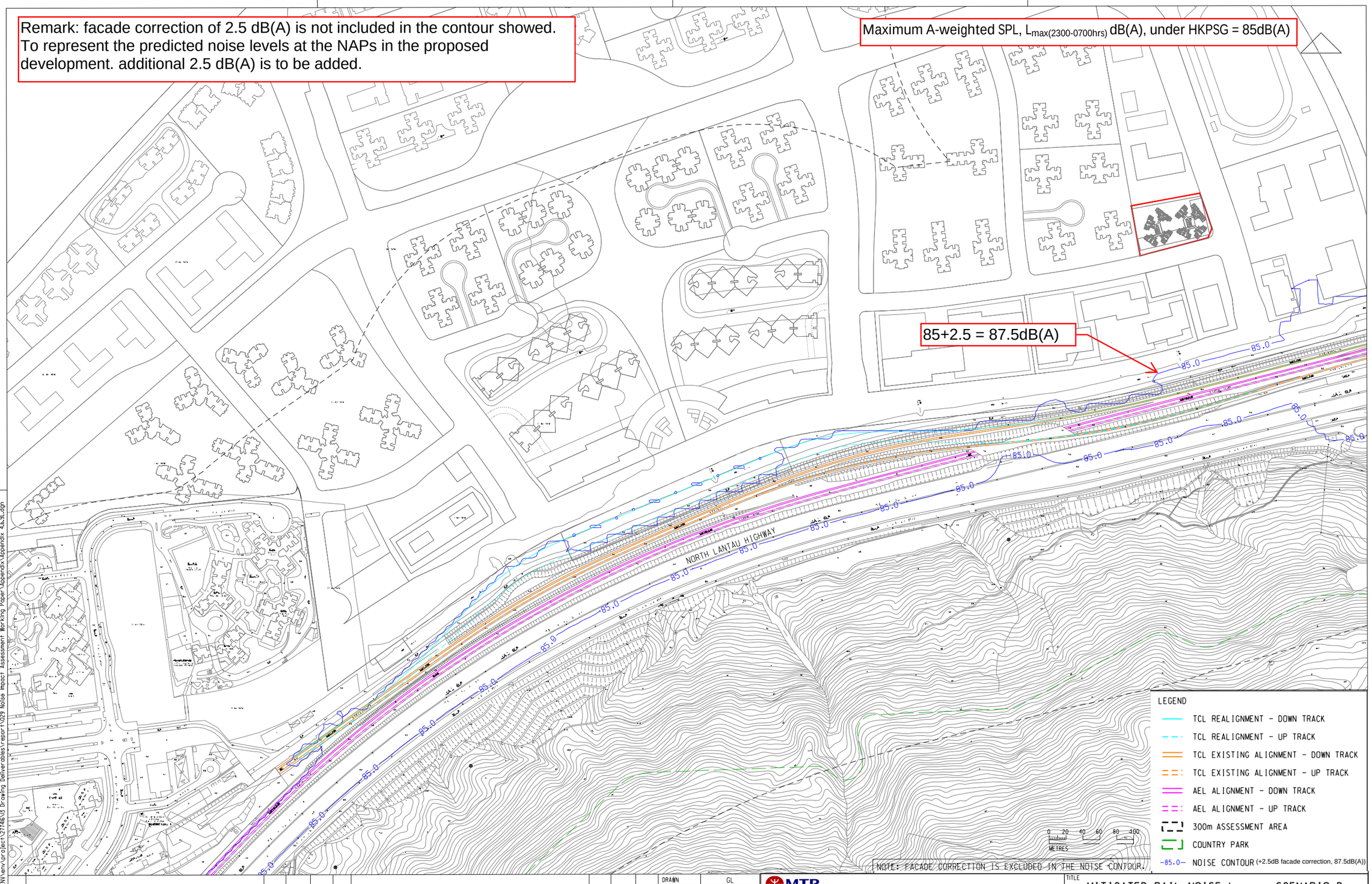
DRAWING NO. APPENDIX 4.6.8H

REV. C

Remark: facade correction of 2.5 dB(A) is not included in the contour showed. To represent the predicted noise levels at the NAPs in the proposed development. additional 2.5 dB(A) is to be added.

Maximum A-weighted SPL, $L_{max(2300\text{-}0700hrs)}$ dB(A), under HKPSG = 85dB(A)

85+2.5 = 87.5dB(A)



LEGEND

- TCL REALIGNMENT - DOWN TRACK
- TCL REALIGNMENT - UP TRACK
- TCL EXISTING ALIGNMENT - DOWN TRACK
- TCL EXISTING ALIGNMENT - UP TRACK
- AEL ALIGNMENT - DOWN TRACK
- AEL ALIGNMENT - UP TRACK
- 300m ASSESSMENT AREA
- COUNTRY PARK
- -85.0- NOISE CONTOUR (+2.5dB facade correction, 87.5dB(A))

NOTE: FACADE CORRECTION IS EXCLUDED IN THE NOISE CONTOUR.

REV	DESCRIPTION	BY	DATE	APPROVED
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B	SECOND ISSUE	GL	250821	FC
A	FIRST ISSUE	GL	070621	FC

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DATE	13/10/2021

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MTR

C1202 – EIA for Tung Chung Line Extension

ORIGINATOR

ARUP Ove Arup & Partners Hong Kong Limited

CADD REF. Appendix 4.6.9L.dgn

TITLE

MITIGATED RAIL NOISE Lmax - SCENARIO D AT 7.2mPD

SCALE	DRAWING NO.	REV.
1 : 4000 (A3)	APPENDIX 4.6.9L	C

PLOT DRV: g:\common\microstation standard\plotdrv\hp_druphk_a3-pdf-c.envplt
MODELNAME: Default PRINTED BY: HKGTRA04 10/5/2021 11:39:49 AM
FILENAME: \\hkgnts27\CIEN\env\project\27746\13 Drawing Deliverables\report\029 Noise Impact Assessment Working Paper\Appendix\Appendix 4.6.9L.dgn

Remark: facade correction of 2.5 dB(A) is not included in the contour showed.
To represent the predicted noise levels at the NAPs in the proposed development. additional 2.5 dB(A) is to be added.

Maximum A-weighted SPL, $L_{max(2300\text{-}0700hrs)}$ dB(A), under HKPSG = 85dB(A)

85+2.5 = 87.5dB(A)

NORTH LANTAU HIGHWAY

85.0

LEGEND

- TCL REALIGNMENT - DOWN TRACK
- TCL REALIGNMENT - UP TRACK
- TCL EXISTING ALIGNMENT - DOWN TRACK
- TCL EXISTING ALIGNMENT - UP TRACK
- AEL ALIGNMENT - DOWN TRACK
- AEL ALIGNMENT - UP TRACK
- 300m ASSESSMENT AREA
- COUNTRY PARK
- -85.0- NOISE CONTOUR(+2.5dB facade correction, 87.5dB(A))

0 20 40 60 80 100
METRES

NOTE: FACADE CORRECTION IS EXCLUDED IN THE NOISE CONTOUR.

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REV	DESCRIPTION	BY	DATE	APPROVED
C	THIRD ISSUE	GL	131021	FC
B	SECOND ISSUE	GL	250821	FC
A	FIRST ISSUE	GL	070621	FC

DRAWN	GL
DESIGNED	GL
CHECKED	EL
APPROVED	FC
DATE	13/10/2021

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MTR

C1202 – EIA for Tung Chung Line Extension

ORIGINATOR
ARUP Ove Arup & Partners Hong Kong Limited

CADD REF. Appendix 4.6.9H.dgn

TITLE
MITIGATED RAIL NOISE Lmax - SCENARIO D AT 15mPD

SCALE 1 : 4000 (A3)

DRAWING NO. APPENDIX 4.6.9H

REV. C

Remark: facade correction of 2.5 dB(A) is not included in the contour showed. To represent the predicted noise levels at the NAPs in the proposed development. additional 2.5 dB(A) is to be added.

Maximum A-weighted SPL, $L_{max(2300\text{-}0700hrs)}$ dB(A), under HKPSG = 85dB(A)

85+2.5 = 87.5dB(A)

NORTH LANTAU HIGHWAY

LEGEND

- TCL REALIGNMENT - DOWN TRACK
- TCL REALIGNMENT - UP TRACK
- TCL EXISTING ALIGNMENT - DOWN TRACK
- TCL EXISTING ALIGNMENT - UP TRACK
- AEL ALIGNMENT - DOWN TRACK
- AEL ALIGNMENT - UP TRACK
- 300m ASSESSMENT AREA
- COUNTRY PARK
- -85.0- NOISE CONTOUR (+2.5dB facade correction, 87.5dB(A))

0 20 40 60 80 100 METRES

NOTE: FACADE CORRECTION IS EXCLUDED IN THE NOISE CONTOUR.

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REV	DESCRIPTION	BY	DATE	APPROVED
C	THIRD ISSUE	GL	131021	FC
B	SECOND ISSUE	GL	250821	FC
A	FIRST ISSUE	GL	070621	FC

DRAWN	GL
DESIGNED	GL
CHECKED	EL
APPROVED	FC
DATE	13/10/2021

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C1202 – EIA for Tung Chung Line Extension

ORIGINATOR

ARUP Ove Arup & Partners Hong Kong Limited

CADD REF. Appendix 4.6.9D.dgn

TITLE

MITIGATED RAIL NOISE Lmax – SCENARIO D AT 30mPD

SCALE	DRAWING NO.	REV.
1 : 4000 (A3)	APPENDIX 4.6.9D	C

Appendix 6.7

Extract of Helicopter Flight Path and Holding Area from TCNTE EIA Report (AEIAR-196/2016)

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PROPOSED EXPANSION OF
HONG KONG INTERNATIONAL AIRPORT
(BY OTHERS)

HONG KONG
INTERNATIONAL AIRPORT

赤鱲角
CHEK LAP KOK

HK BOUNDARY CROSSING
FACILITIES OF HZMB
(BY OTHERS)

TMCLK LINK
(BY OTHERS)

PROPOSED LANTAU LOGISTICS PARK
(BY OTHERS)
(REF. REVISED CONCEPT PLAN
FOR LANTAU)

Subject Site

F2-2-02
F1-1-03
C2-2-02
A1-2-01

TCV-6-06
TCV-6-01

H5
H6
H7
H10

NORTH LANTAU HIGHWAY

LANTAU NORTH (EXTENSION) COUNTRY PARK

LANTAU NORTH COUNTRY PARK

TAI TAU
POK KAI SHAN
POK TO YAN
WO LIU TUN
TUNG CHUNG ROAD

0 500 1000m

LEGEND

- POSSIBLE DEVELOPMENT AREA
- WORKS AREA FOR ROAD P1 (TUNG CHUNG - TAI HO SECTION)
- ASSESSMENT AREA
- COUNTRY PARK
- HELICOPTER FLIGHT PATH
- H — HELICOPTER HOLDING AREA
- PLANNED NOISE ASSESSMENT POINT

Rev	Description	By	Date
D	FOURTH ISSUE	GL	09/15
C	THIRD ISSUE	GL	08/15
B	SECOND ISSUE	GL	06/15
A	FIRST ISSUE	GL	04/15

Consultant
ARUP

Project title
Tung Chung
New Town Extension

Drawing title
Location of Representative Noise Assessment Points (Helicopter Noise)

Drawing no.	Rev.
Figure 4.12	D

Drawn	Date	Checked	Approved
GL	09/15	LK	FC

Scale: 1:30000 @A3
Status: PRELIMINARY

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

Printed by : 11/8/2015
Filename : G:\env\project\219844-70\13 Drawing Deliverables\24 Environmental Impact Assessment\Figure 4.12 - Location of Representative Noise Assessment Points (Helicopter Noise).dgn

Appendix 6.8

Extract of NEF Contours from TCNTE EIA Report

(AEIAR-196/2016)

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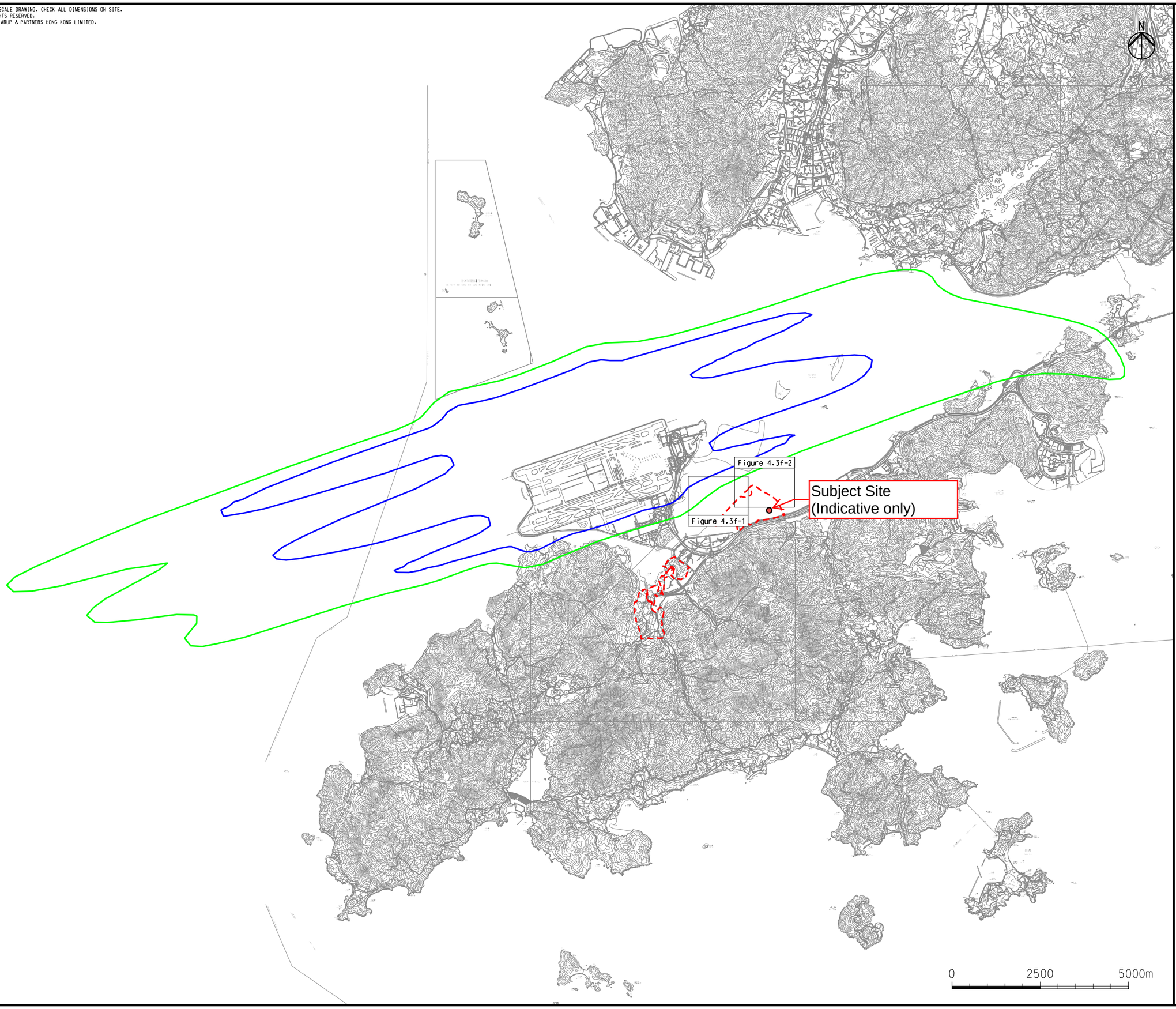

LEGEND

- POSSIBLE DEVELOPMENT AREA
- NEF25 CONTOUR
- NEF30 CONTOUR

EXTRACTED FROM "EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM" EIA REPORT

Rev	Description	By	Date
D	FOURTH ISSUE	GL	10/15
C	THIRD ISSUE	GL	08/15
B	SECOND ISSUE	GL	06/15
A	FIRST ISSUE	GL	04/15

Consultant

ARUP

Project title

Tung Chung
New Town Extension

Drawing title

NEF Contours Against
TCE Phasing
(Year 2030)
(Sheet 1 of 3)

Drawing no.	Rev.
Figure 4.3e	D

Drawn	Date	Checked	Approved
GL	10/15	LK	FC

Scale	Status
1:100000 @A3	PRELIMINARY

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Civil Engineering and Development Department

Printed by : 11/8/2015
Filename : G:\env\project\219844-70\13 Drawing Deliverables\24 Environmental Impact Assessment\Figure 4.3e - NEF Contours Against TCE Phasing (Year 2030) (Sheet 1 of 3).dgn

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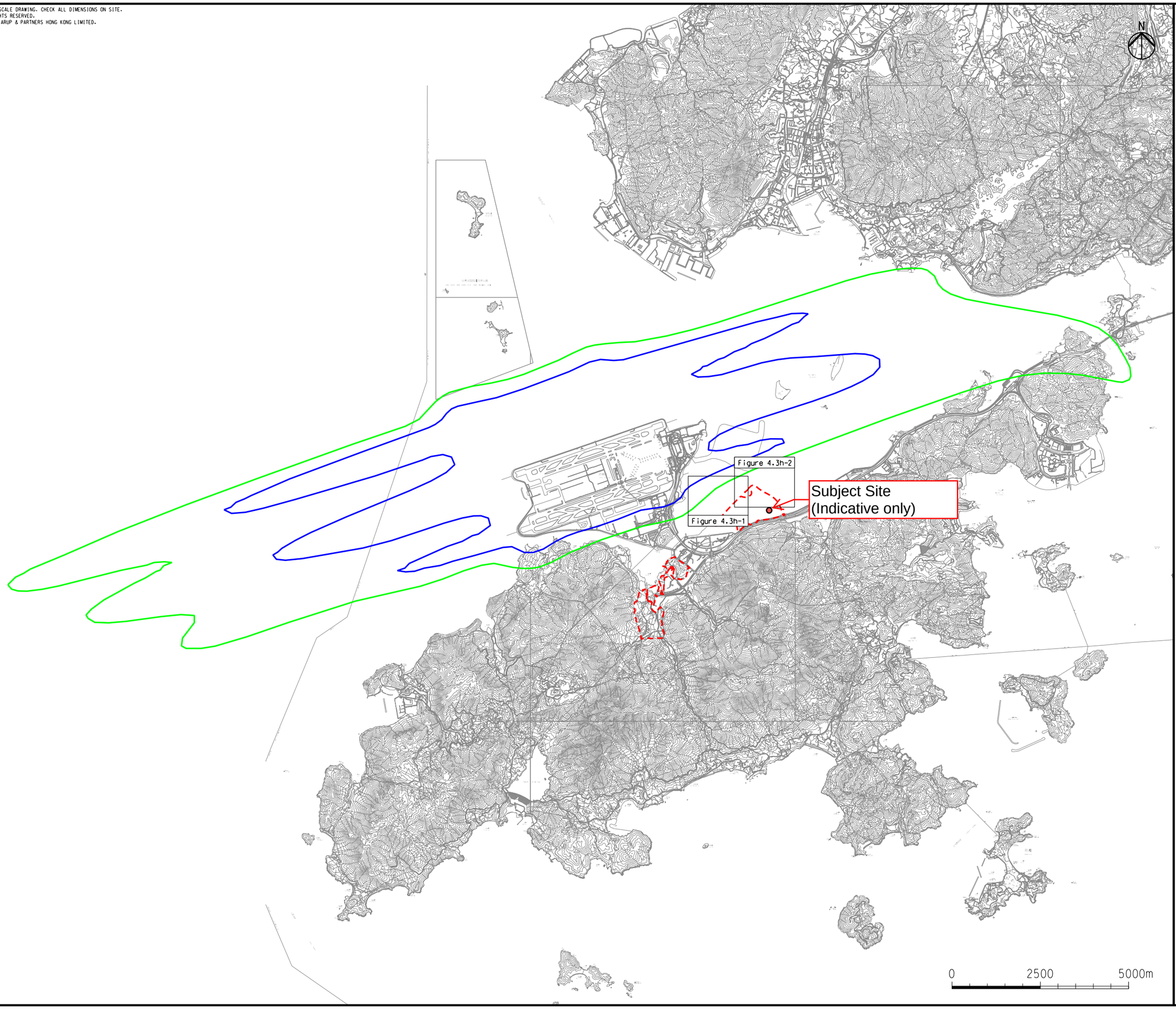

LEGEND

POSSIBLE DEVELOPMENT AREA

NEF25 CONTOUR

NEF30 CONTOUR

EXTRACTED FROM "EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM" EIA REPORT

Rev	Description	By	Date
D	FOURTH ISSUE	GL	10/15
C	THIRD ISSUE	GL	08/15
B	SECOND ISSUE	GL	06/15
A	FIRST ISSUE	GL	04/15

Consultant

ARUP

Project title

Tung Chung
New Town Extension

Drawing title

NEF Contours Against
TCE Phasing
(Year 2032)
(Sheet 1 of 3)

Drawing no.			Rev.
Figure 4.3g			D
Drawn: GL	Date: 10/15	Checked: LK	Approved: FC
Scale: 1:100000 @A3		Status: PRELIMINARY	

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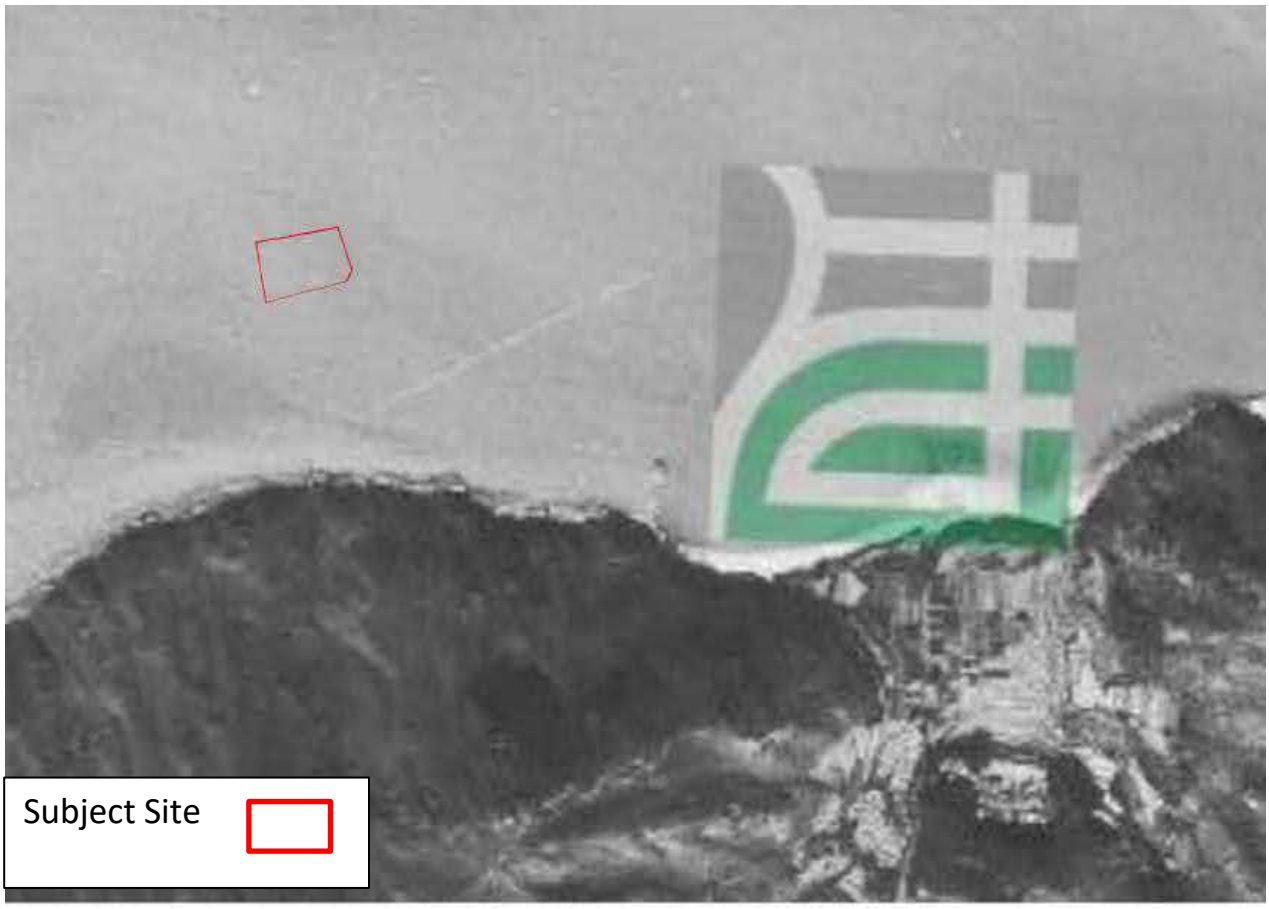
土木工程拓展署
Civil Engineering and Development Department

Printed by : 11/8/2015
Filename : G:\env\project\219844-70\13 Drawing Deliverables\24 Environmental Impact Assessment\Figure 4.3g - NEF Contours Against TCE Phasing (Year 2032) (Sheet 1 of 3).dgn

Appendix 8.1

Historical Aerial Photographs



Year: 1973

Year : 1982

Year : 2004

Year : 2012

Year : 2020

Year : 2024

Appendix 8.2

Copy of Letter Replies from Various Government Departments

Our Ref. [2240/24-0001]

Environmental Protection Department
Environmental Compliance Division
Regional Office (South)
Islands
2/F., Chinachem Exchange Square,
1 Hoi Wan Street, Quarry Bay,
Hong Kong.

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

26 November 2024

By Email

Dear Sir/ Madam,

Proposed Junior Police Married Quarters (JPOMQ)
at Area 134 in Tung Chung New Town Extension East
Request for Information for Land Contamination Assessment

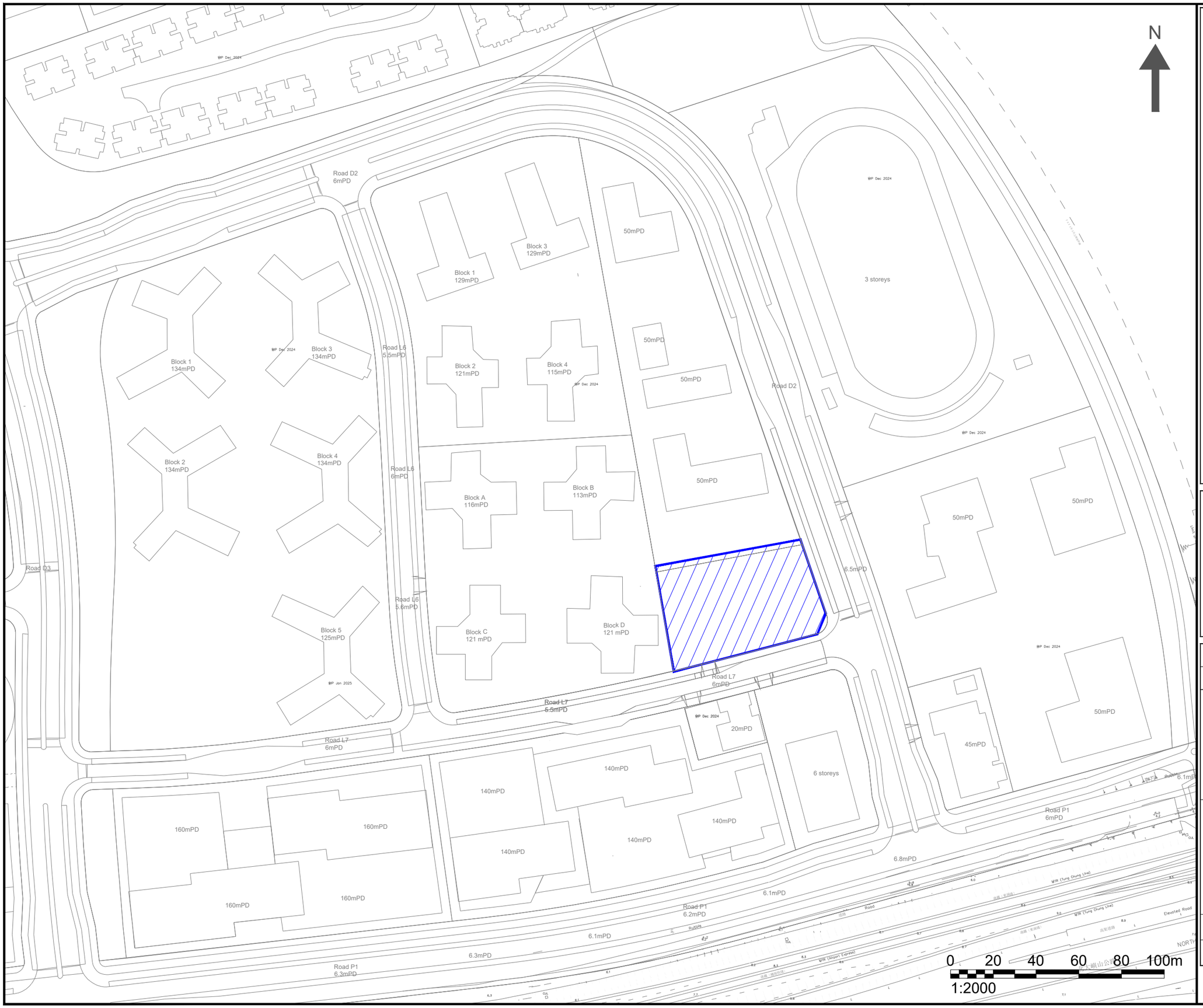
We are conducting an Environmental Assessment for Proposed Junior Police Married Quarters (JPOMQ) at Area in Tung Chung New Town Extension East (Subject Site). As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Subject Site are required as part of the vetting process.

Of particular interests is whether there are any registered chemical waste producers under your record in the Subject Site, any waste disposal record, any accidental spillage record, any submission relating to land contamination assessment and any information you could provide which might be useful for our study. We enclosed herewith a site map showing the location of the Subject Site for your reference.

Due to tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by **10 December 2024**. Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 or Ms. Christine Goh (christinegoh@aecasia.io) at 5290 3688.

Yours sincerely,

Cathy Man
Associate Director
CM/ll
Encl. Site Location Plan



NOTES :

Subject Site

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PROJECT SITE AND ITS ENVIRON

Drawing No : FIGURE 2.1	Revision : 0
Scale : AS SHOWN	Date : MAY 2025

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A3 420 x 297

C:\USERS\CHRISTINEGOHSIEWYINN\SYNOLOGYDRIVE\2240 TUNG CHUNG JPOMQ\05 REPORT\01 AEC REPORT\SIA\ISSUE 1\WORKING CG\[2240] TUNG CHUNG DSIA FIGURES.DWG

本署檔案
OUR REF : ( ) in Ax (3) to EP771/E1/116 Pt.2
來函檔案
YOUR REF: 2240/24-0001
電　話
TEL. NO. : 2187 3984
圖文傳真
FAX NO : 2960 1760
網　址
HOMEPAGE: http://www.epd.gov.hk

Environmental Protection Department
Environmental Compliance Division
Regional Office (South)
2/F, Chinachem Exchange Square,
1 Hoi Wan Street,
Quarry Bay, Hong Kong.

環境保護署
環保法規管理科
區域辦事處（南）
香港鰂魚涌
海灣街一號
華懋交易廣場二樓

By Email Only (Total Page:1)

5 December 2024

Allied Environmental Consultants Limited
27/F, Overseas Trust Bank Building,
160 Gloucester Road, Wan Chai, Hong Kong.

(Attn: Ms. Cathy Man, Associate Director / Ms. Christine Goh, Assistant Consultant)

Dear Ms. Man,

Proposed Junior Police Proposed Junior Police Married Quarters (JPOMQ) at Area 134 in Tung Chung New Town Extension East
Request for Information for Land Contamination Assessment

We refer to above referenced letter dated 26 November 2024.

Please be advised that there has been no registered chemical waste producer for the captioned area.

You are advised to seek other requested records from relevant departments for your consultancy study.

(Fiona CHEUNG)
Senior Environmental Protection Officer
for Director of Environmental Protection

Internal: AE(MP)2, E(TS)11

Our Ref. [2240/24-0002]

Fire Services Department
Fire Services Headquarters Building,
1 Hong Chong Road,
Tsim Sha Tsui East,
Kowloon

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

26 November 2024

By Email

Dear Sir/Madam,

Proposed Junior Police Married Quarters (JPOMQ)
at Area 134 in Tung Chung New Town Extension East
Request for Information for Land Contamination Assessment

We are conducting an Environmental Assessment for Proposed Junior Police Married Quarters (JPOMQ) at Area in Tung Chung New Town Extension East (Subject Site). As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Subject Site are required as part of the vetting process.

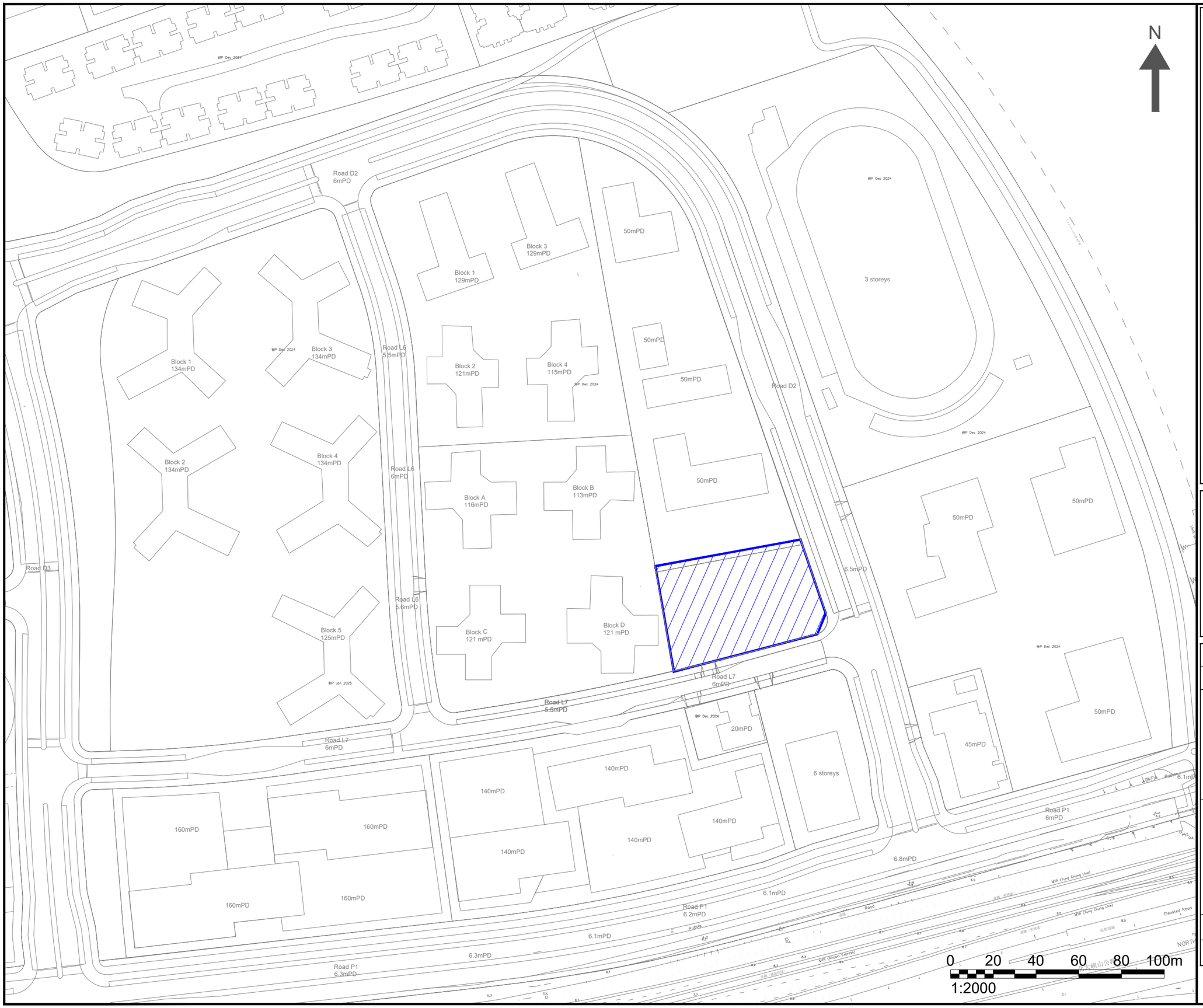
Of particular interests are spill and incident reports (including records of fire at the Subject Site) that we believe your Department might have record of. Furthermore, we would also like to know whether anywhere of the subject site had applied or possessed license for dangerous goods storage. We enclosed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

Due to tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by **10 December 2024**.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 or Ms. Christine Goh (christinegoh@aecasia.io) at 5290 3688.

Yours sincerely,

Cathy Man
Associate Director
CM/ll
Encl. Site Location Plan



NOTES :

Subject Site

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PROJECT SITE AND ITS ENVIRON

Drawing No : FIGURE 2.1	Revision : 0
Scale : AS SHOWN	Date : MAY 2025

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A3 420 x 297

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(125)

消 防 處
香港九龍尖沙咀東部康莊道 1 號
消防處總部大廈

FIRE SERVICES DEPARTMENT
FIRE SERVICES HEADQUARTERS
BUILDING,
No.1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong.

本處檔號 OUR REF. : (125) in FSD GR 6-5/4 R Pt. 56
來函檔號 YOUR REF. : [2240/24-0002]
電子郵件 E-mail : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX NO. : 2988 1196
電 話 TEL NO. : 2733 7896

24 December 2024

Allied Environmental Consultants Limited
27/F, Overseas Trust Bank Building,
160 Gloucester Road,
Wan Chai, Hong Kong.
(Attn: Ms. Cathy MAN, Associate Director)

Dear Ms. MAN,

Proposed Junior Police Married Quarters (JPOMQ)
at Area 134 in Tung Chung New Town Extension East
Request for Information of Dangerous Goods & Incident Records

I refer to your letter of 26.11.2024 regarding the captioned request and reply below in response to your questions:-

Please be advised that neither records of dangerous goods license, fire incidents nor incidents of spillage / leakage of dangerous goods were found in connection with the given conditions of your request at the subject location.

If you have further questions, please feel free to contact the undersigned.

Yours sincerely,

(AU Ting-hin)
for Director of Fire Services

Our Ref. [2240/24-0003]

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

Planning Department
District Planning Branch
New Territories District Planning Division
Sai Kung & Islands District Planning Office
15/F, Sha Tin Government Offices,
1 Sheung Wo Che Road, Sha Tin, N.T.

26 November 2024

By Email

Dear Sir/Madam,

Proposed Junior Police Married Quarters (JPOMQ)
at Area 134 in Tung Chung New Town Extension East
Request for Information for Land Contamination Assessment

We are conducting an Environmental Assessment for Proposed Junior Police Married Quarters (JPOMQ) at Area in Tung Chung New Town Extension East (Subject Site). As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Subject Site are required as part of the vetting process.

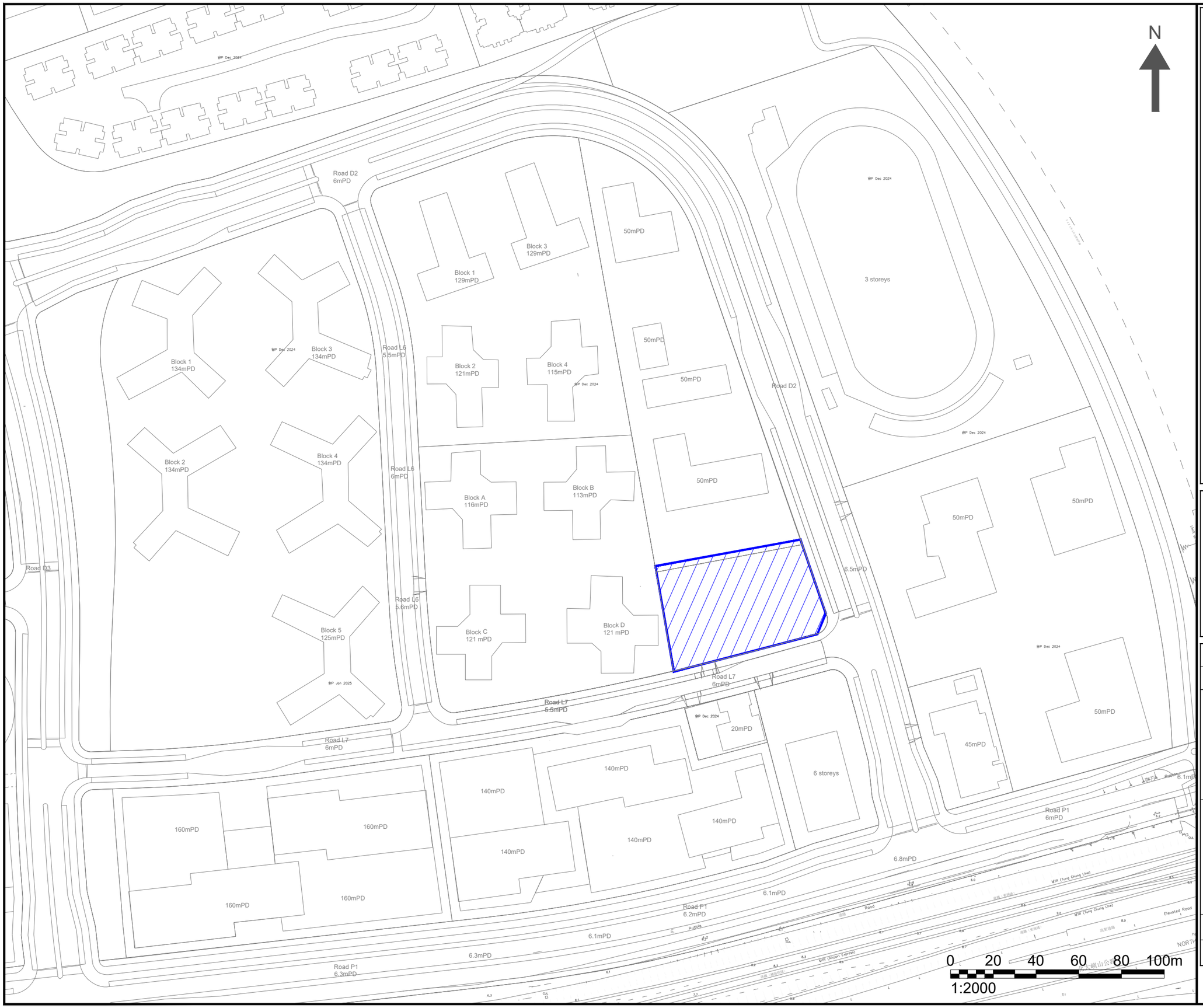
Of particular interests are current and historical site information, any change on the land use and any information you could provide that might be useful for our study. We enclosed herewith a site map showing the location of the subject site for your reference.

Due to tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by **10 December 2024**.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 or Ms. Christine Goh (christinegoh@aecasia.io) at 5290 3688.

Yours sincerely,

Cathy Man
Associate Director
CM/ll
Encl. Site Location Plan



NOTES :

Subject Site

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PROJECT SITE AND ITS ENVIRON

Drawing No : FIGURE 2.1	Revision : 0
Scale : AS SHOWN	Date : MAY 2025

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A3 420 x 297

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Outlook

Re: [2240] Information Request for Land Contamination Assessment - Tung Chung JPOMQ

From Kirstie Yuk Ling LAW/PLAND <kyllaw@pland.gov.hk>
Date Thu 15/05/2025 09:34
To Christine Goh Siew Yinn <christinegoh@aecasia.io>
Cc Cathy Man <cm@aechk.com>; NGAN Chun Sang <nganchunsang@aecasia.io>

Dear Christine,

I refer to your preceding emails.

The subject site falls within an area zoned "Government, Institution or Community" ("G/IC") on the approved Tung Chung Extension Area Outline Zoning Plan (OZP) No. S/I-TCE/2. The site is located in the Tung Chung East Reclamation area and is on newly formed land. There has not been change of zoning since the first OZP (No. S/I-TCE/1) gazetted under s.5 of the Town Planning Ordinance on 8 January 2016.

Regards,
Kirstie LAW
SKIs DPO, PlanD
(Tel: 2158 6163)

From: Christine Goh Siew Yinn <christinegoh@aecasia.io>
Sent: Thursday, May 15, 2025 9:15 AM
To: Kirstie Yuk Ling LAW/PLAND <kyllaw@pland.gov.hk>
Cc: Cathy Man <cm@aechk.com>; NGAN Chun Sang <nganchunsang@aecasia.io>
Subject: Re: [2240] Information Request for Land Contamination Assessment - Tung Chung JPOMQ

Dear Kirstie,

I hope this message finds you well.

With reference to our previous email dated 28 November 2024 , we would like to follow up on regarding the information request for the proposed development at Area 134, Tung Chung New Town Extension East. We would greatly appreciate it if you could kindly provide us with a reply on the requested information at your earliest convenience.

Your assistance is much appreciated.

Thank you very much for your support.

Best regards,

Christine Goh – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 5290 3688 | **E:** christinegoh@aecasia.io

Allied Environmental Consultants Limited *Member of AEC Group (HKEX Stock Code: 8320.HK)*
27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
Follow us www.asecg.com

From: Christine Goh Siew Yinn
Sent: 28 November 2024 17:51
To: kyllaw@pland.gov.hk <kyllaw@pland.gov.hk>
Cc: Cathy Man <cm@aechk.com>; NGAN Chun Sang <nganchunsang@aecasia.io>
Subject: [2240] Information Request for Land Contamination Assessment - Tung Chung JPOMQ

Dear Ms. LAW,

Proposed Junior Police Married Quarters (JPOMQ) at Area 134 in Tung Chung New Town Extension East
Request for Information for Land Contamination Assessment

We are conducting an Environmental Assessment for Proposed Junior Police Married Quarters (JPOMQ) at Area in Tung Chung New Town Extension East (Subject Site). As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Subject Site are required as part of the vetting process.

Of particular interests are current and historical site information, any change on the land use and any information you could provide that might be useful for our study. We enclosed herewith a site map showing the location of the subject site for your reference.

Due to tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by **10 December 2024**.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact us.

Thanks and regards,

Christine Goh – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 5290 3688 | **E:** christinegoh@aecasia.io

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27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
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Our Ref. [2240/24-0004]

Lands Department
District Lands Office,
Islands
19th floors,
Harbour Building,
38 Pier Road,
Central, Hong Kong

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

26 November 2024

By Email

Dear Sir/Madam,

Proposed Junior Police Married Quarters (JPOMQ)
at Area 134 in Tung Chung New Town Extension East
Request for Information for Land Contamination Assessment

We are conducting an Environmental Assessment for Proposed Junior Police Married Quarters (JPOMQ) at Area in Tung Chung New Town Extension East (Subject Site). As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Subject Site are required as part of the vetting process.

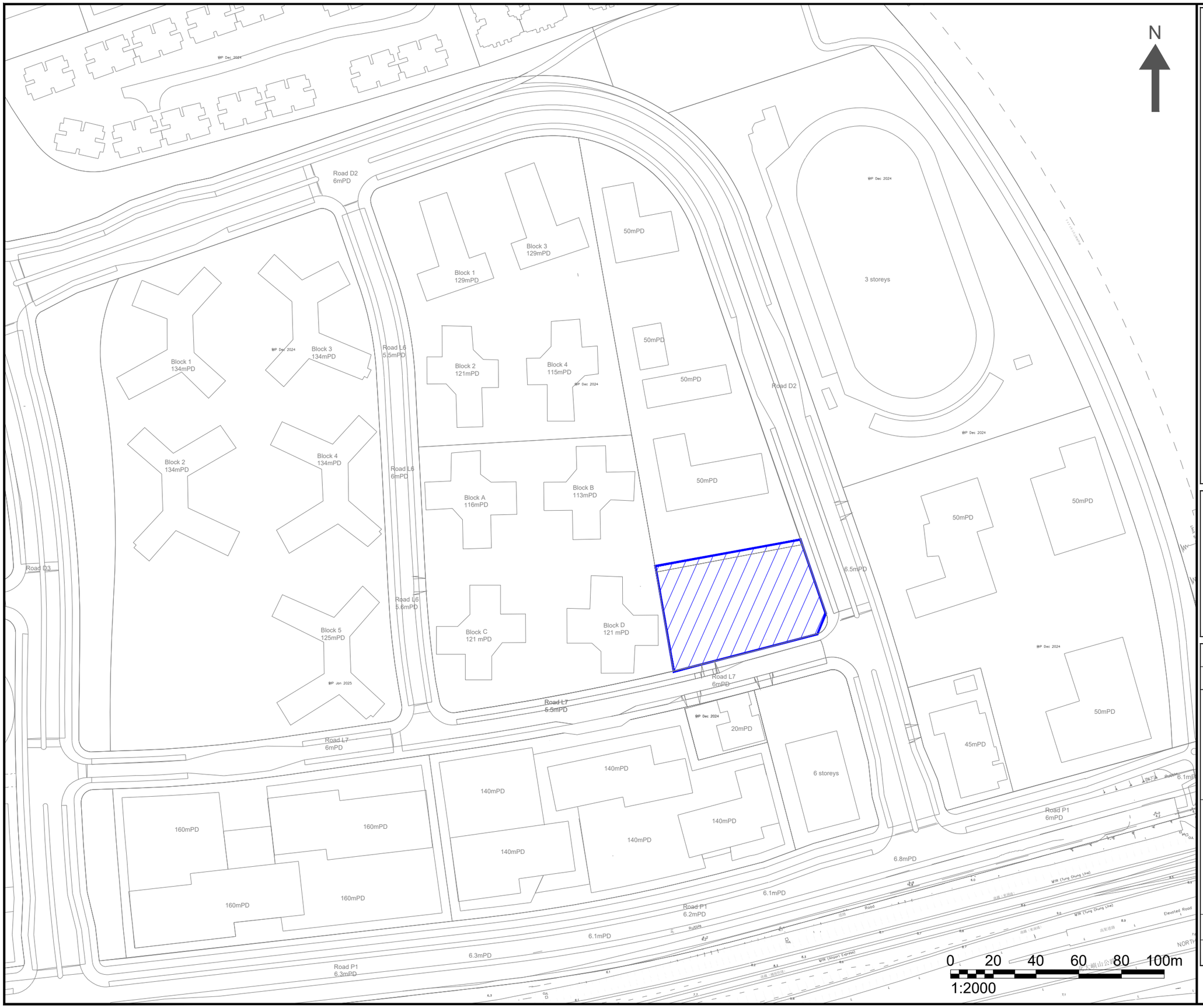
Of particular interests are information on spillage accidents, illegal/contaminating land uses or uncontrolled dumping uses, current and historical land use information, and any information you could provide which might be useful for our study. We enclosed herewith a site map showing the location of the subject site for your reference.

Due to tight schedule, it is highly appreciated if the above information could be available and returned to us via either fax (Fax No. 2815 5399) or email by **10 December 2024**.

Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact the undersigned at 3915 7148 or Ms. Christine Goh (christinegoh@aecasia.io) at 5290 3688.

Yours sincerely,

Cathy Man
Associate Director
CM/ll
Encl. Site Location Plan



NOTES :

Subject Site

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PROJECT SITE AND ITS ENVIRON

Drawing No : FIGURE 2.1	Revision : 0
Scale : AS SHOWN	Date : MAY 2025

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

A3 420 x 297

C:\USERS\CHRISTINEGOHSIEWYINN\SYNOLOGYDRIVE\2240 TUNG CHUNG JPOMQ\05 REPORT\01 AEC REPORT\SIA\ISSUE 1\WORKING CG\[2240] TUNG CHUNG DSIA FIGURES.DWG

Outlook

Re: Fw: [2240] Information Request for Land Contamination Assessment - Tung Chung JPOMQ

From esissd1@landsd.gov.hk <esissd1@landsd.gov.hk>
Date Mon 17/03/2025 16:39
To Christine Goh Siew Yinn <christinegoh@aecasia.io>

Dear Christine,

I refer to your email dated 28.11.2024 and your supplementary information provided on 20.12.2024.

In response to para. 2 of your email dated 28.11.2024, please see the information as requested below:-

1) This office has not received any reported spillage accidents, illegal/contaminating issues in respect of the concerned site.
2) The site is currently allocated to Civil Engineering and Development Department ("CEDD") under Simplified Temporary Land Allocation ("STLA") to carry out "Tung Chung New Town Extension - Reclamation and Advance Works" since 20 December 2017.

Since the concerned site is within the STLA allocated to CEDD, you may wish to approach CEDD direct for your required information. Should you have any queries, please feel free to contact me.

Regards,
Milky Li
ES/SD1, DLO/Is
Tel.: 2852 4692

This message and any attachment is intended for the use of the addressee only. It may contain information which is confidential and/or legally privileged. You are hereby notified that no unauthorised disclosure or use of this message is permitted. If you have received this message by mistake, please notify us immediately and delete or destroy this message, as appropriate. Any liability arising from the use of this information is excluded.

From: Christine Goh Siew Yinn <christinegoh@aecasia.io>
To: "esissd1@landsd.gov.hk" <esissd1@landsd.gov.hk>
Cc: Cathy Man <cm@aechk.com>, NGAN Chun Sang <nganchunsang@aecasia.io>
Date: 20/12/2024 15:42
Subject: Re: Fw: [2240] Information Request for Land Contamination Assessment - Tung Chung JPOMQ

Dear Milky,

Thank you for your reminder.

Please find the attached appointment letter for your reference and for proceeding with the related work. Should you require any additional information or clarification, please feel free to contact us.

Thank you for your kind attention.

Best regards,
Christine Goh – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 5290 3688 | **E:** christinegoh@aecasia.io

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27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
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From: esissd1@landsd.gov.hk <esissd1@landsd.gov.hk>
Sent: 17 December 2024 15:03
To: Christine Goh Siew Yinn <christinegoh@aecasia.io>
Subject: Re: Fw: [2240] Information Request for Land Contamination Assessment - Tung Chung JPOMQ

Dear Christine,

I refer to my preceding email.

Your reply is still pending. You are reminded to provide the required information to this office for our consideration. Should you have any queries, please feel free to contact me.

Regards,
Milky Li
ES/SD1, DLO/Is
Tel.: 2852 4692

This message and any attachment is intended for the use of the addressee only. It may contain information which is confidential and/or legally privileged. You are hereby notified that no unauthorised disclosure or use of this message is permitted. If you have received this message by mistake, please notify us immediately and delete or destroy this message, as appropriate. Any liability arising from the use of this information is excluded.

From: Milky Chui Ting LI/LAO/LANDSD/HKSARG
To: christinegoh@aecasia.io
Date: 05/12/2024 16:27
Subject: Fw: [2240] Information Request for Land Contamination Assessment - Tung Chung JPOMQ

Dear Christine,

I refer to your preceding email regarding the captioned.

Please advise the identity and status of your company in connection to the project (i.e. the Proposed Junior Police Married Quarters (JPOMQ) at Area 134 in Tung Chung New Town Extension East), with necessary supporting document, before we could follow up your enquiry.

Regards,
Milky Li
ES/SD1, DLO/Is
Tel.: 2852 4692

This message and any attachment is intended for the use of the addressee only. It may contain information which is confidential and/or legally privileged. You are hereby notified that no unauthorised disclosure or use of this message is permitted. If you have received this message by mistake, please notify us immediately and delete or destroy this message, as appropriate. Any liability arising from the use of this information is excluded.
----- Forwarded by Milky Chui Ting LI/LAO/LANDSD/HKSARG on 05/12/2024 16:10 -----

From: Christine Goh Siew Yinn <christinegoh@aecasia.io>
To: "gendlois@landsd.gov.hk" <gendlois@landsd.gov.hk>
Cc: Cathy Man <cm@aechk.com>, NGAN Chun Sang <nganchunsang@aecasia.io>
Date: 2024/11/28 下午 05:49
Subject: [2240] Information Request for Land Contamination Assessment - Tung Chung JPOMQ

Dear Sir/Madam,

Proposed Junior Police Married Quarters (JPOMQ) at Area 134 in Tung Chung New Town Extension East
Request for Information for Land Contamination Assessment

We are conducting an Environmental Assessment for Proposed Junior Police Married Quarters (JPOMQ) at Area in Tung Chung New Town Extension East (Subject Site). As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Subject Site are required as part of the vetting process.

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Thank you very much for your kind attention and assistance. Should you have any queries, please feel free to contact us.
Thanks and regards,

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[attachment "ATT00001.png" deleted by Milky Chui Ting LI/LAO/LANDSD/HKSARG] [attachment "ATT00002.png" deleted by Milky Chui Ting LI/LAO/LANDSD/HKSARG] [attachment "ATT00003.png" deleted by Milky Chui Ting LI/LAO/LANDSD/HKSARG] [attachment "ATT00004.png" deleted by Milky Chui Ting LI/LAO/LANDSD/HKSARG] [attachment "Outlook-cid_image0.png" deleted by Milky Chui Ting LI/LAO/LANDSD/HKSARG] [attachment "Outlook-cid_image0.png" deleted by Milky Chui Ting LI/LAO/LANDSD/HKSARG] [attachment "Outlook-cid_image0.png" deleted by Milky Chui Ting LI/LAO/LANDSD/HKSARG] [attachment "Outlook-cid_image0.png" deleted by Milky Chui Ting LI/LAO/LANDSD/HKSARG] [attachment "Appointment Letter.pdf" deleted by Milky Chui Ting LI/LAO/LANDSD/HKSARG]

Appendix 3

VISUAL IMPACT ASSESSMENT

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

VISUAL IMPACT ASSESSMENT

PREPARED BY

STEPHEN LAI STUDIO LIMITED

TABLE OF CONTENTS

1 INTRODUCTION 4
1.1 BACKGROUND 4
1.2 OUTLINE OF THE VISUAL IMPACT ASSESSMENT 5

2 METHODOLOGY FOR VISUAL IMPACT ASSESSMENT 6
2.1 METHODOLOGY 6

3 VISUAL CONTEXT AND VISUAL ELEMENTS 7
3.1 SITE LOCATION AND EXISTING CONDITION 7
3.2 SURROUNDING CONTEXT 8
3.3 VISUAL ELEMENTS 8

4 PROPOSED DEVELOPMENT 9
4.1 BASELINE SCHEME 9
4.2 PROPOSED SCHEME 9
4.3 DESIGN CONSIDERATION 10

5 IDENTIFICATION OF BASELINE VISUAL CONDITION 11
5.1 ASSESSMENT AREA 11
5.2 VIEWING POINTS 11

6 VISUAL APRAISAL 12
6.1 INTRODUCTION 12
6.2 VIEWPOINT 1 - VIEW FROM TUNG MUI ANCIENT TRAIL 12
6.3 VIEWPOINT 2 - VIEW FROM THE PLANNED LINEAR PARK AT TUNG CHUNG AREA 145B 13
6.4 VIEWPOINT 3 - VIEW FROM THE PLANNED WATERFRONT PROMENADE AT TUNG CHUNG AREA 52 14
6.5 MITIGATION MEASURES 15

7 CONCLUSION AND SUMMARY OF IMPACTS 16
7.1 SUMMARY OF VISUAL IMPACTS 16

LIST OF TABLE

TABLE 4.1 Key Development Parameters
TABLE 5.1 Summary Table of Visual Impacts

LIST OF FIGURE

FIGURE 1.1 Site Location Plan
FIGURE 3.1 Aerial Photo of the Site and Surrounding Context
FIGURE 3.2 Approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2
FIGURE 4.1 Building Height Concept of TCE (Extracted from the Approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2)
FIGURE 5.1 Plan for Key Visual Elements for VIA
FIGURE 6.1 Viewpoint 1 - View from Tung Mui Ancient Trail
FIGURE 6.2 Viewpoint 2 - View from the Planned Linear Park at Tung Chung Area 145B
FIGURE 6.3 Viewpoint 3 - View from the Planned Waterfront Promenade at Tung Chung Area 52

1 INTRODUCTION

1.1 BACKGROUND

The Hong Kong Police Force (Applicant) intends to develop a Junior Police Officers Married Quarters (Proposed JPOMQ) at Tung Chung Area 134, Lantau Island (Application Site).

The Application Site is located in Tung Chung East (TCE) of Tung Chung New Town Extension (TCNTE). It is predominantly zoned "Government, Institution or Community (1)" ("G/IC (1)") with minor encroachment into the "Government, Institution or Community" ("G/IC") zone. The "G/IC" and "G/IC (1)" zones are subject to BH restrictions of 50mPD and 70mPD respectively. A Section 16 (S16) Planning Application is being submitted in support of the Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "G/IC(1)" Zone and Proposed Flat (Police Married Quarters) in "G/IC" Zone at the Application Site.

Stephen Lai Studio Limited is commissioned to prepare a Visual Impact Assessment (VIA) to assess the visual impact arising from the Proposed JPOMQ in support of the S16 Planning Application.

Figure 1.1 shows the site location.

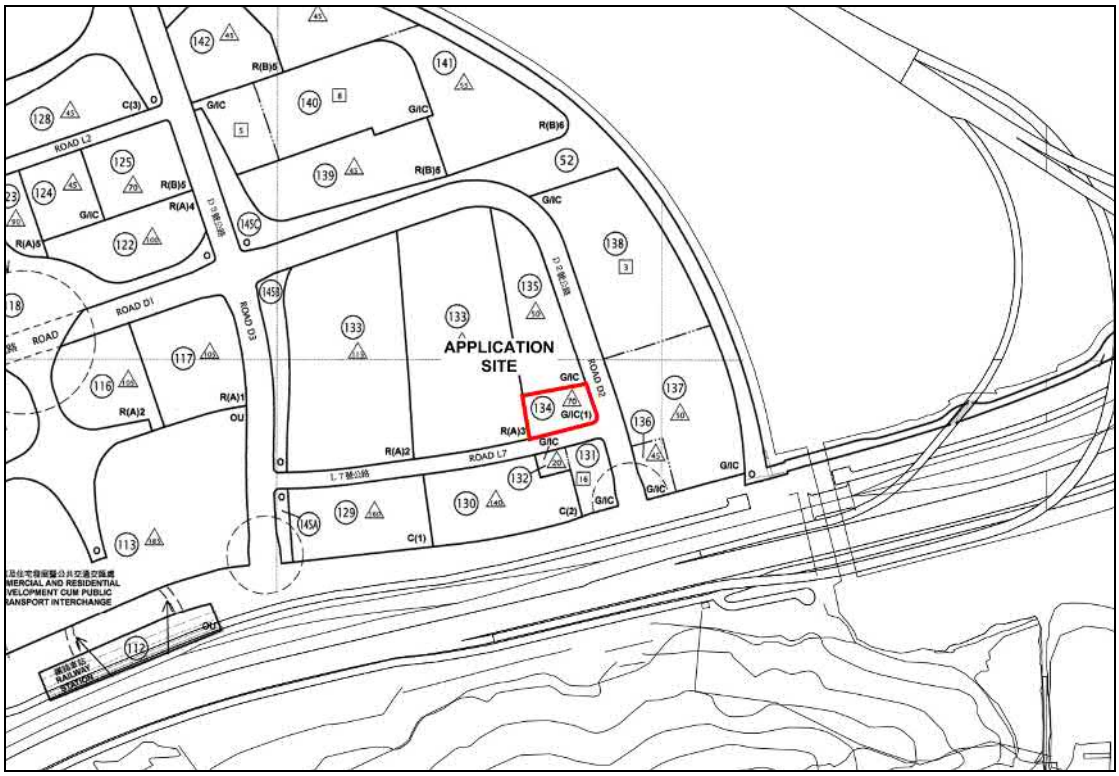


FIGURE 1.1 Site Location Plan

1.2 OUTLINE OF THE VISUAL IMPACT ASSESSMENT

This report is structured to provide a comprehensive assessment of the visual impact of the Proposed JPOMQ. It is organized into several key sections:

- Section 2 outlines the methodology for this VIA.
- Section 3 outlines the visual context and the visual elements of the Application Site.
- Section 4 explains the baseline scheme and proposed scheme of the development.
- Section 5 identifies the assessment area (i.e. visual envelope) and the specific viewpoints (VPs) selected for analysis.
- Section 6 includes detailed assessments of each viewpoint, examining effects on visual composition, visual obstruction, public viewers, and visual resources.
- Section 7 summarizes the findings of the VIA and presents overall conclusions regarding the proposed scheme's compatibility with the surrounding environment.

2 METHODOLOGY FOR VISUAL IMPACT ASSESSMENT

2.1 METHODOLOGY

This VIA aims to evaluate the potential visual impact of the Proposed JPOMQ on public viewers. This VIA will be conducted based on the requirements of Town Planning Board Guidelines on Submission of Visual Impact Assessment for Planning Applications to the Town Planning Board (TPB PG-No.41). The methodology comprises the following key steps designed to evaluate the potential visual impacts of the Proposed JPOMQ on the surrounding environment:

2.1.1 Identification of Baseline Conditions

An assessment of the existing visual environment will be conducted to establish baseline conditions. During the assessment, the actual assessment area will be determined based on the size and the distance of the Proposed JPOMQ.

2.1.2 Selection of Viewing Points and Identification of Visual Elements

VPs will be identified based on their strategic locations and accessibility to the public. These points will represent the perspectives of sensitive viewers and will be assessed at human eye level. Additionally, all relevant visual elements within the assessment area will be catalogued, including major physical structures, visual attractors and visual detractors.

2.1.3 Appraisal of Visual Changes

The potential visual changes resulting from the Proposed JPOMQ will be appraised. Visual changes may be positive or negative and they are not necessarily mutually exclusive. The appraisal will cover the following aspects:

- Effects on Visual Composition
- Effects on Visual Obstruction
- Effects on Public Viewers
- Effects on Visual Resources

2.1.4 Overall Visual Impact Evaluation

The overall visual impact evaluation will consider the sensitivity of key public viewers, visual resources and visual amenities likely to be affected, the magnitude, extent and duration of impact and any resultant improvement or degradation in the visual quality and character of the surrounding area, and the planning intention and known planned developments of the area. The impacts will be concluded and classified into categories: enhanced, partly enhanced/ partly adverse, negligible, slightly adverse, moderately adverse, or significantly adverse.

3 VISUAL CONTEXT AND VISUAL ELEMENTS

3.1 SITE LOCATION AND EXISTING CONDITION

The Application Site is located at the junction of Road D2 and Road L7 in TCNTE, covering an area of approximate 4,876m^2. It is situated in a newly reclamation land, which is currently under Site Formation Works **(refers to Figure 1.1 & 3.1)**.

The Application Site predominantly falls within the "G/IC(1)" zone with minor encroachment into the "G/IC" zone which covered by the Approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2 **(refers to Figure 3.2)**.

FIGURE 3.1 Aerial Photo of the Site and Surrounding Context

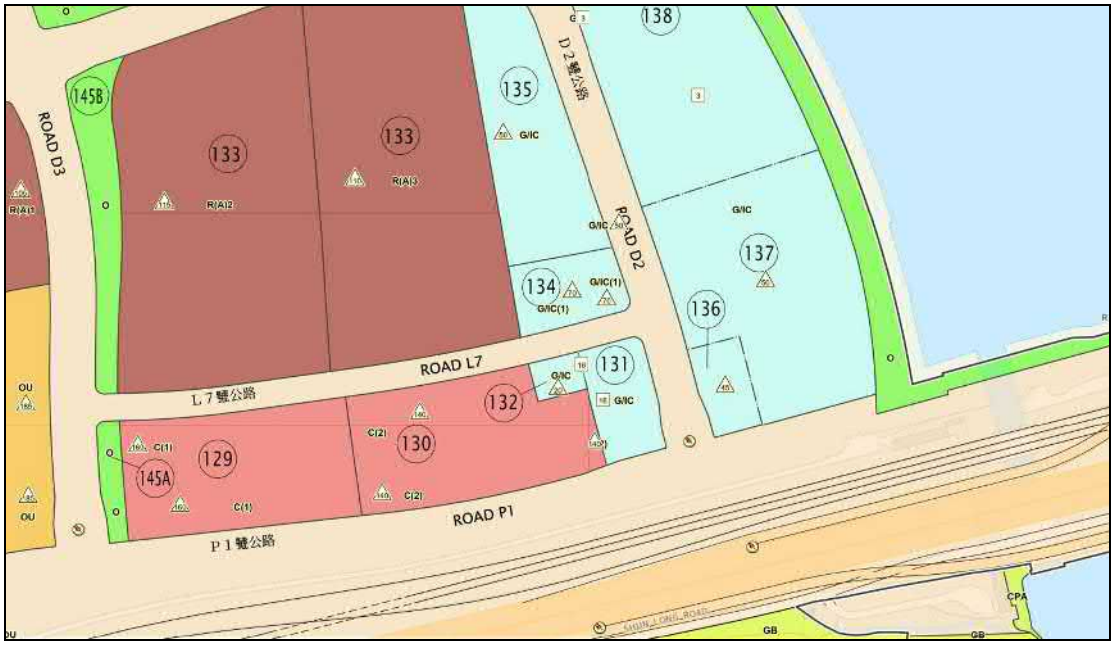


FIGURE 3.2 Approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2

3.2 SURROUNDING CONTEXT

The surrounding land uses include "G/IC", "Commercial" ("C"), and "Residential (Group A)" ("R(A)") zones.

Much of the land to the north, northeast, east, and southeast is "G/IC" sites. The major planned facilities in those areas include a sports ground (Area 138), post-secondary institution and other educational uses (Areas 137), other educational uses (Area 135), a police station (Area 131), a sewage pumping station (Area 132), and a fire station (Area 136).

To the south and southwest are "C(1)" and "C(2)" zones, with building height restrictions of 160mPD and 140mPD respectively.

To the west and northwest are the public housing developments falling within "R(A)2" and "R(A)3" zones. The residential developments with building height restrictions ranging from 125mPD to 135mPD was approved on 21.06.2024 (i.e. Planning Application No. A/I-TCE/4).

3.3 VISUAL ELEMENTS

The visual outlook is shaped by the combined composition of all the visual elements which come into sight of the viewers. All key visual elements, including any major physical structures, visual resources or attractors and/or visual eyesores or detractors that currently exist or are known to be planned within the assessment area are listed below:

3.3.1 Key Positive Visual Elements

- Planned sports ground at the northeast of the Application Site (Area 138)
- Planned linear park (Area 145B)
- Planned waterfront promenade (Area 52)
- Views to Por Kai Shan

3.3.2 Key Negative Visual Elements

- Planned sewage pumping station at the south of the Application Site (Area 132)
- Traffic along the nearby roads and railway (Existing North Lantau Highway, Tung Chung Line, and Airport Express Line)

4 PROPOSED DEVELOPMENT

4.1 BASELINE SCHEME

The baseline scheme of the Application Site is prepared based on the 2nd Revised Technical Paper on Revised Preliminary Layout Plan of the previous Planning and Engineering Study on the Remaining Development in Tung Chung - Feasibility Study under Agreement No. CE 32/2011 (CE) in 2012. The baseline scheme represented the fundamental development potential of the Application Site and will be used for comparison under this VIA.

4.2 PROPOSED SCHEME

The Proposed JPOMQ comprises 2 nos. of residential towers with a maximum building height of 105mPD. The 27 storeys residential towers sit on a 3 storeys podium, which will provide about 432 residential units with a designed population of approximately 1,167.

Key developments parameters of the Proposed JPOMQ are summarised in **Table 4.1**.

TABLE 4.1 Key Development Parameters

Development Parameters	Proposed JPOMQ
Site Area	About 4,876m^2
Proposed Maximum Building Height	No more than 105mPD
Proposed No. of Towers	2
Proposed No. of Storey	27 storeys residential tower above 3 storeys of podium
No. of Flat	About 432
Estimated Population (1)	About 1,167
Plot Ratio	6.5
Site Coverage - Above 15m - Below 15m	 Not more than 37.5% Not more than 80%
GFA	About 31,694m^2
Proposed Open Space (2)	Not less than 1,167m^2
Note: (1) Assuming 2.7 persons per flat. (2) Calculated based on a provision of 1m^2 per person.	

4.3 DESIGN CONSIDERATION

Considering the increased building height under the proposed scheme, the following design measures will be included to enhance the visual quality of the Proposed JPOMQ:

- Landscape treatments will be implemented at both at-grade and podium levels to enhance green coverage and reduce the visual impact of the Proposed JPOMQ.
- Large shrubs and green hedge will be provided along the boundary fence wall to soften the solid mass the Proposed JPOMQ and act as green buffer plantings to the surrounding developments.
- Row of new trees on will be provided on ground floor at the north side, acts as a greenery backdrop to the view from podium floor and a green buffer to the adjacent lots.
- The Proposed JPOMQ will conform to the overall visual context and the intended stepped building height concept of TCE.
- Light tone façade material/ finishes will be explored to minimize the visual impact of the Proposed JPOMQ. The mitigation measures at the facade treatment will be explored at the detailed design stage.

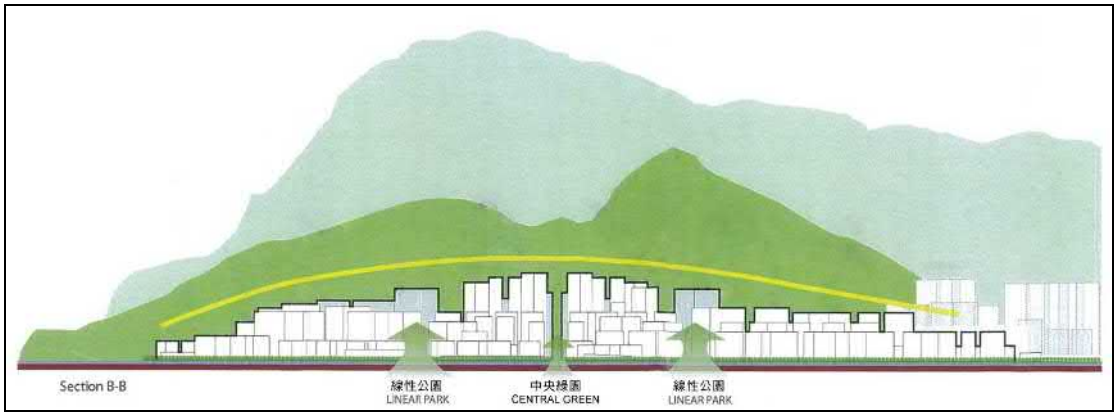


FIGURE 4.1 Building Height Concept of TCE (Extracted from the Approved Tung Chung Extension Area Outline Zoning Plan No. S/I-TCE/2)

5 IDENTIFICATION OF BASELINE VISUAL CONDITION

5.1 ASSESSMENT AREA

In accordance with TPB PG-No.41, the assessment area is determined by the distance 3H, where H is the proposed height of the development (105mPD). The assessment area for the Application Site encompasses the general area of TCNTE, which includes Road L7, Road D2, and the adjacent developments. The assessment area is shown in **Figure 5.1**.

5.2 VIEWING POINTS

VPs have been identified are representative of all sensitive viewers in direct sight of the Proposed JPOMQ. The selected VPs include public areas for outdoor facilities, recreation, rest, leisure, walking, and prominent travel routes which are easily accessible by the public. The locations of the VPs are shown in **Figure 5.1**.

5.2.1 VIEWPOINT 1 - VIEW FROM TUNG MUI ANCIENT TRAIL

VP1 is a static VP taken from Tung Mui Ancient Trail, which is located about 315m to the South of the site. The VP is along the hiking trail connected to Mui Wo, visited by hikers and other recreational users, with a panoramic view over TCNTE. In view of the hikers are transient in nature, the visual sensitivity of this VP is identified with **low to medium** visual sensitivity.

5.2.2 VIEWPOINT 2 - VIEW FROM THE PLANNED LINEAR PARK AT TUNG CHUNG AREA 145B

VP2 is a static VP situated about 310m to the west of the site and located in the planned Linear Park at Tung Chung Area 145B. The VP is expected to be a district open space connecting the non-building area (NBA) within the adjacent site (i.e. Area 133). This District Open Space is mainly for passive activity use and routine circulation passageway only. The duration of stay will be few minutes walking distance, but will have longer duration when taking rest in this District Open Space, such as estimated 1 hour in general. In view of the high pedestrian flow and short viewing distance, the VP is identified with **medium to high** visual sensitivity.

5.2.3 VIEWPOINT 3 - VIEW FROM THE PLANNED WATERFRONT PROMENADE AT TUNG CHUNG AREA 52

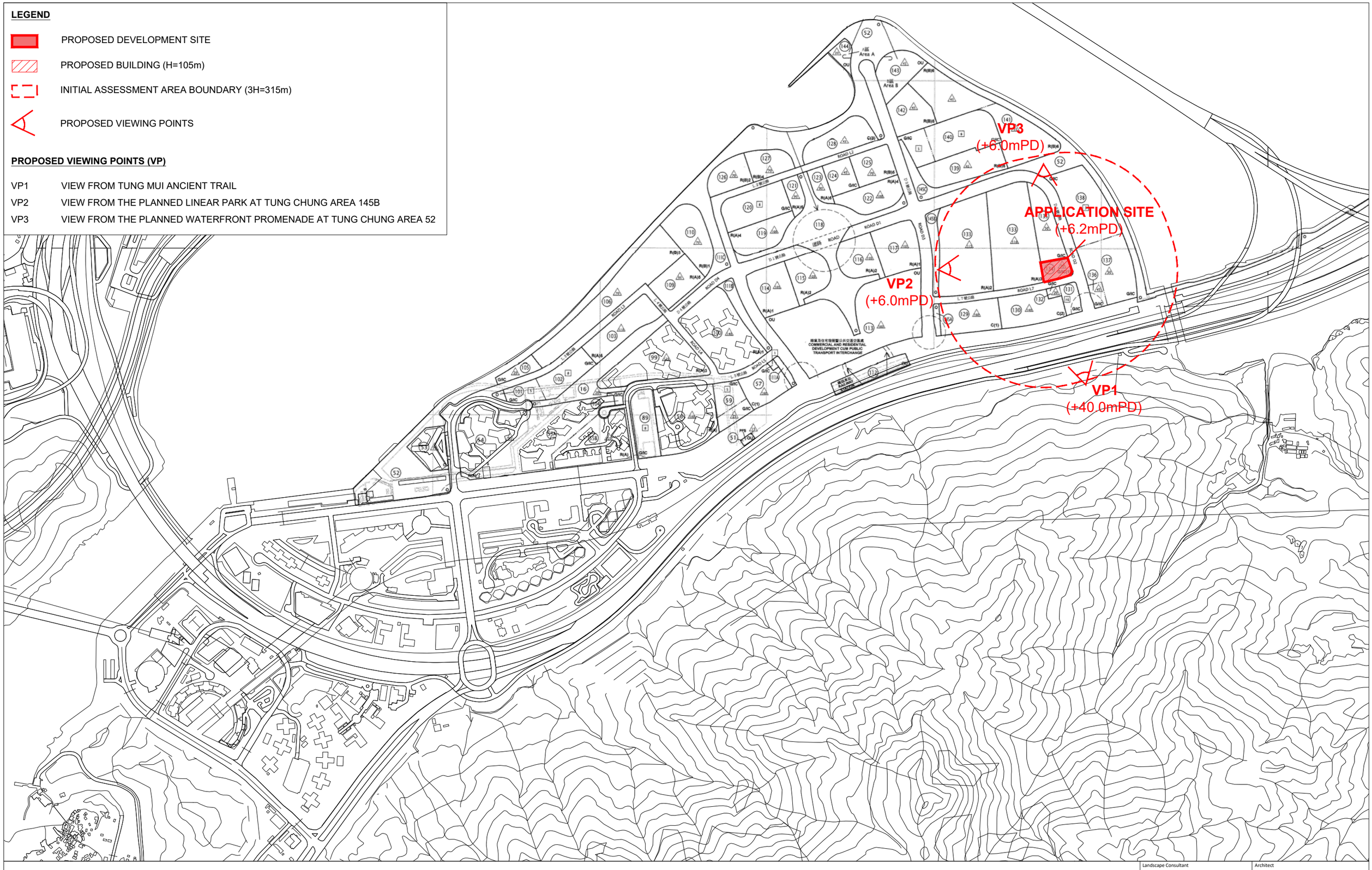
VP3 is a static VP located about 280m to the north of the site. The VP is situated on the planned Waterfront Promenade at Tung Chung Area 52, which is expected to be the regional open space in the TCNTE and frequently used by the public. It is mainly a passageway toward the waterfront, estimate that there should have no planned seating space and so that the major activity is for circulation purpose only, the duration of stay will be few minutes walking distance. In view of the high pedestrian flow and short viewing distance, the VP is identified with **medium to high** visual sensitivity.

LEGEND

- PROPOSED DEVELOPMENT SITE
- PROPOSED BUILDING (H=105m)
- INITIAL ASSESSMENT AREA BOUNDARY (3H=315m)
- PROPOSED VIEWING POINTS

PROPOSED VIEWING POINTS (VP)

VP1	VIEW FROM TUNG MUI ANCIENT TRAIL
VP2	VIEW FROM THE PLANNED LINEAR PARK AT TUNG CHUNG AREA 145B
VP3	VIEW FROM THE PLANNED WATERFRONT PROMENADE AT TUNG CHUNG AREA 52



PLAN FOR KEY VISUAL ELEMENTS FOR VIA (FIGURE 5.1)

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

Project no. 2412	S16
	REVISON NO. / DATE:
	(–)03/09/25
03/09/2025 Rev. -	

Landscape Consultant

SLSL
STEPHEN LAI STUDIO LIMITED
G/F, Sun Chun Street, Tai Hanf Hong Kong

Architect

Ivanho Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
JPOMQ@ivanhoarchitect.com

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6 VISUAL APRAISAL

6.1 INTRODUCTION

The visual impacts of the Proposed JPOMQ on the selected VPs are assessed and described in this section. The locations of the VPs are shown in **Figure 5.1**.

6.2 VIEWPOINT 1 - VIEW FROM TUNG MUI ANCIENT TRAIL

The comparison of the Proposed JPOMQ under baseline scheme and proposed scheme for this VP is shown in **Figure 6.1**.

6.2.1 Effects on Visual Composition

The existing visual composition of this VP comprises vegetation, the highway, and the railway in the foreground. The background consists of the planned developments at the TCNTE, the sea, and open sky. From this VP, the Proposed JPOMQ, along with the nearby public housing developments at Area 133 and commercial developments at Area 130, creates a cluster of high-rise development. The maximum building height of both baseline and proposed schemes is lower than the maximum building height of the surrounding developments in Area 129, 130, and 133. Consequently, the proposed scheme has a **negligible** visual impact on the overall visual composition from this VP.

6.2.2 Effects on Visual Obstruction

In comparison to the baseline scheme, the proposed schemes will slightly obstruct more views of the sea and open sky in the background. However, they contribute to a cohesive building form alongside the surrounding developments. The change in visual impact between the baseline and proposed schemes is considered **slightly adverse**, as most of the sky and sea views remain unobstructed.

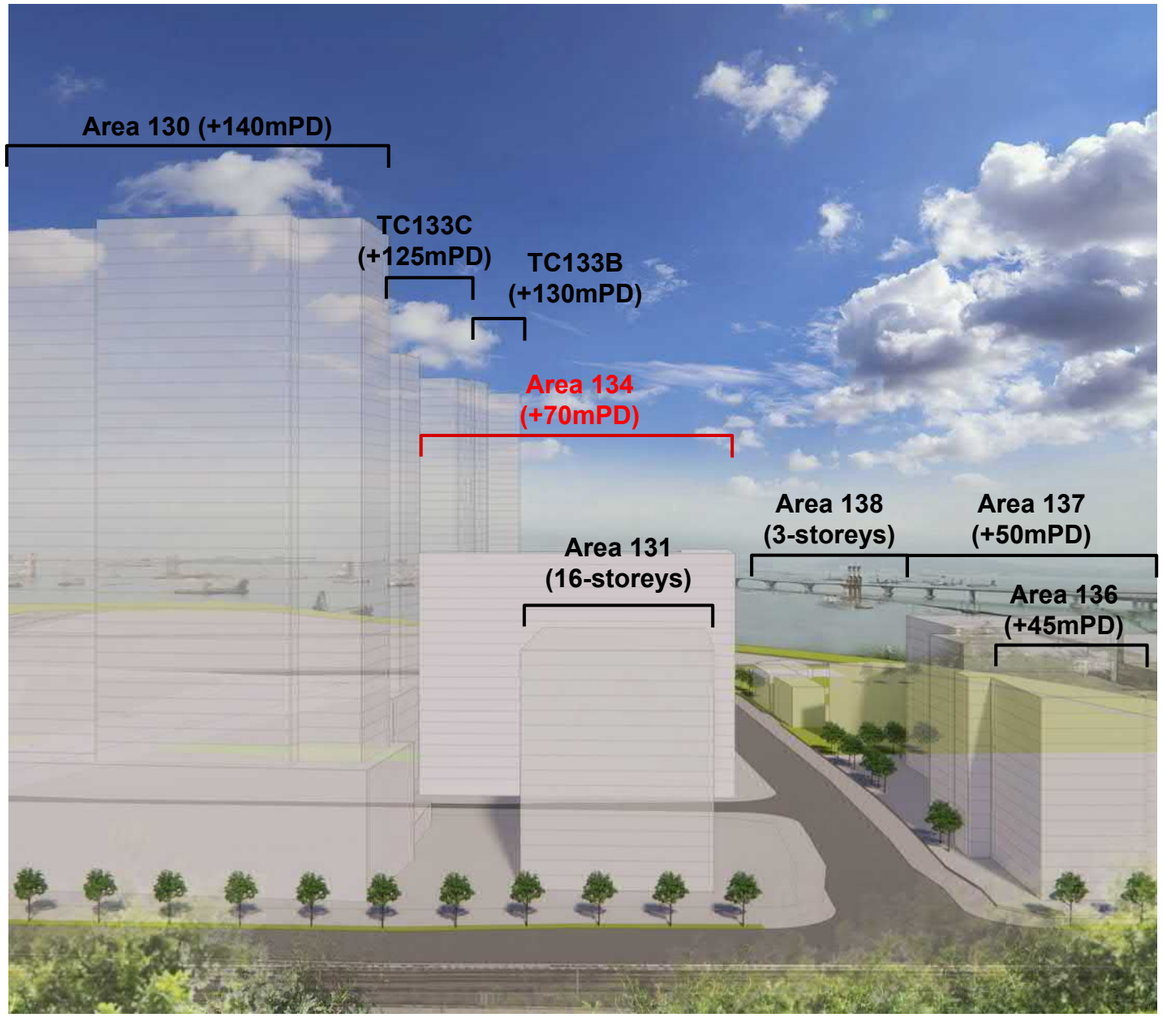
6.2.3 Effects on Public Viewers

The public viewers of this VP are mostly hikers and other recreational users, whom are of transient nature. When viewing from this VP, both baseline and proposed schemes of the Proposed JPOMQ will be part of the cluster of high-rise development and with a slightly lower building height compared with the surrounding developments in Area 130 and 133. Therefore, the Proposed JPOMQ will not be incompatible or isolated. The visual change to the viewers is **slightly adverse**.

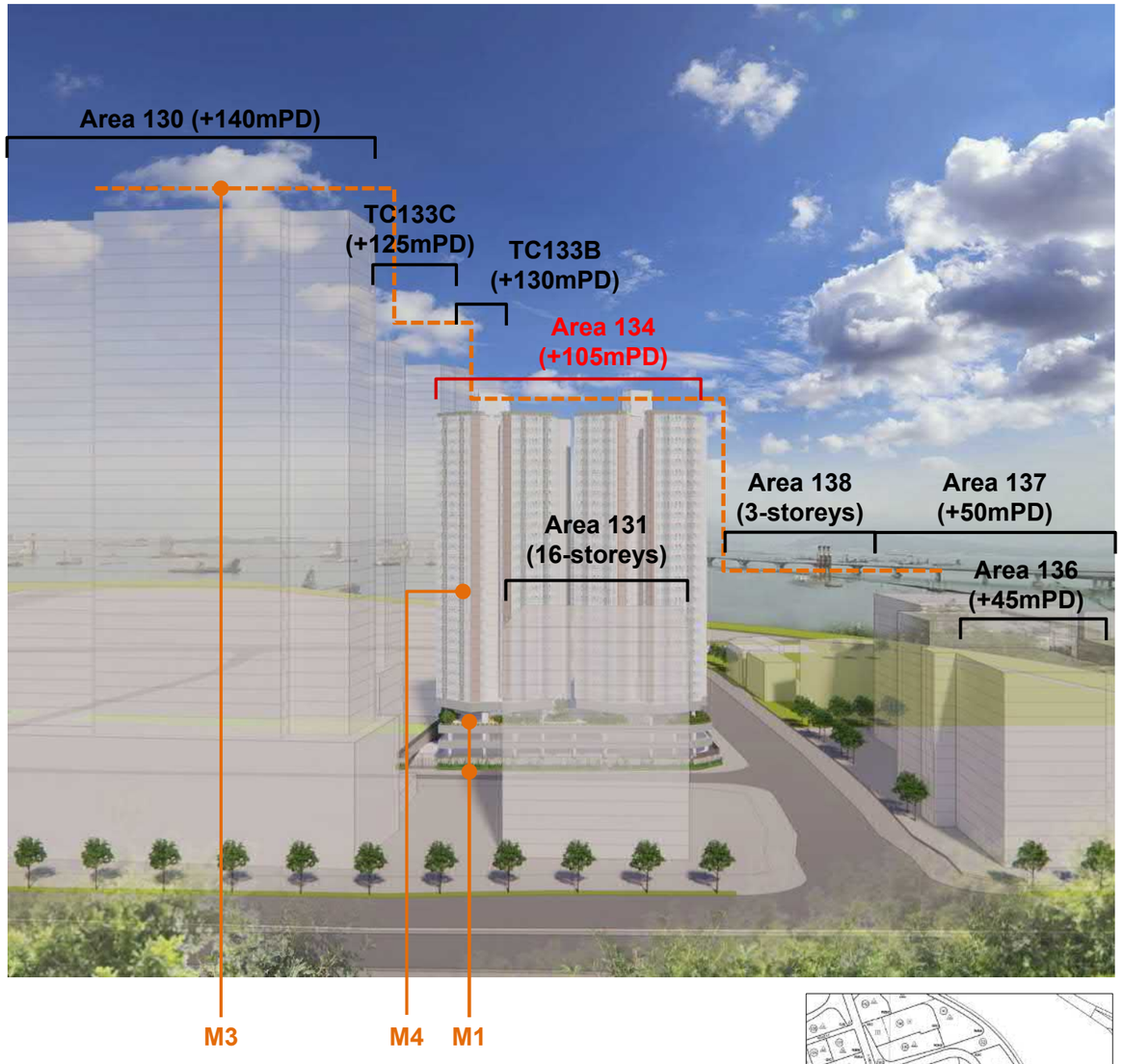
6.2.4 Effects on Visual Resources

The open sky view and sea view at the background is the major visual resources at this VP. Both baseline and proposed schemes of the Proposed JPOMQ will be integrated with the overall planned development at the TCNTE and most of the sky and sea views remain unobstructed. There is **slightly adverse** impact to the visual resources.

BASELINE SCHEME



PROPOSED SCHEME



VIEWPOINT 1 - VIEW FROM TUNG MUI ANCIENT TRAIL (FIGURE 6.1)

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

Project no. 2412	S16
	REVISON NO. / DATE:
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03/09/2025 Rev. -	

Landscape Consultant
SLSL
STEPHEN LAI STUDIO LIMITED
G/F, Sun Chun Street, Tai Hanf Hong Kong

Architect
Ivanho Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
JPOMQ@ivanhoarchitect.com

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6.3 VIEWPOINT 2 - VIEW FROM THE PLANNED LINEAR PARK AT TUNG CHUNG AREA 145B

The comparison of the Proposed JPOMQ under baseline scheme and proposed scheme for this VP is shown in **Figure 6.2**.

6.3.1 Effects on Visual Composition

This VP captures the NBA, footbridge, covered walkways, and residential buildings within Area 133 in the foreground. The Proposed JPOMQ, open sky view, and the mountain are in the background. Upon completion, the Proposed JPOMQ will form a cluster of high-rise developments with the surrounding residential developments. Although the building height of the proposed scheme is slightly higher than the baseline scheme, there is **negligible** visual impact in terms of visual composition from this VP.

6.3.2 Effects on Visual Obstruction

A large portion of the mountain and open sky view will have been blocked by the footbridge, covered walkways, and residential buildings within Area 133. The Proposed JPOMQ will be behind and partly blocked by the developments within Area 133. Although the proposed scheme with a higher building height of 105mPD will slightly obstruct more sky view compared with the baseline scheme, the mountain in the background will not be obstructed further under the proposed scheme. As such, there is **negligible** obstruction to the visual permeability compared with the baseline scheme.

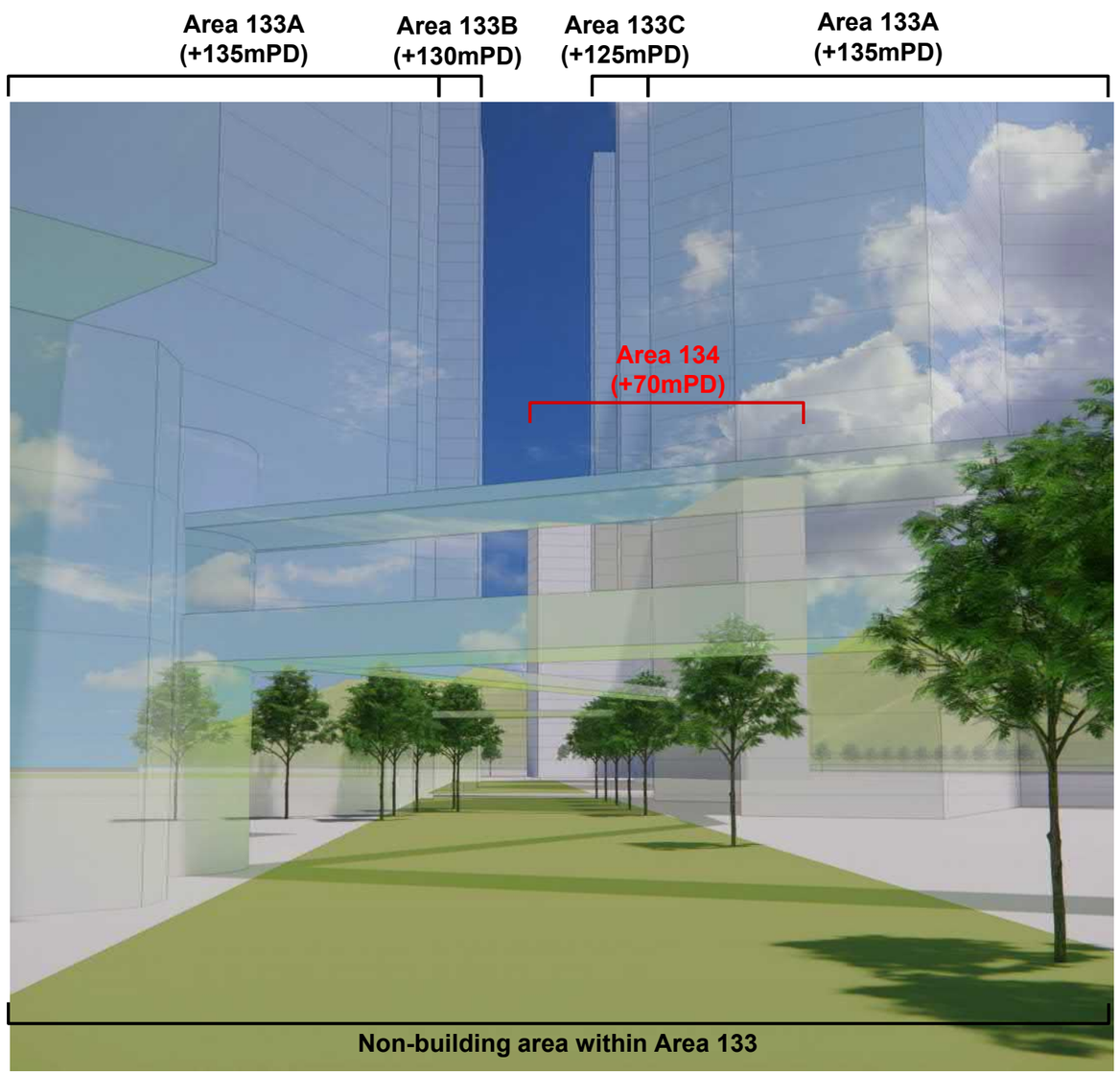
6.3.3 Effects on Public Viewers

At glimpse of the view, the pedestrian and other recreational users will perceive the Proposed JPOMQ as a visual extension of the cluster of high-rise development at Area 133, the visual change to these viewers is **negligible**.

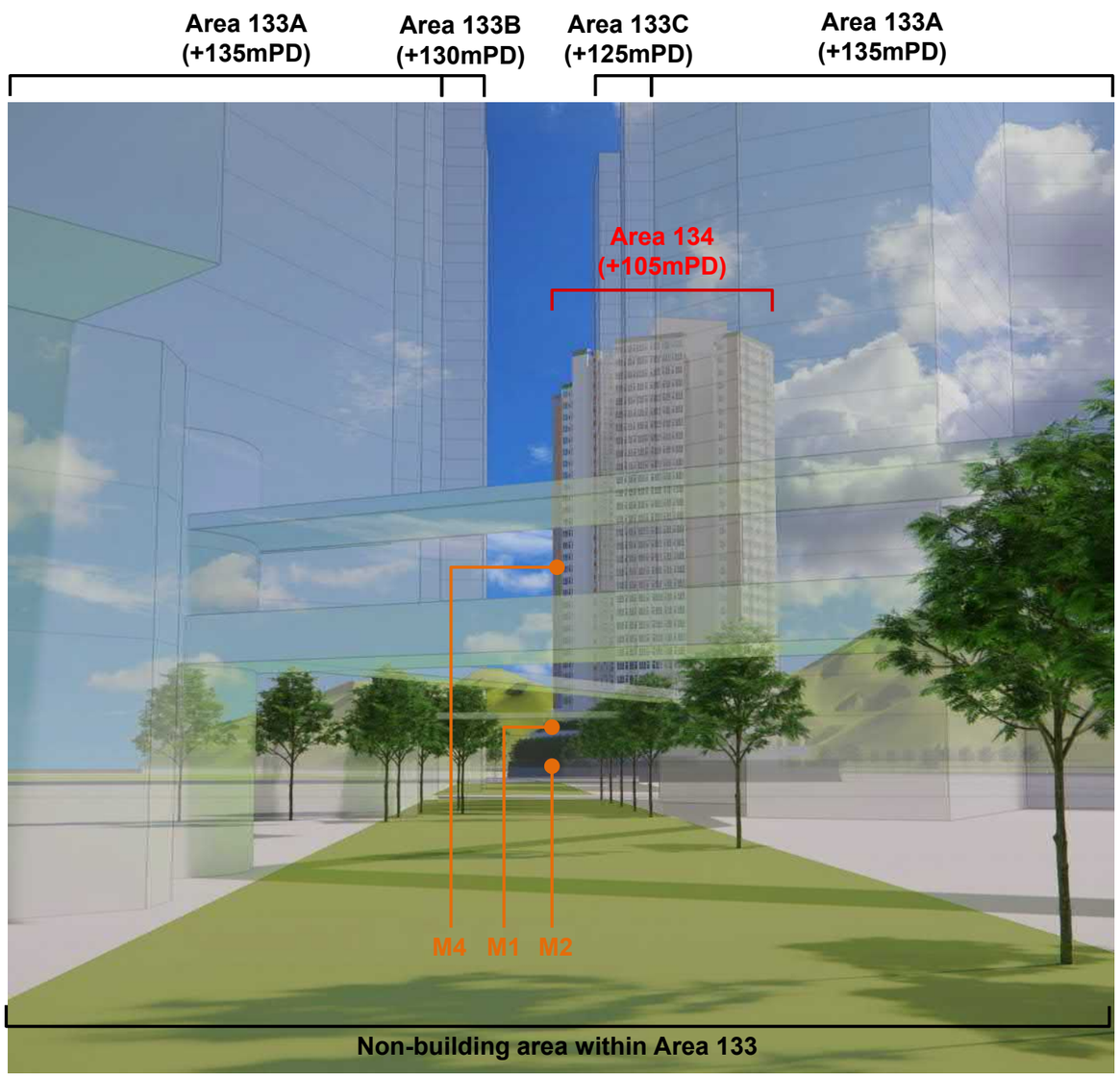
6.3.4 Effects on Visual Resources

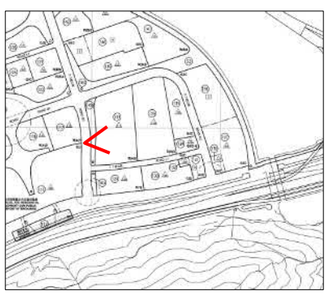
The greenery in the foreground is the major visual resources at this VP and a portion of the mountain and open sky view will have been blocked by the surrounding developments and Proposed JPOMQ under the baseline scheme. Therefore, it is anticipated there will be **negligible** impact to the visual resources brought by the Proposed JPOMQ as compared with the baseline scheme.

BASELINE SCHEME



PROPOSED SCHEME





VIEWPOINT 2 - VIEW FROM THE PLANNED LINEAR PARK AT TUNG CHUNG AREA 145B (FIGURE 6.2)

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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Landscape Consultant
SLSL
STEPHEN LAI STUDIO LIMITED
G/F, Sun Chun Street, Tai Hang Hong Kong

Architect
Ivanho Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
JPOMQ@ivanhoarchitect.com

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6.4 VIEWPOINT 3 - VIEW FROM THE PLANNED WATERFRONT PROMENADE AT TUNG CHUNG AREA 52

The comparison of the Proposed JPOMQ under baseline scheme and proposed scheme for this VP is shown in **Figure 6.3**.

6.4.1 Effects on Visual Composition

This VP comprises the planned waterfront promenade at Area 52 and planned sports ground at Area 138 in the foreground. The Proposed JPOMQ and planned post-secondary institution and other educational uses at Area 135 are to the right of this VP. The mountain and sky view between the Proposed JPOMQ and other planned developments in TCNTE will form the background. From this VP, the Proposed JPOMQ, along with the nearby public housing developments at Area 133 and commercial developments at Area 130, creates a cluster of high-rise development. The maximum building height of both baseline and proposed schemes is lower than the maximum building height of the surrounding developments in Area 129, 130, and 133. As such, there is **negligible** impact to the overall visual composition.

6.4.2 Effects on Visual Obstruction

A portion of the mountain and open sky view will have been blocked by the Proposed JPOMQ and surrounding developments under the baseline scheme. Under the proposed scheme, the mountain in the background will not be obstructed further. Although the increased building height will obstruct slightly more sky view, the degree of visual obstruction is minor as compared with the baseline scheme. Most of the sky view and mountain remain unobstructed. Therefore, there is **slight adverse** obstruction to the visual permeability compared with the baseline scheme.

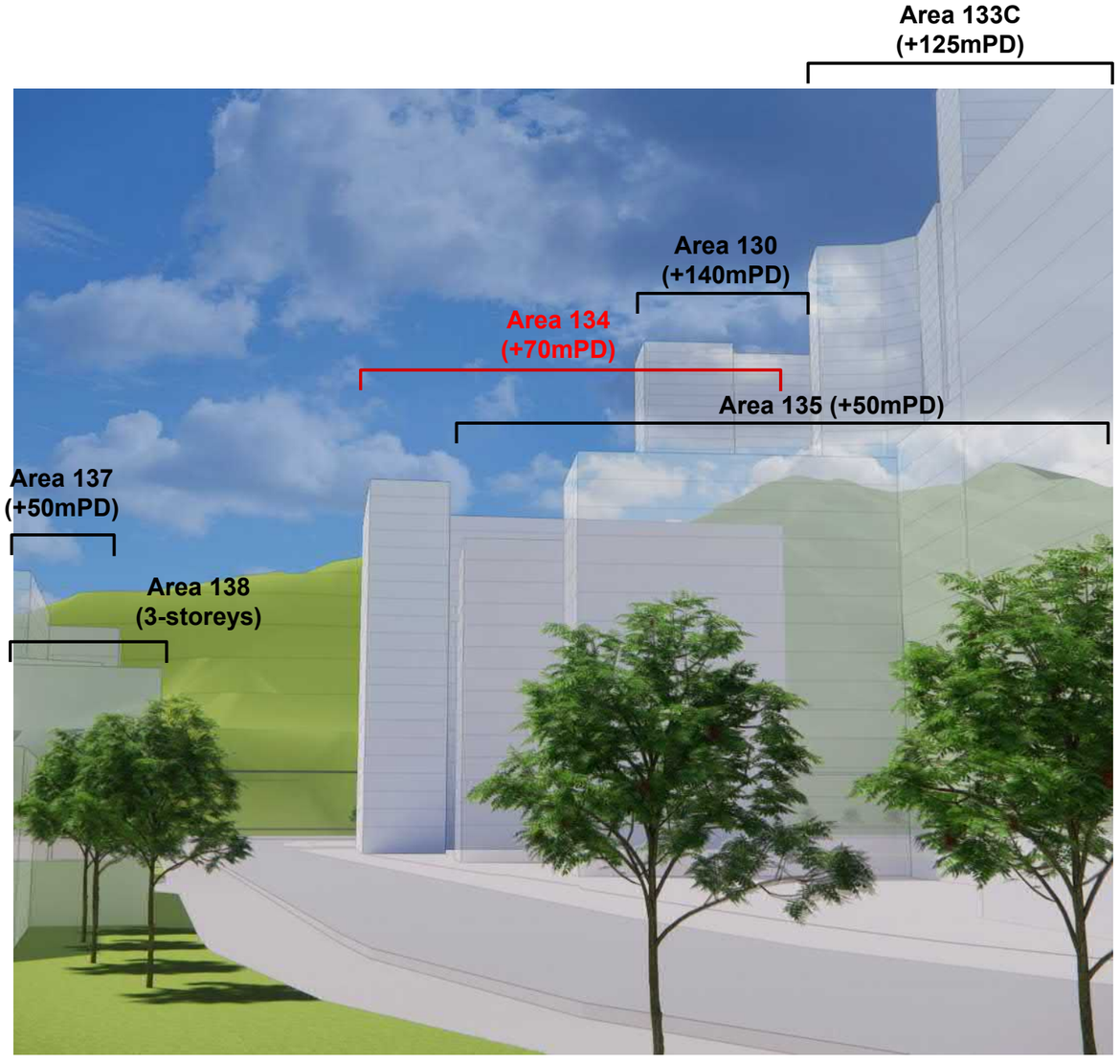
6.4.3 Effects on Public Viewers

The public viewers of this VP are targeted to be recreational users. The viewers will likely perceive the Proposed JPOMQ as part of the cluster of high-rise developments with the surrounding residential developments, which is not incompatible nor an outlier. The visual change to the viewers is considered **slight adverse**.

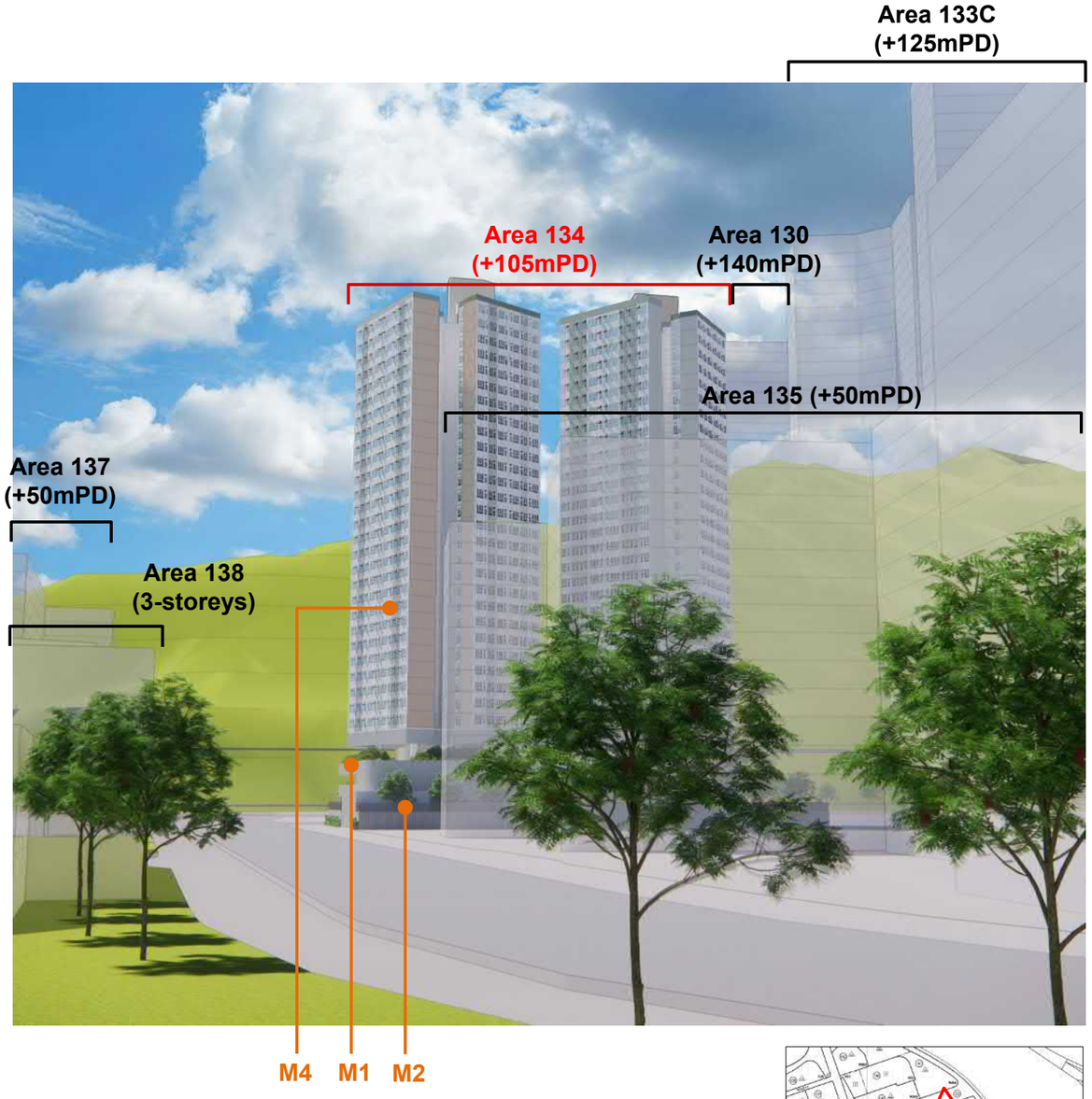
6.4.4 Effects on Visual Resources

The greenery in the foreground is the major visual resources at this VP and a portion of the mountain and open sky view will have been blocked by the Proposed JPOMQ under the baseline scheme. Therefore, it is anticipated there will be **slight adverse** impact to the visual resources brought by the Proposed JPOMQ as compared with the baseline scheme.

BASELINE SCHEME



PROPOSED SCHEME



VIEWPOINT 3 - VIEW FROM THE PLANNED WATERFRONT PROMENADE AT TUNG CHUNG AREA 52 (FIGURE 6.3)

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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Landscape Consultant
SLSL
STEPHEN LAI STUDIO LIMITED
G/F, Sun Chun Street, Tai Hanf Hong Kong

Architect
Ivanho Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
JPOMQ@ivanhoarchitect.com

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6.5 MITIGATION MEASURES

Mitigation measures are proposed to reduce and eliminate the visual impacts of the proposed development. The specific actions and design strategies are described below and are visually detailed in Figures 6.1, 6.2, and 6.3.

6.5.1 Landscape and Green Buffer Strategy

Extensive landscape treatments will be implemented at both at-grade and podium levels to significantly enhance green coverage and effectively reduce the visual impact of the Proposed JPOMQ. Specifically:

No.	Description
M1	**Large shrubs and green hedges** will be provided along the boundary fence wall to soften the building's solid mass and act as green buffer plantings for the surrounding developments.
M2	**A row of new trees** will be provided at the ground floor along the north side, serving as a greenery backdrop and creating a further green buffer to adjacent lots.

6.5.2 Architectural Integration and Façade Treatment

No.	Description
M3	The Proposed JPOMQ will be designed to **conform to the overall visual context** and the **intended stepped building height concept of the TCE**, thereby ensuring cohesive integration with the surrounding urban fabric. Specifically, the proposed development's height strategically falls between the surrounding higher buildings (Areas 133A, 133B, 133C to the northwest and Areas 129 and 130 to the south and southwest) and the lower buildings to the north (Areas 135 and 141) and east (Areas 136, 137, and 138). This graduated approach directly aligns with the TCE concept of creating a stepped height profile that the building height reduced from the mountain backdrop in the south to the waterfront area in the north as stated in the ES of the OZP paragraph 7.1.6.
M4	**Light-toned façade materials/finishes** will be explored during the detailed design stage to minimize the building's visual presence and overall impact. These specific mitigation measures regarding façade treatment will be finalized in the detailed design phase.
M5	The building towers provided a 7.5m setback from the northern boundary. This feature ensures that the structures of the proposed development will not encroach into the planned breezeway designated within Area 133, effectively preserving this vital corridor and mitigating visual obstruction.

7 CONCLUSION AND SUMMARY OF IMPACTS

7.1 SUMMARY OF VISUAL IMPACTS

Based on the analysis on the appraisal of visual changes on Visual Composition, Visual Obstruction, Effects on Public Views and Effects on Visual Resources, the overall visual impact caused by the Proposed JPOMQ of the VPs are presented in **Table 5.1**.

TABLE 5.1 Summary Table of Visual Impacts

VPs	Visual Composition	Visual Obstruction	Effects on Public Viewers	Effects on Visual Resources	Visual Sensitivity	Overall
VP1: View from Tung Mui Ancient Trail	Negligible	Slightly Adverse	Slightly adverse	Slightly Adverse	Low to Medium	Slightly adverse
VP2: View from the Planned Linear Park at Tung Chung Area 145B	Negligible	Negligible	Negligible	Negligible	Medium to High	Negligible
VP3: View from the Planned Waterfront Promenade at Tung Chung Area 52	Negligible	Slightly adverse	Slightly adverse	Slightly adverse	Medium to High	Slightly adverse

In conclusion, the proposed scheme will incur slightly adverse impacts on the identified VPs and is compatible with the surrounding developments in TCNTE. The integration of the Proposed JPOMQ into the existing visual landscape ensures that key visual resources, such as views of the sky and sea, remain largely unobstructed. While there may be slight adverse effects on visibility at certain points, these changes do not detract significantly from the overall visual experience. Additionally, the proposed scheme respects the stepped building height profile in TCE, further enhancing the coherence of the built environment while maintaining the visual integrity of the area. The proposed scheme with a maximum building height of 105mPD is acceptable in visual terms.

Appendix 4

TRAFFIC IMPACT ASSESSMENT

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

Traffic Impact Assessment
Final Report
October 2025

Prepared by: CKM Asia Limited

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in Government, Institution or Community" Zone in Government Land Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

CONTENTS

CHAPTER		PAGE
1.	INTRODUCTION Background Contents of the Report	1
2.	THE PROPOSED JPOMQ AT AREA 134 IN TCNTE Development Provision of Internal Transport Facilities Swept Path Analysis	2
3.	TRAFFIC IMPACT Design Year Selected Junctions 2036 Traffic Flows 2036 Junction Operational Performance 2036 Link Capacity Assessment	4
4.	Conclusion	9
	Figures Appendix A – Swept Path Analysis Appendix B – Calculation	

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in Government, Institution or Community" Zone in Government Land Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

TABLES

NUMBER

2.1 Detailed Flat Mix

2.2 Provision of Internal Transport Facilities for the Proposed JPOMQ at Area 134 in TCNTE

3.1 Approved planned development in the vicinity of the Proposed JPOMQ at Area 134 in TCNTE

3.2 Details of 2 surveyed Police Quarters

3.3 Adopted trip rates for the Proposed JPOMQ at Area 134 in TCNTE

3.4 Traffic generation of the Proposed JPOMQ at Area 134 in TCNTE

3.5 2036 Junction Operational Performance

3.6 2036 Link Capacity Assessment

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in Government, Institution or Community" Zone in Government Land Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

FIGURES

NUMBER

1.1 Location of subject site

2.1 G/F Layout Plan

2.2 1/F Layout Plan

3.1 Locations of selected junctions

3.2 2036 peak hour traffic flows without the Proposed JPOMQ at Area 134 in TCNTE

3.3 2036 peak hour traffic flows with the Proposed JPOMQ at Area 134 in TCNTE

1.0 INTRODUCTION

Background

1.1 The subject site is located at Tung Chung Area 134 in Tung Chung East of Tung Chung New Town Extension ("TCNTE"), and it abuts Road D2 to the east and Road L7 to the south. The location of subject site is shown in Figure 1.1.

1.2 The subject site is zoned as "Government, Institution or Community (1)" ("G/IC(1)") with minor encroachment into the "Government, Institution or Community" ("G/IC") zone and the building height restrictions of G/IC(1) and G/IC zones are 70mPD and 50mPD respectively.

1.3 The Hong Kong Police Force intends to develop a Junior Police Officers Married Quarters with 432 units at Tung Chung Area 134 in TCNTE (the "Proposed JPOMQ at Area 134 in TCNTE") and the minor relaxation of building height restrictions is needed. Section 16 Planning Application is required for proposed minor relaxation of building height restriction for permitted flat (Police Married Quarters) in "G/IC(1)" zone and proposed flat (Police Married Quarters) in "G/IC" zone.

1.4 In December 2024, the Civil Engineering Development Department ("CEDD") commissioned a Traffic Impact Assessment ("TIA") to assess the increase in population within the TCNTE under "Agreement No. CE 69/2015 (CE) Tung Chung New Town Extension (East) Design and Construction Report on Traffic Impact Assessment Review for Population Increase and Development Intensity – Case 2 (Final) (Ref. PI50-02)" (TIA study of CE69/2015 (CE)).

1.5 Against this background, CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned to conduct a TIA in support of the Section 16 Planning Application for the Proposed JPOMQ at Area 134 in TCNTE. The report presents the findings and recommendations of the traffic impact assessment for the Proposed JPOMQ at Area 134 in TCNTE.

Contents of the Report

1.6 After this introduction, the remaining chapters contain the following:

Chapter Two	-	presents the Proposed JPOMQ at Area 134 in TCNTE;
Chapter Three	-	describes the traffic impact analysis; and
Chapter Four	-	summarises the overall conclusion.

2.0 THE PROPOSED JPOMQ AT AREA 134 IN TCNTE

Development Schedule

2.1 The Proposed JPOMQ at Area 134 in TCNTE has 2 blocks building with 432 flats and the detailed flat mix is found in Table 2.1.

TABLE 2.1 DETAILED FLAT MIX

Grade	Flat Size (GFA)	Number of Flats
E	85 m^2	54 (1)
F	70 m^2	54 (2)
G	55 m^2	324 (2)
	Total Number of Flats =	432

Note: (1) 54 flats @ 70.1 – 100m^2 (2) 378 flats @ 40.1 – 70m^2

2.2 The vehicular access to the Proposed JPOMQ at Area 134 in TCNTE is provided at Road L7, some 75m from the junction of Road D2 / Road L7.

Provision of Internal Transport Facilities

2.3 A comparison of the provision of internal transport facilities by the Proposed JPOMQ at Area 134 in TCNTE and the recommendations of the Hong Kong Planning Standards and Guidelines ("HKPSG") is presented in Table 2.2.

TABLE 2.2 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR THE PROPOSED JPOMQ AT AREA 134 IN TCNTE

Use	HKPSG Recommendation 432 flats comprise of 378 flats @ 40.1 – 70m^2, 54 flats @ 70.1 – 100m^2	Proposed Provision
	Car Parking Space	
Residential (I)	Number of space = GPS x R1 x R2 x R3, where: Global Parking Standard (GPS) = 1 space per 4 – 7 flats R1 = 1.2 for flat size of 40.1 – 70m^2; 2.4 for flat size of 70.1 – 100m^2 R2 = 1.0 for development outside 500m of rail station R3 = 0.9 for domestic plot ratio (PR) = 6.5 Minimum =(378 x 1.2 ÷ 7 x 1 x 0.9) +(54 x 2.4÷7 x 1 x 0.9) = 58.3 + 16.7 = 59 + 17 = 76 nos. Maximum =(378 x 1.2 ÷ 4 x 1 x 0.9) +(54 x 2.4÷4 x 1 x 0.9) = 102.1 + 29.2 = 103 + 30 = 133 nos.	Residential (I) 77 nos. comprising of : (i) 76 nos. @ 5m(L)x 2.5m(W) x 2.4m(H); and (ii) 1 no. @ 5m(L) x 3.5m(W) x 2.4m(H) for persons with disabilities Visitor (II) 10 nos. comprising of : (i) 9 nos. @ 5m(L) x 2.5m(W) x 2.4m(H); and (ii) 1 no. @ 5m(L) x 3.5m(W) x 2.4m(H) for persons with disabilities Total (I) + (II) = 77 + 10 = 87 nos. > minimum & < maximum, OK
Visitor (II)	Visitor car parking spaces: 5 visitor spaces per block with > 75 units per block =10 nos. for 2 residential blocks	
Total (I) + (II)	Minimum = 76 + 10 = 86 nos. Maximum = 133 + 10 = 143 nos.	
	Motorcycle Parking Space	

Use	HKPSG Recommendation 432 flats comprise of 378 flats @ 40.1 – 70m^2, 54 flats @ 70.1 – 100m^2	Proposed Provision
Residential	1 motorcycle parking space per 100 – 150 flats Minimum = 432 / 150 = 2.9, say 3 nos. Maximum = 432 / 100 = 4.3, say 5 nos.	13 nos. @ 2.4m(L) x 1m(W) x 2.4m(H) > maximum
	Loading / Unloading Bay	
Residential	Minimum of 1 loading / unloading bay for goods vehicles within the site for every 800 flats or part thereof, subject to a minimum of 1 bay for each housing block = minimum 2nos. for 2 residential blocks	2 nos. HGV@ 11m(L) x 3.5m(W) x 4.7m(H) = HKPSG recommendation, OK
	Bicycle parking spaces	
Residential	Bicycle parking spaces shall be provided in the residential developments where proper cycle tracks with direct connection to rail stations are accessible. The following guidelines on the level of bicycle parking provision for these residential developments are recommended: (a) within a 0.5-2km radius of a rail station, 1 bicycle parking space for every 15 flats with flat size smaller than 70m^2. (b) outside a 2km radius of a rail station, 1 bicycle parking space for every 30 flats with flat size smaller than 70m^2. Since the Proposed JPOMQ is located within 2km radius of the Tung Chung East Station, provision rate (a) is adopted, and the calculation based on the HKPSG is presented below: Bicycle parking spaces to be provided for 324 flats with flat size < 70m^2 = 324 / 15 = 21.6, say 22 nos.	22 nos. = HKPSG recommendation, OK

2.4 Table 2.2 shows that the car parking spaces, loading / unloading bay and bicycle parking spaces provided comply with the recommendation of the HKPSG.

2.5 In order to satisfy the operational needs of the residents of the Proposed JPOMQ at Area 134 in TCNTE, a total of 13 motorcycle parking spaces are provided.

2.6 The carpark layout plans for G/F and 1/F are shown in Figures 2.1 – 2.2.

Swept Path Analysis

2.7 The CAD-based swept path analysis program, Autodesk Vehicle Tracking, was used to check the ease of vehicle manoeuvring. Vehicles are found to have no manoeuvring problems and all vehicles could enter and leave the spaces with ease. The swept path analysis drawings for critical movements are found in Appendix A.

3.0 TRAFFIC IMPACT

Design Year

3.1 The Proposed JPOMQ at Area 134 in TCNTE is expected to be completed by 2031, and the design year adopted for this TIA is 2036.

Selected Junctions

3.2 The selected junctions for capacity analysis included the following:

- J1: Road D2 / Road L7;
- J2: Road P1 / Road D2;
- J3: Road P1 / Road D3;
- J4: Road D3 / Road L7;
- J5: Road L6 / Road L7;
- J6: Road D1 / Road D2 / Road D3;
- J7: Road D2 / Road L6;
- J8: Road P1 / Road D5;
- J9: Ying Hei Road / Ying Tung Road / Road P1;
- J10: Tung Chung Waterfront Road /Ying Hei Road / Yi Tung Road / Road L3;
- J11: Tai Ho Interchange; and
- J12 : Tung Chung East Interchange

3.3 The locations of selected junctions are shown in Figure 3.1.

2036 Traffic Flows

3.4 The 2036 traffic flows used for the junction analysis are produced with reference to the following:

(i) 2036 traffic flows from TIA study of CE69/2015 (CE);
(ii) the approved planned developments in the vicinity; and
(iii) Traffic generated by the Proposed JPOMQ at Area 134 in TCNTE.

The approved planned developments in the vicinity

3.5 The approved planned development included in the 2036 traffic flows are presented in Table 3.1.

TABLE 3.1 APPROVED PLANNED DEVELOPMENT IN THE VICINITY OF THE PROPOSED JPOMQ AT AREA 134 IN TCNTE

Site	Planning Application No.	Address	Application
1	A/I-TCE/1	Government Land at Area 99, Tung Chung, Lantau Island	Proposed Minor Relaxation of Plot Ratio Restriction for Permitted Flat and Public Transport Terminus or Station Uses, and Proposed Public Vehicle Park
2	A/I-TCE/2	Government Land at Area 109, Tung Chung, Lantau Island	Proposed Minor Relaxation of Plot Ratio Restriction for Permitted Public Housing Development
3	A/I-TCE/3	Government Land at Area 103, Tung Chung, Lantau Island	Proposed Minor Relaxation of Plot Ratio and Building Height Restrictions for Permitted Public Housing Development
4	A/I-TCE/4	Government Land at Area 133A, 133B and 133C, Tung Chung, Lantau Island	Proposed Minor Relaxation of Plot Ratio and Building Height Restrictions for Permitted Public Housing Development

Site	Planning Application No.	Address	Application
5	A/I-TCE/5	Government Land at Area 114 and 117, Tung Chung, Lantau Island	Proposed Minor Relaxation of Building Height Restriction for Permitted Public Housing Development

Traffic Generated by the Proposed JPOMQ at Area 134 in TCNTE

3.6 Trip generation survey was conducted during AM and PM weekday peak periods at 2 police quarters, the details of these 2 police quarters are found in Table 3.2.

TABLE 3.2 DETAILS OF 2 SURVEYED POLICE QUARTERS

Ref.	Police Quarters	Address	No. of flats	Distance from nearest MTR Station
1	Fan Garden	17 Fan Leng Lau Road, Fanling	1184	1.5km from Fanling Station
2	Tuen Mun Wu Hong Police Quarters	8 Wu Hong Street, Tuen Mun	336	2.3km from Tuen Mun Hang Station

3.7 The survey results and trip rates adopted for the Proposed JPOMQ at Area 134 in TCNTE is summarised in Table 3.3.

TABLE 3.3 ADOPTED TRIP RATES FOR THE PROPOSED JPOMQ AT AREA 134 IN TCNTE

Ref.	Police Quarters	AM Peak Hour		PM Peak Hour	
		IN	OUT	IN	OUT
Traffic Generation (pcu/hr)					
1	Fan Garden	54	49	70	42
2	Tuen Mun Wu Hong Police Quarters	15	14	19	12
Trip Rates (pcu/hour/flat)					
1	Fan Garden	0.0446	0.0417	0.0565	0.0357
2	Tuen Mun Wu Hong Police Quarters	0.0456	0.0414	0.0591	0.0355
3	Medium-Density / R(A) with an average flat size of 60m^2 [1]	0.0425	0.0718	0.0370	0.0286
	Adopted (maximum rates) =	0.0456	0.0718	0.0591	0.0357

Note: [1] the mean traffic rate from Transport Planning and Design Manual (TPDM)

3.8 Based on trip rates in Table 3.3, the traffic generation associated with the Proposed JPOMQ at Area 134 in TCNTE is calculated and presented in Table 3.4.

TABLE 3.4 TRAFFIC GENERATION OF THE PROPOSED JPOMQ AT AREA 134 IN TCNTE

Item	AM Peak Hour			PM Peak Hour		
	In	Out	2-way	In	Out	2-way
Trip Generation Rates (pcu/hour/flat) from Table 3.3						
Police Quarters	0.0456	0.0718	NA	0.0591	0.0357	NA
Traffic Generation of Proposed JPOMQ at Area 134 in TCNTE (pcu/hour)						
432 flats	20	32	52	26	16	42

2036 Traffic Flows

3.9 To conduct the capacity analysis, year 2036 traffic flows are derived as follows:

2036 without the Proposed JPOMQ at Area 134 in TCNTE [A]	=	2036 traffic flows adopted from the TIA study of CE69/2015 (CE) + (ii) Approved Planned Development in the vicinity of the Proposed JPOMQ at Area 134 in TCNTE
2036 with the Proposed JPOMQ at Area 134 in TCNTE [B]	=	[A] + Traffic generated by the Proposed JPOMQ at Area 134 in TCNTE in Table 3.4

3.10 The 2036 peak hour traffic flows for the cases without and with the Proposed JPOMQ at Area 134 in TCNTE, are found in Figures 3.2 – 3.3, respectively.

2036 Junction Operational Performance

3.11 Year 2036 capacity analysis for the cases without and with the Proposed JPOMQ at Area 134 in TCNTE is summarized in Table 3.5, and detail calculations are found in Appendix B.

TABLE 3.5 2036 JUNCTION OPERATIONAL PERFORMANCE

Ref.	Junction	Type of Junction / Parameter	Without the Proposed JPOMQ at Area 134 in TCNTE		With the Proposed JPOMQ at Area 134 in TCNTE	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Road D2 / Road L7	Signal / RC	45%	78%	43%	75%
J2	Road P1 / Road D2	Signal / RC	39%	85%	38%	84%
J3	Road P1 / Road D3	Signal / RC	26%	45%	25%	41%
J4	Road D3 / Road L7	Signal / RC	50%	79%	46%	74%
J5	Road L6 / Road L7	Signal / RC	26%	61%	25%	59%
J6	Road D1 / Road D2 / Road D3	Signal / RC	31%	97%	28%	94%
J7	Road D2 / Road L6	Signal / RC	29%	74%	28%	72%
J8	Road P1 / Road D5	Signal / RC	29%	28%	29%	28%
J9	Ying Hei Road / Ying Tung Road / Road P1	Signal / RC	43%	45%	41%	44%
J10	Tung Chung Waterfront Road /Ying Hei Road / Yi Tung Road / Road L3	Signal / RC	71%	69%	69%	68%
J11	Tai Ho Interchange	Roundabout / DFC	0.19	0.17	0.19	0.17
J12	Tung Chung East Interchange	Roundabout / DFC	0.52	0.54	0.52	0.54

Note: RC – reserve capacity DFC – Design flow / capacity ratio

3.12 Table 3.5 shows that the junctions are expected to operate with capacities during the 2036 AM and PM peak hours for the cases without and with the Proposed JPOMQ at Area 134 in TCNTE.

2036 Link Capacity Assessment

3.13 2036 link capacity for the case without and with the Proposed JPOMQ at Area 134 in TCNTE is summarised in Table 3.6.

TABLE 3.6 2036 LINK CAPACITY ASSESSMENT

Ref.	Links	Direction	Design Flow (pcu/hr)	Traffic Flow (pcu/hr)		V/C Ratio	
				AM Peak	PM Peak	AM Peak	PM Peak
Without the Proposed JPOMQ at Area 134 in TCNTE							
L1	Road P1 (between Ying Tung Road and Road D5)	EB	920	665	545	0.72	0.59
		WB	920	120	145	0.13	0.16
L2	Road D2 (between Road P1 and Road L7)	NB	2800	110	125	0.04	0.04
		SB	2800	1460	1055	0.52	0.38
L3	Road P1 (between Road D3 and Road D2)	EB	3000	1404	1114	0.47	0.37
		WB	3000	2070	1772	0.69	0.59
L4	Road D3 (between Road P1 and Road L7)	NB	2800	1235	1125	0.44	0.40
		SB	2800	670	415	0.24	0.15
L5	Road L7 (between Road D3 and Road L6)	EB	920	675	670	0.73	0.73
		WB	920	170	155	0.18	0.17
L6	Road D3 (between Road L7 and Road L9)	NB	2800	295	295	0.11	0.11
		SB	2800	285	70	0.10	0.03
L7	Road D3 (between Road D1 and Road L9)	NB	2800	360	255	0.13	0.09
		SB	2800	285	75	0.10	0.03
L8	Road D2 (between Road D3 and Road L6)	EB	2800	910	575	0.33	0.21
		WB	2800	155	105	0.06	0.04
L9	Road D2 (between Road L6 and Road L7)	NB	2800	115	80	0.04	0.03
		SB	2800	920	600	0.33	0.21
L10	Road P1 (between Road D5 and Road D3)	EB	3000	1169	1164	0.39	0.39
		WB	3000	1275	1117	0.43	0.37
L11	Road P1 (between Ying Tung Road and Road D5)	EB	3000	715	745	0.24	0.25
		WB	3000	665	550	0.22	0.18
L12	Ying Hei Road	EB	2800	645	651	0.23	0.23
		WB	2800	693	673	0.25	0.24
L13	Yi Tung Road	NB	2800	745	876	0.27	0.31
		SB	2800	668	643	0.24	0.23
L14	Road P1 (between Road D2 and Tai Ho Interchange)	EB	3400	2754	2044	0.81	0.60
		WB	3400	2070	1772	0.61	0.52
With the Proposed JPOMQ at Area 134 in TCNTE							
L1	Road P1 (between Ying Tung Road and Road D5)	EB	920	681	553	0.74	0.60
		WB	920	136	153	0.15	0.17
L2	Road D2 (between Road P1 and Road L7)	NB	2800	110	125	0.04	0.04
		SB	2800	1476	1063	0.53	0.38
L3	Road P1 (between Road D3 and Road D2)	EB	3000	1404	1114	0.47	0.37
		WB	3000	2080	1785	0.69	0.60
L4	Road D3 (between Road P1 and Road L7)	NB	2800	1255	1151	0.45	0.41
		SB	2800	686	423	0.25	0.15
L5	Road L7 (between Road D3 and Road L6)	EB	920	685	683	0.74	0.74
		WB	920	186	163	0.20	0.18
L6	Road D3 (between Road L7 and Road L9)	NB	2800	305	308	0.11	0.11
		SB	2800	285	70	0.10	0.03
L7	Road D3 (between Road D1 and Road L9)	NB	2800	370	268	0.13	0.10
		SB	2800	285	75	0.10	0.03
L8	Road D2 (between Road D3 and Road L6)	EB	2800	920	588	0.33	0.21
		WB	2800	155	105	0.06	0.04
L9	Road D2 (between Road L6 and Road L7)	NB	2800	115	80	0.04	0.03
		SB	2800	930	613	0.33	0.22
L10	Road P1 (between Road D5 and Road D3)	EB	3000	1179	1177	0.39	0.39
		WB	3000	1291	1125	0.43	0.38
L11	Road P1 (between Ying Tung Road and Road D5)	EB	3000	725	758	0.24	0.25
		WB	3000	681	558	0.23	0.19
L12	Ying Hei Road	EB	2800	655	664	0.23	0.24
		WB	2800	709	681	0.25	0.24
L13	Yi Tung Road	NB	2800	755	889	0.27	0.32
		SB	2800	684	651	0.24	0.23

Ref.	Links	Direction	Design Flow (pcu/hr)	Traffic Flow (pcu/hr)		V/C Ratio	
				AM Peak	PM Peak	AM Peak	PM Peak
L14	Road P1 (between Road D2 and Tai Ho Interchange)	EB	3400	2770	2052	0.81	0.60
		WB	3400	2080	1785	0.61	0.53

3.14 Table 3.6 shows that the traffic generated by Proposed JPOMQ at Area 134 in TCNTE has negligible traffic impact to the road link analysed.

4.0 CONCLUSION

4.1 The subject site is located at Area 134 in TCNTE, and it abuts Road D2 to the east and Road L7 to the south. The Proposed JPOMQ at Area 134 in TCNTE with 432 units is to be built at Area 134 in TCNTE.

4.2 The car parking spaces, loading / unloading bay and bicycle parking spaces provided by the Proposed JPOMQ at Area 134 in TCNTE comply with recommendation of the HKPSG. In order to satisfy the operational needs of the residents of the Proposed JPOMQ at Area 134 in TCNTE, a total of 13 motorcycle parking spaces are provided.

4.3 The Proposed JPOMQ at Area 134 in TCNTE is expected to be completed by 2031 and the design year adopted for this TIA is 2036. The 2036 junction and link capacity analysis are expected to operate with capacities during peak hours for the cases without and with the Proposed JPOMQ at Area 134 in TCNTE.

4.4 It is concluded that the Proposed JPOMQ at Area 134 in TCNTE will result in no adverse traffic impact to the surrounding road networks. From traffic engineering grounds, the Proposed JPOMQ at Area 134 in TCNTE is acceptable.

Figures

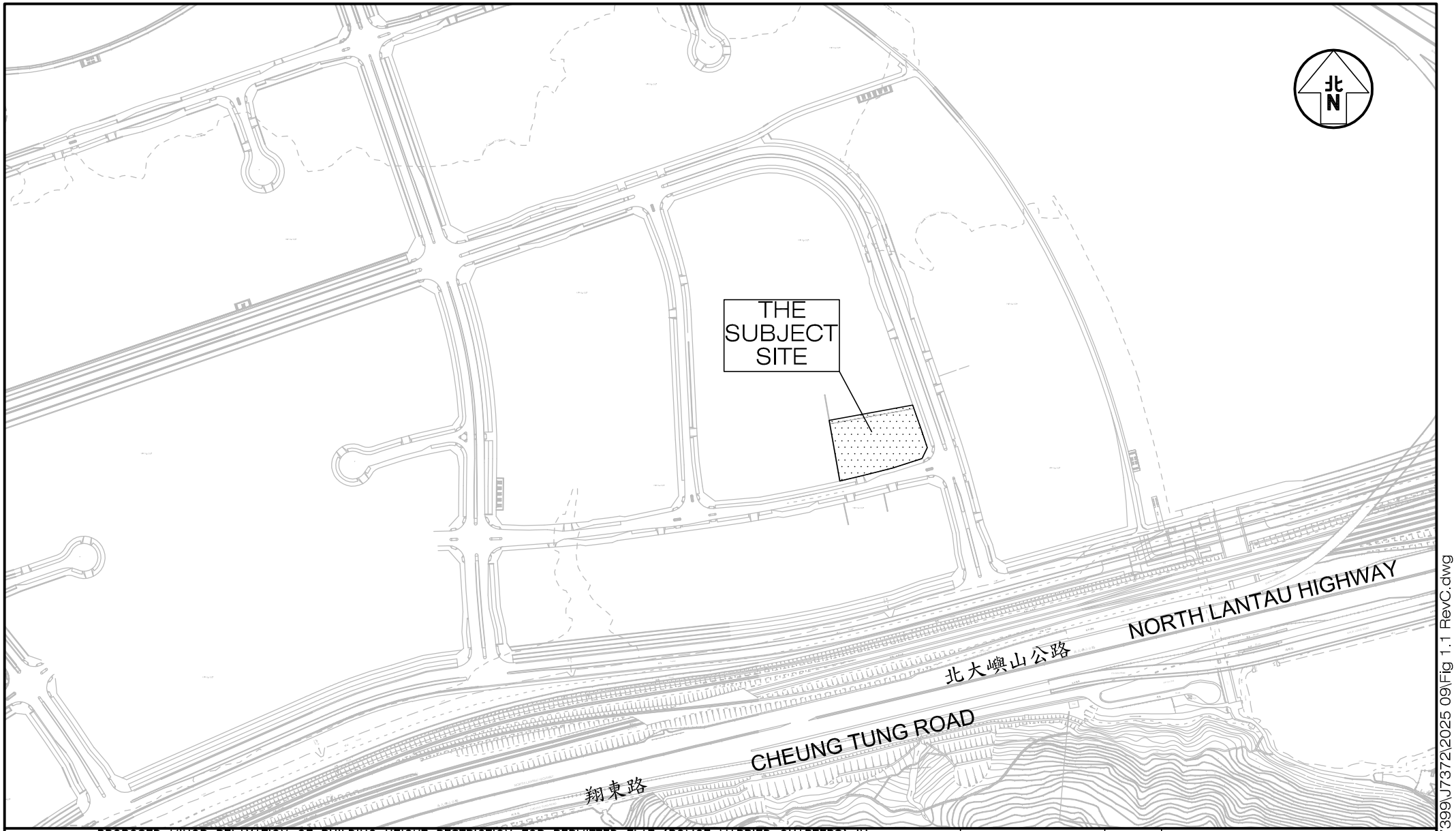

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Figure Title

LOCATION OF SUBJECT SITE

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1.1	C

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CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road,
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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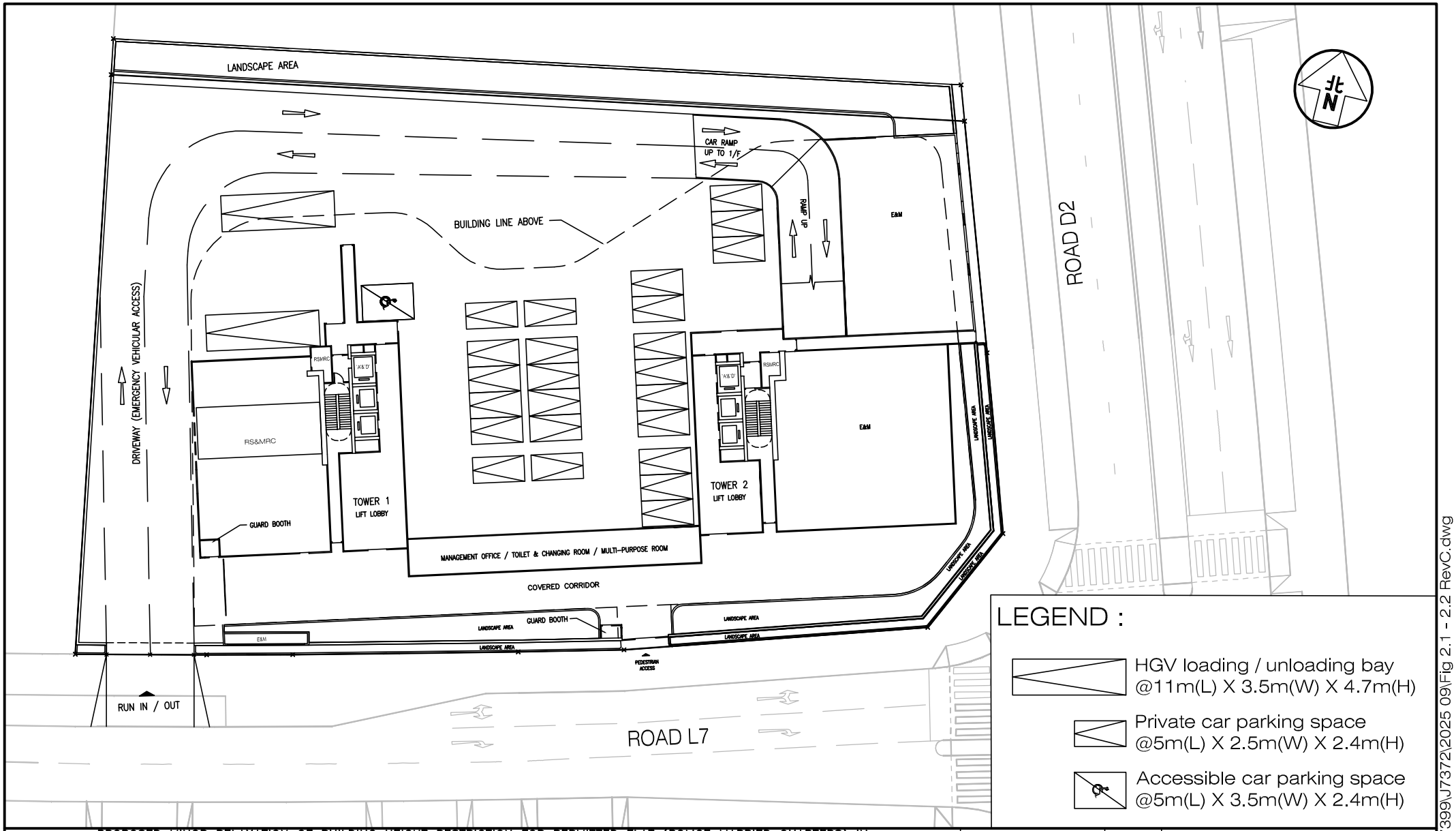

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Figure Title: G/F LAYOUT PLAN

Figure No.	Revision
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CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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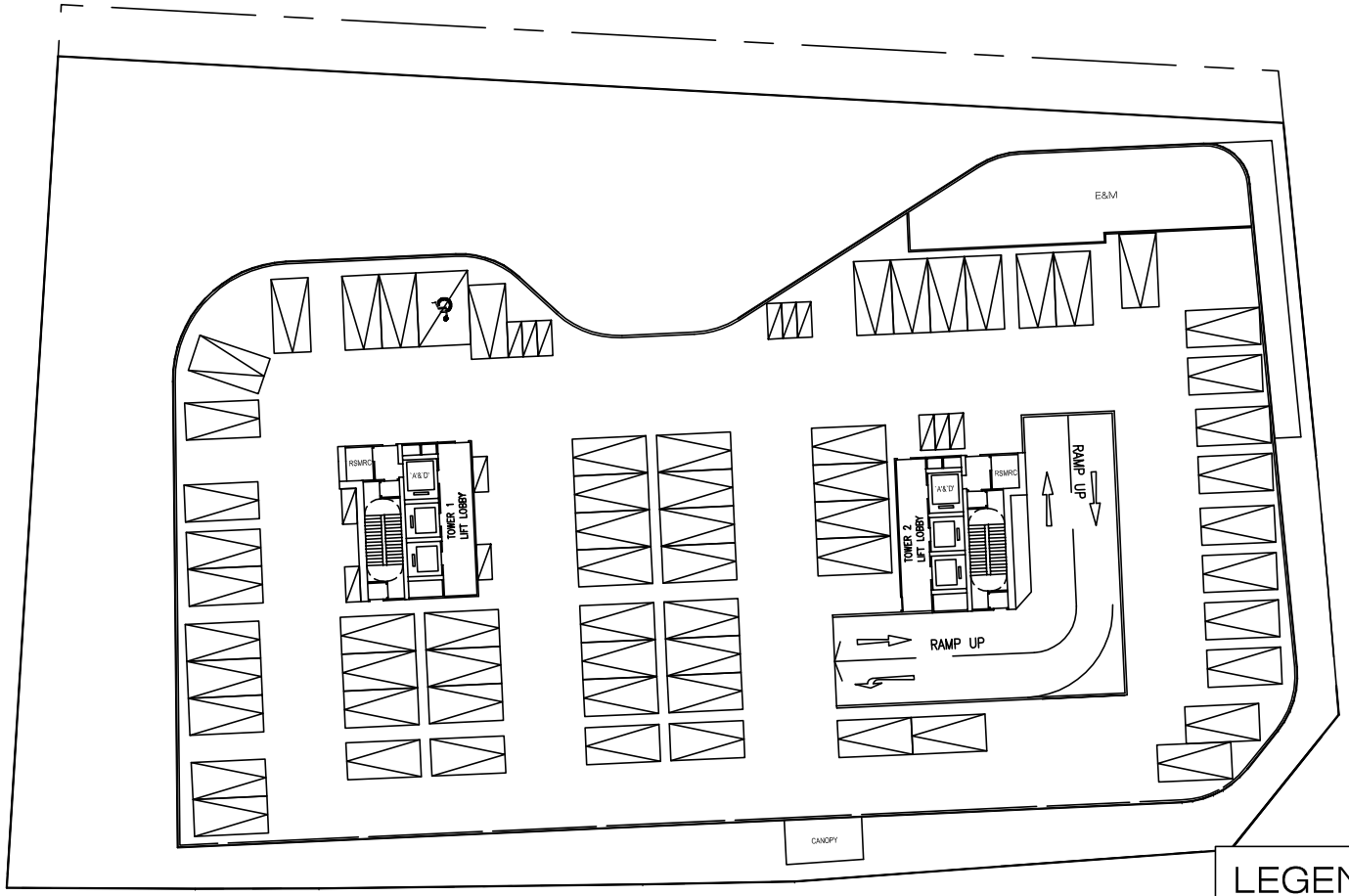

LEGEND :

- Private car parking space @5m(L) X 2.5m(W) X 2.4m(H)
- Accessible car parking space @5m(L) X 3.5m(W) X 2.4m(H)
- Motorcycle parking space @2.4m(L) X 1m(W) X 2.4m(H)

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Figure Title: 1/F LAYOUT PLAN

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21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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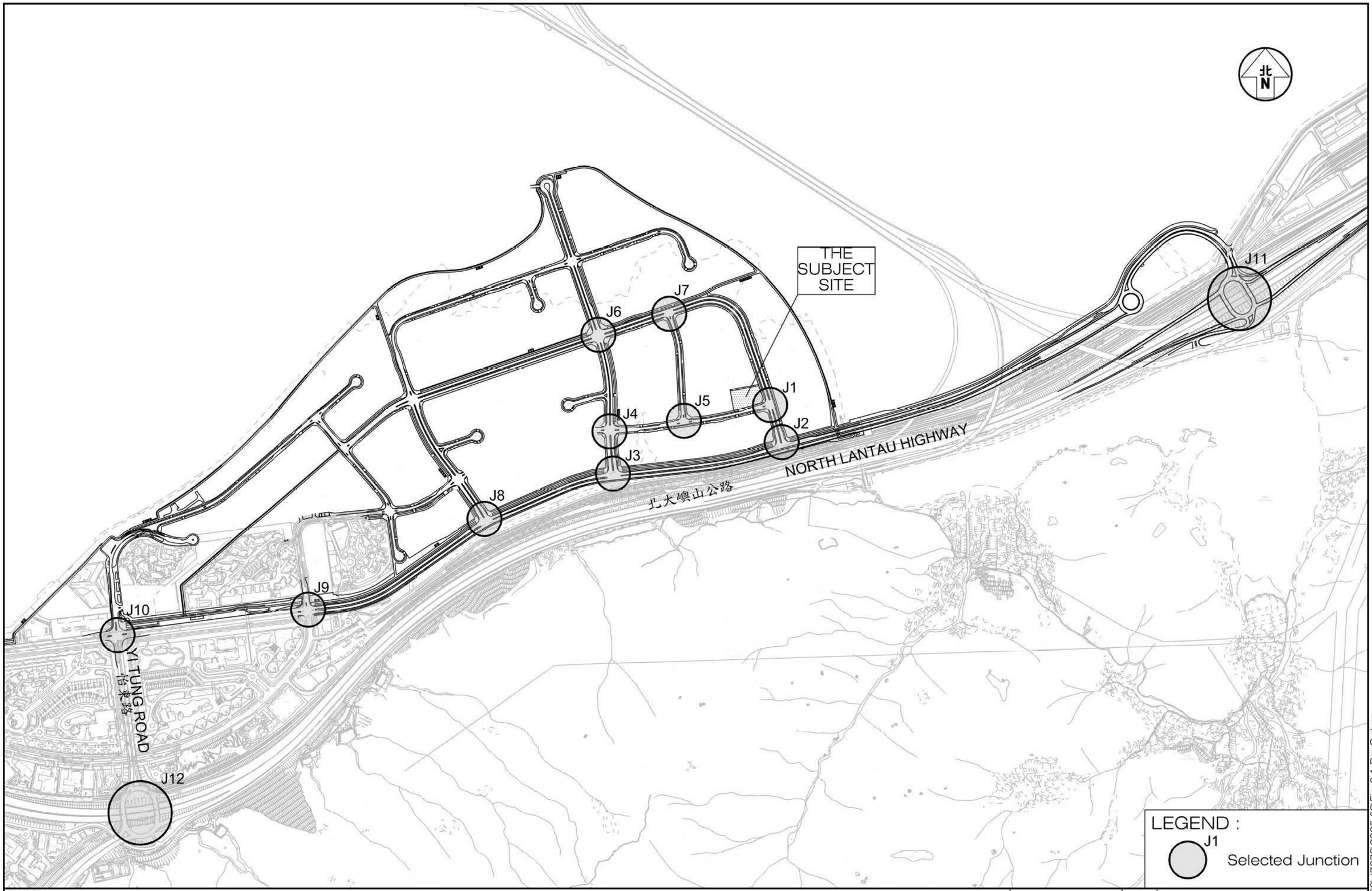

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Figure Title: LOCATIONS OF SELECTED JUNCTIONS

Figure No. 3.1 | Revision C

Designed by L C H | Drawn by N C M | Checked by K C

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CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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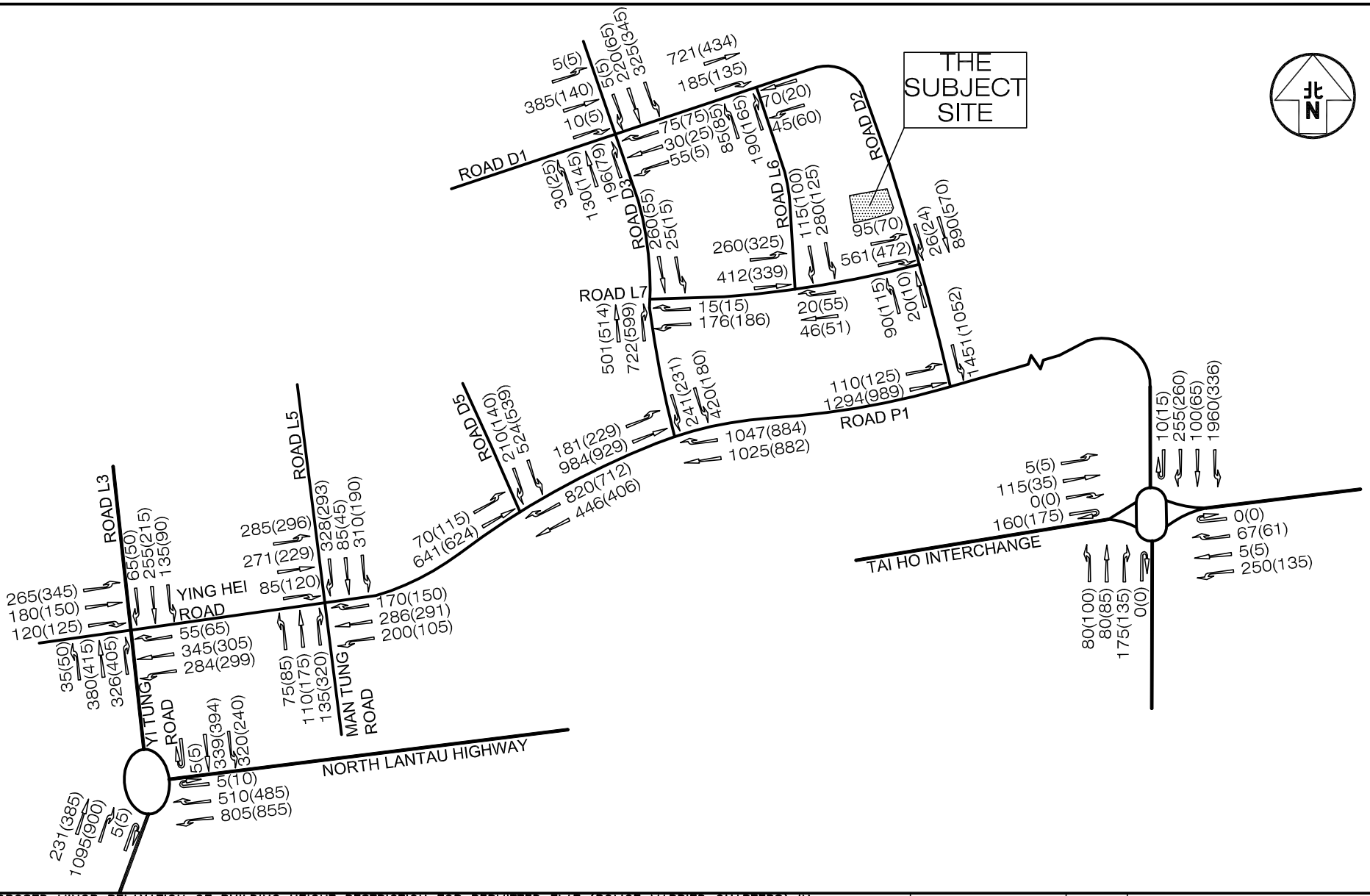

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Figure Title	2036 PEAK HOUR TRAFFIC FLOWS WITHOUT THE PROPOSED JPOMQ AT AREA 134 IN TCNTE		Designed by L C H / Drawn by N C M / Checked by K C
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CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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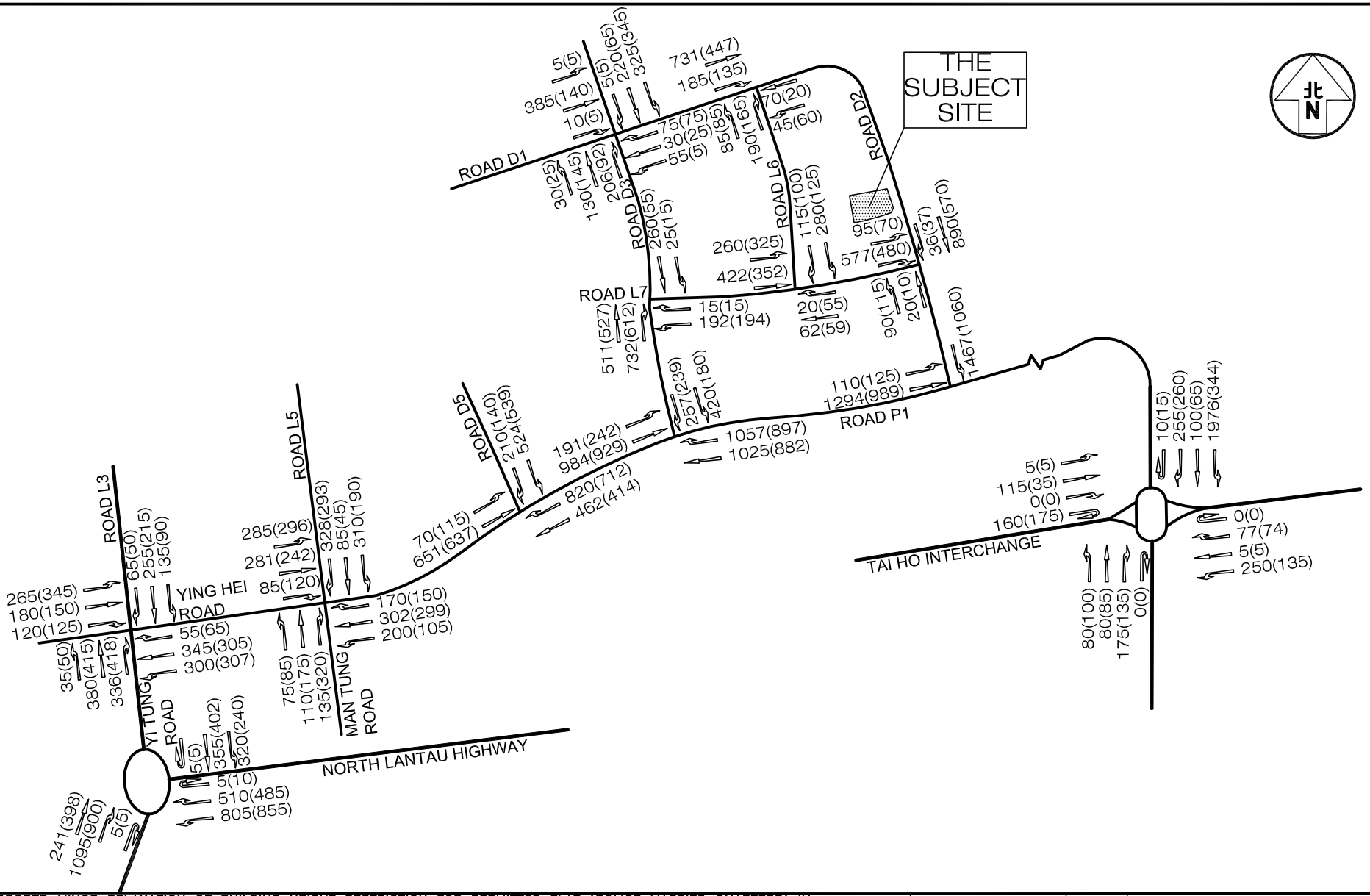

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Figure Title	2036 PEAK HOUR TRAFFIC FLOWS WITH THE PROPOSED JPOMQ AT AREA 134 IN TCNTE		Designed by L C H / Drawn by N C M / Checked by K C
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CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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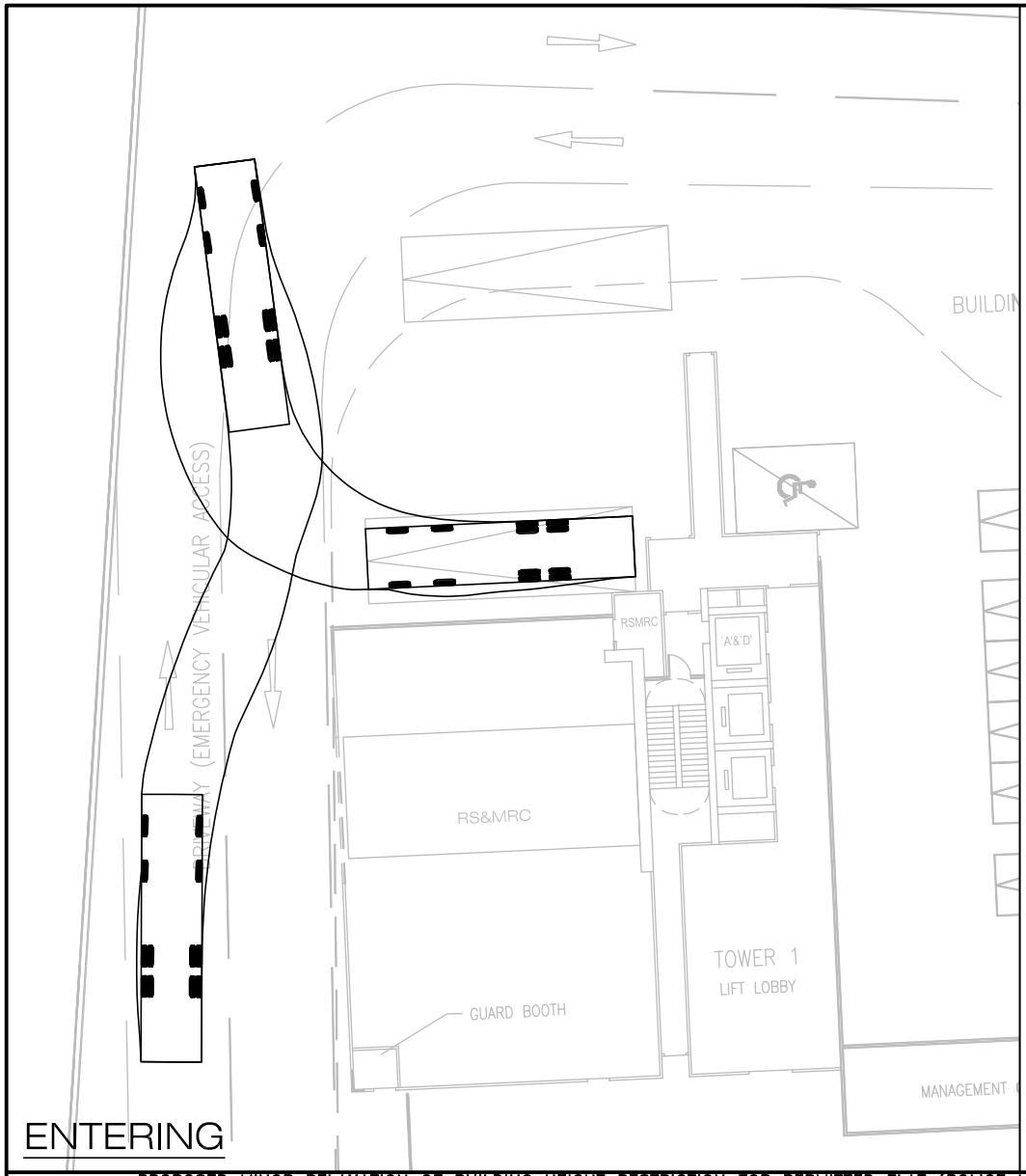
Appendix A– Swept Path Analysis



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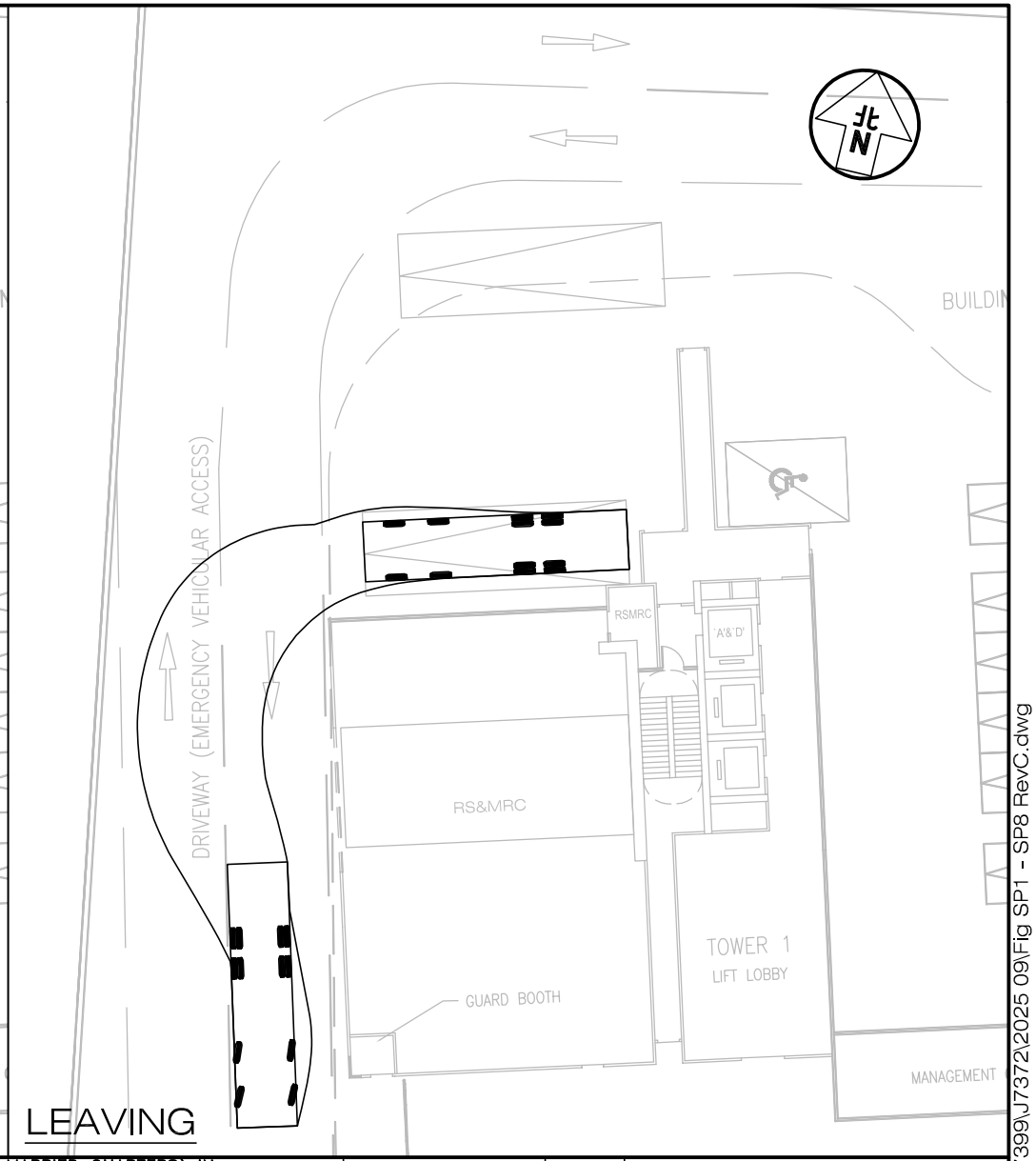

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Figure Title

SWEPT PATH OF HGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY HGV ON G/F

Figure No.	Revision
SP1	C

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Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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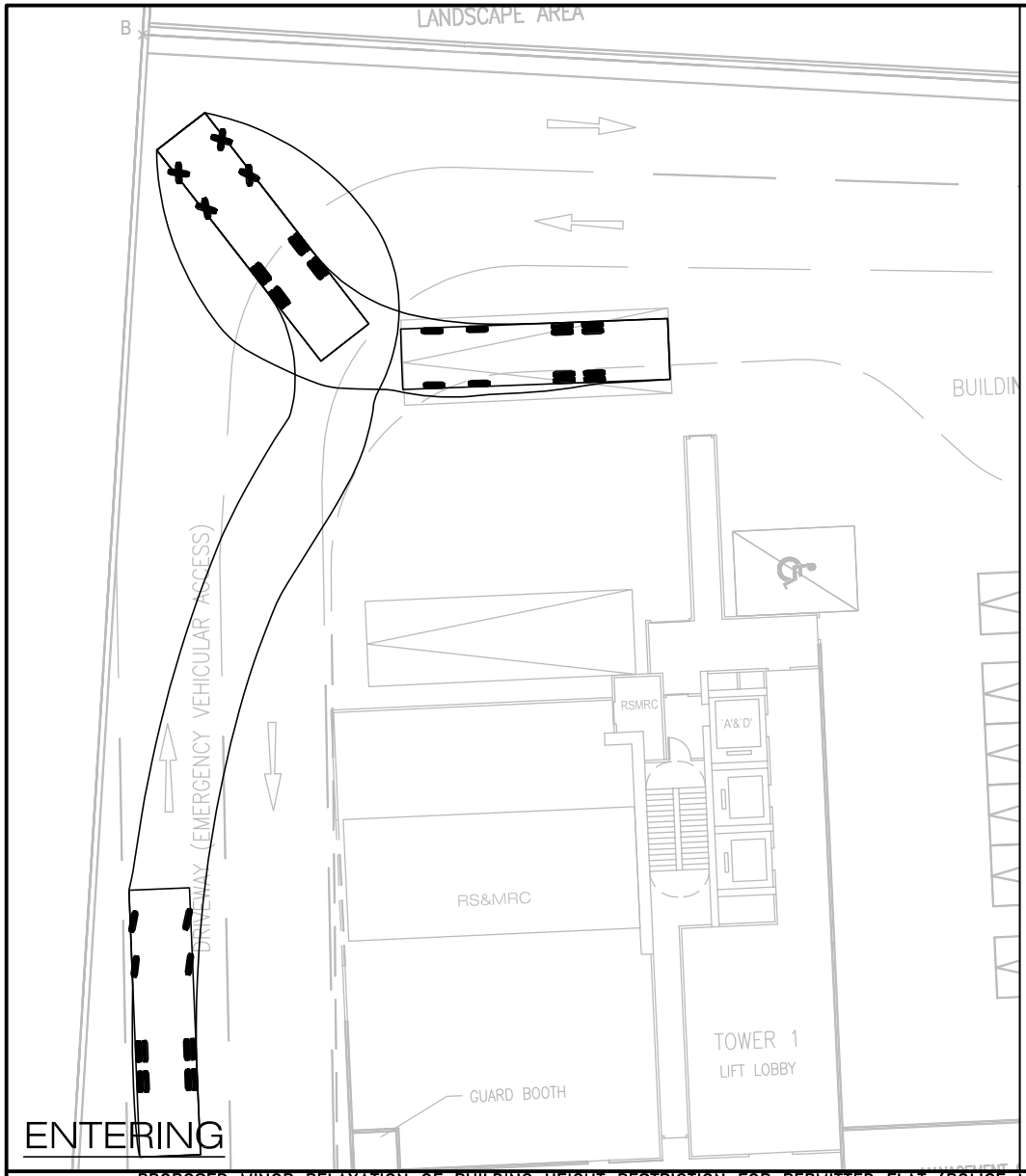

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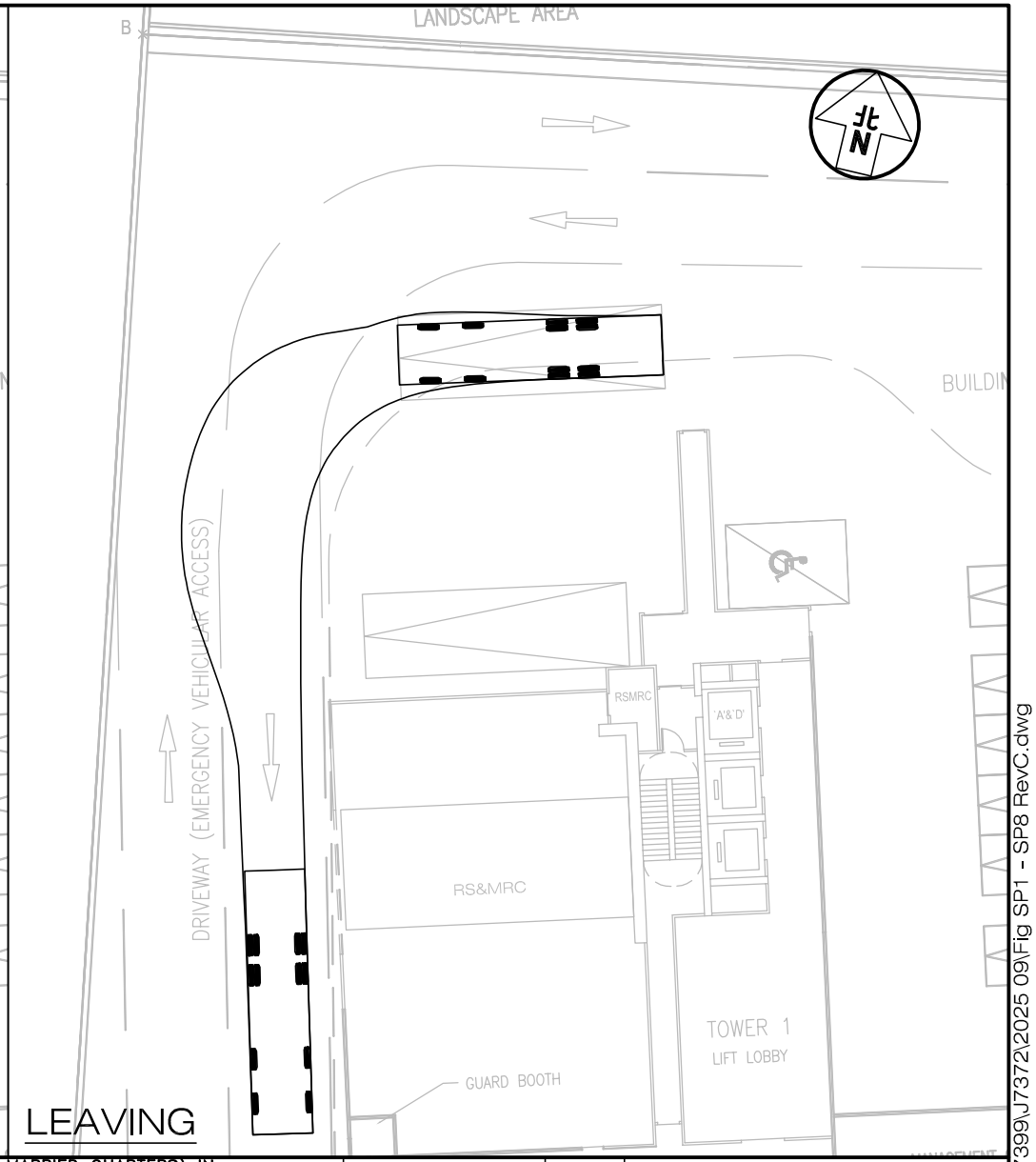

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Figure Title

SWEPT PATH OF HGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY HGV ON G/F

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Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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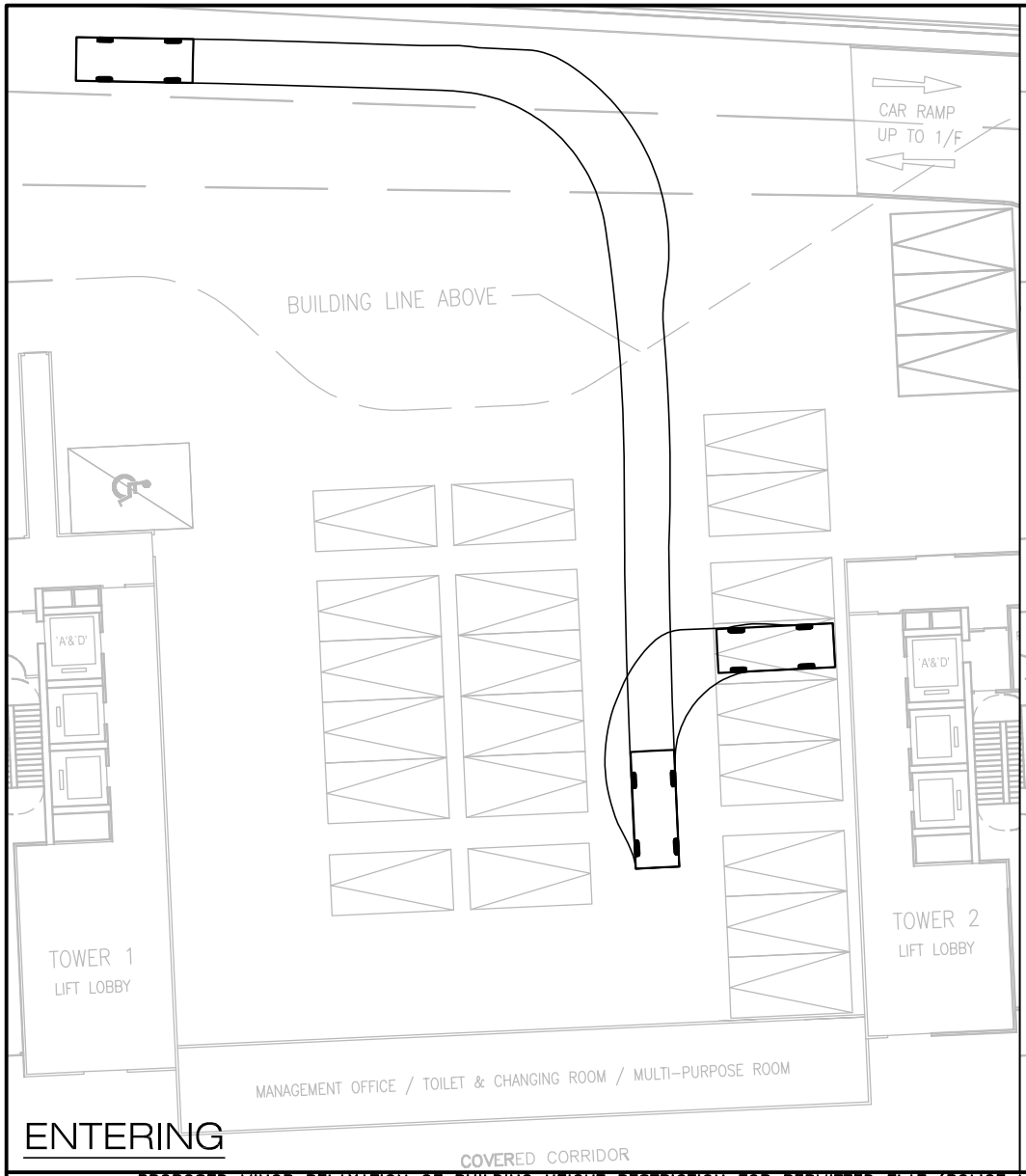

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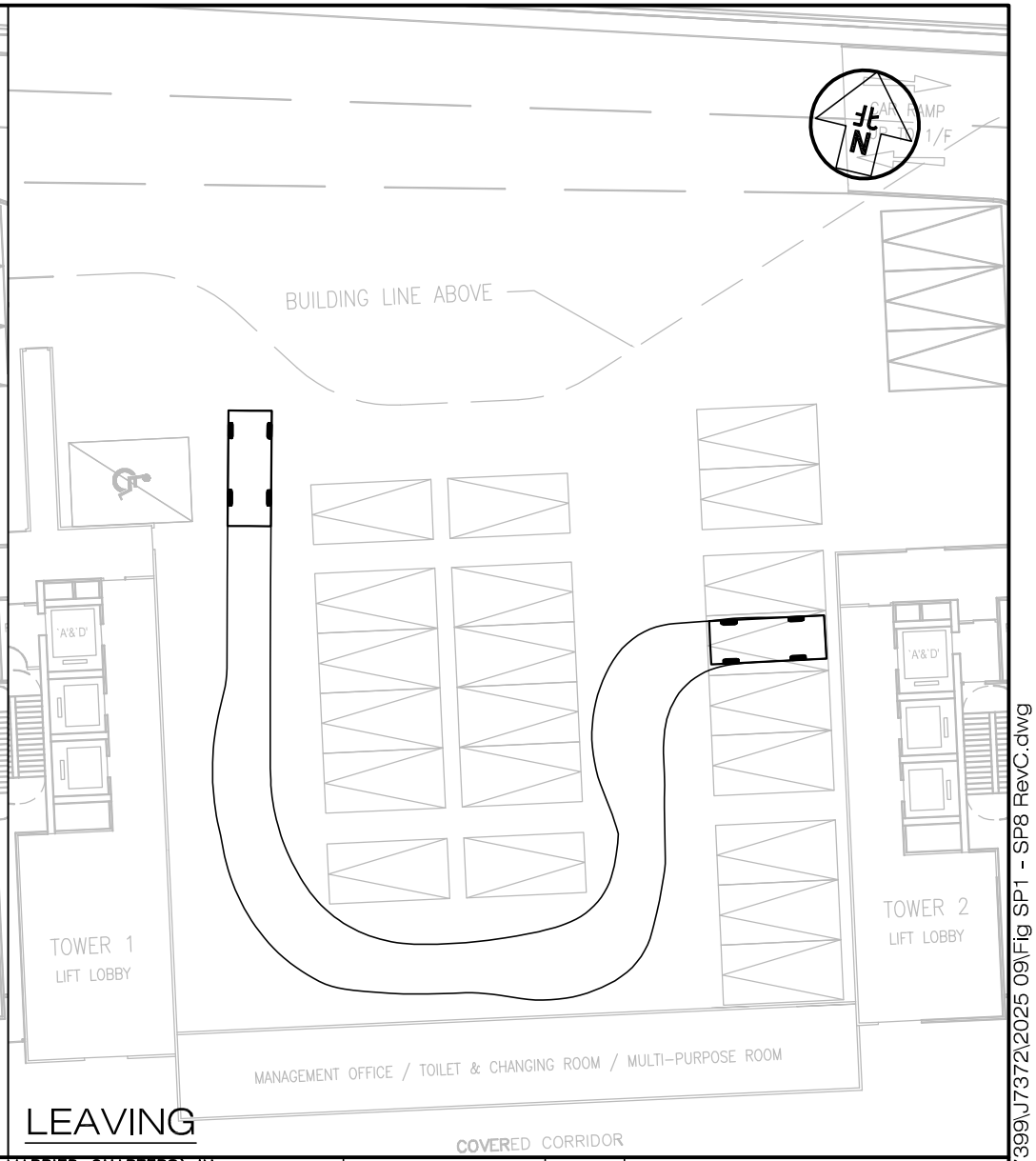

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Figure Title

SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE ON G/F

Figure No.	Revision
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Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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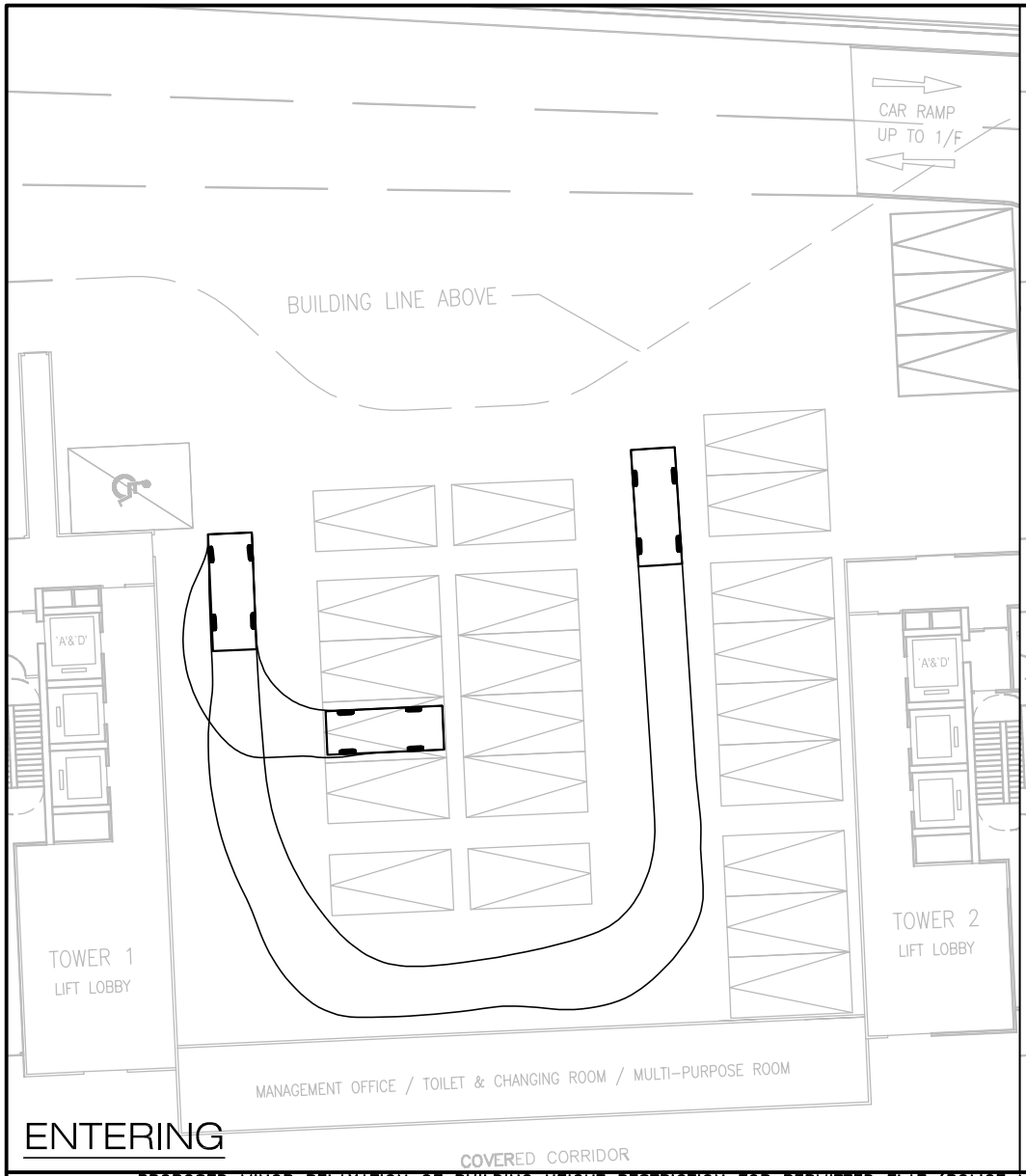

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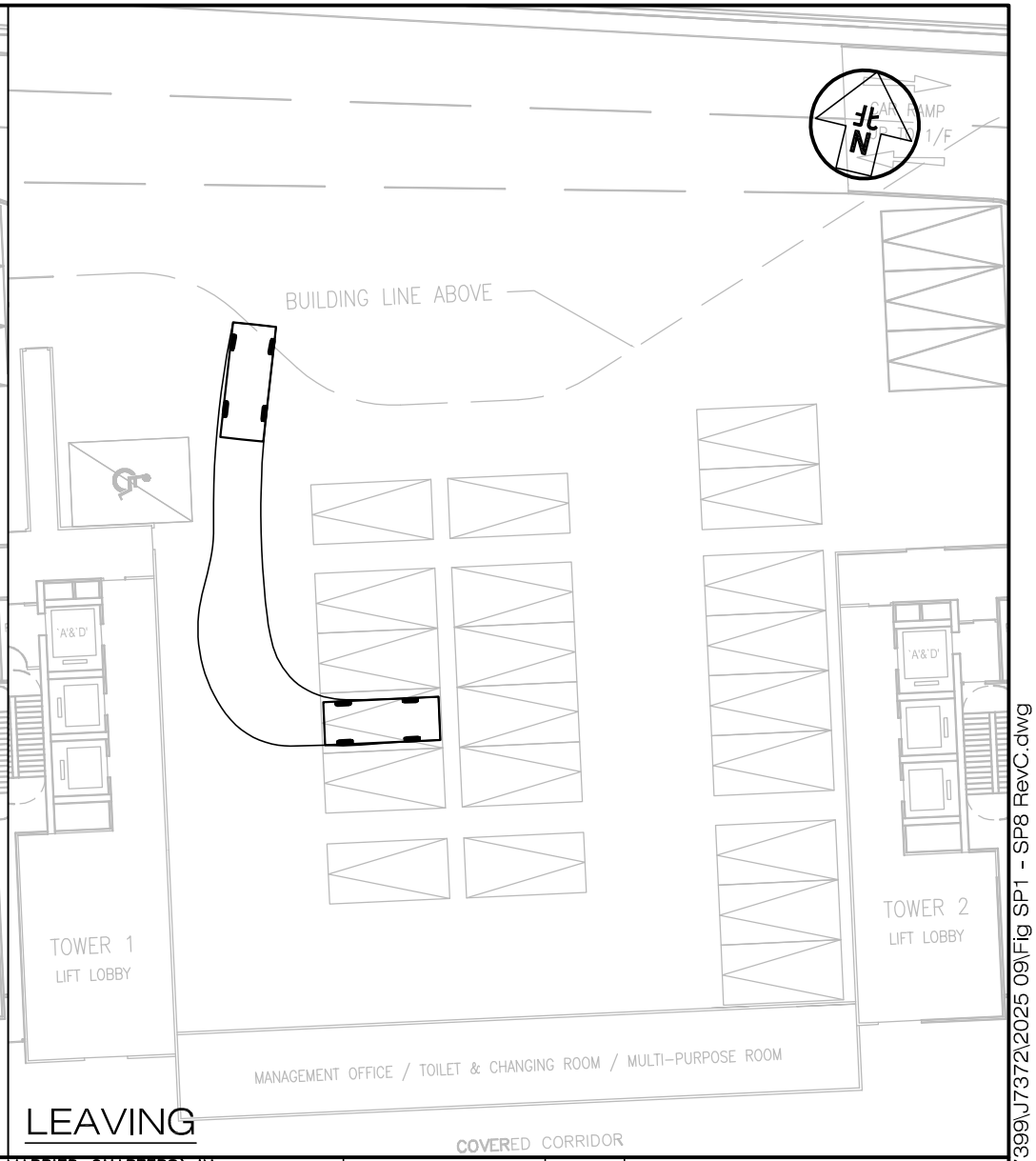

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Figure Title

SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE ON G/F

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CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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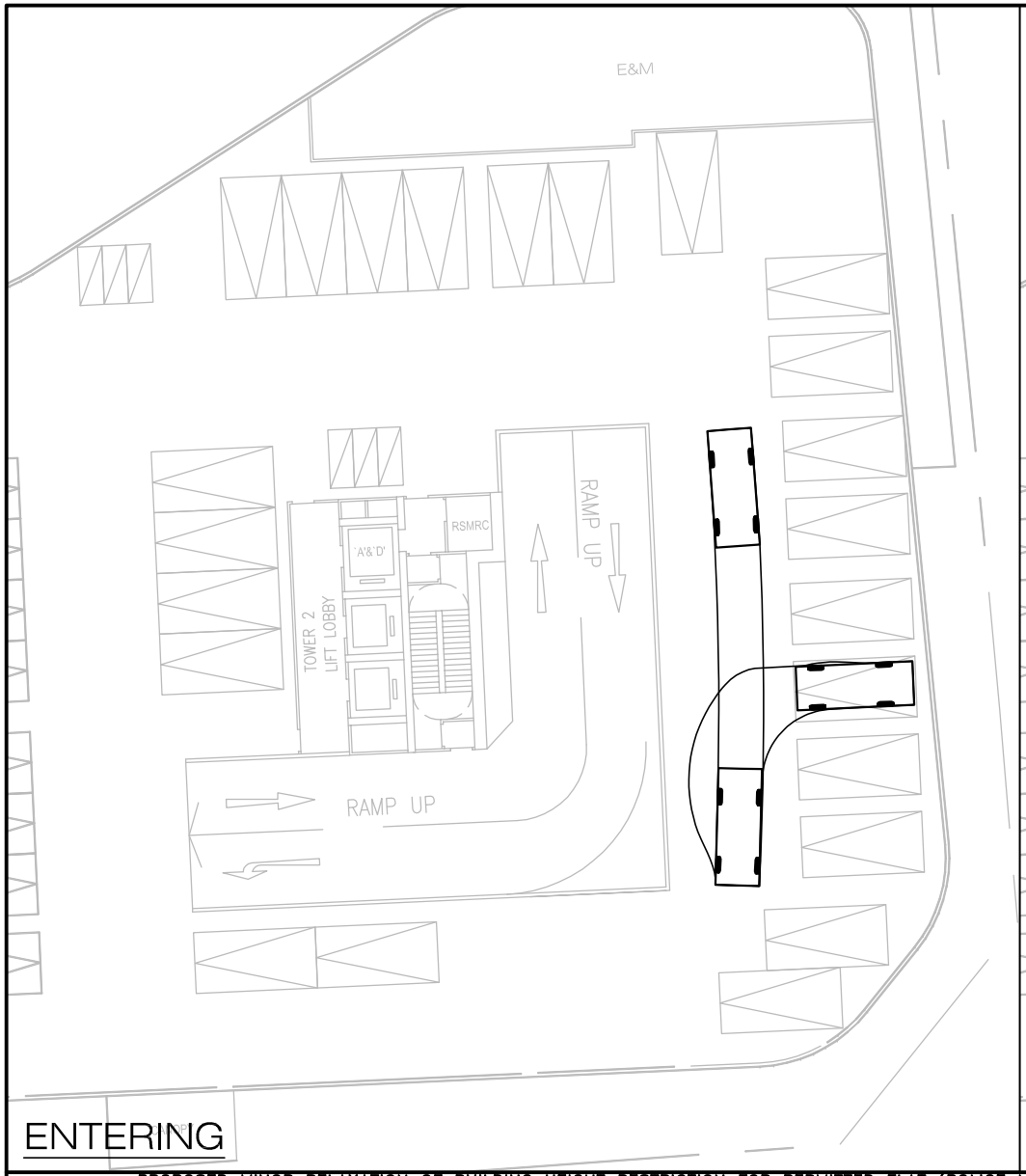

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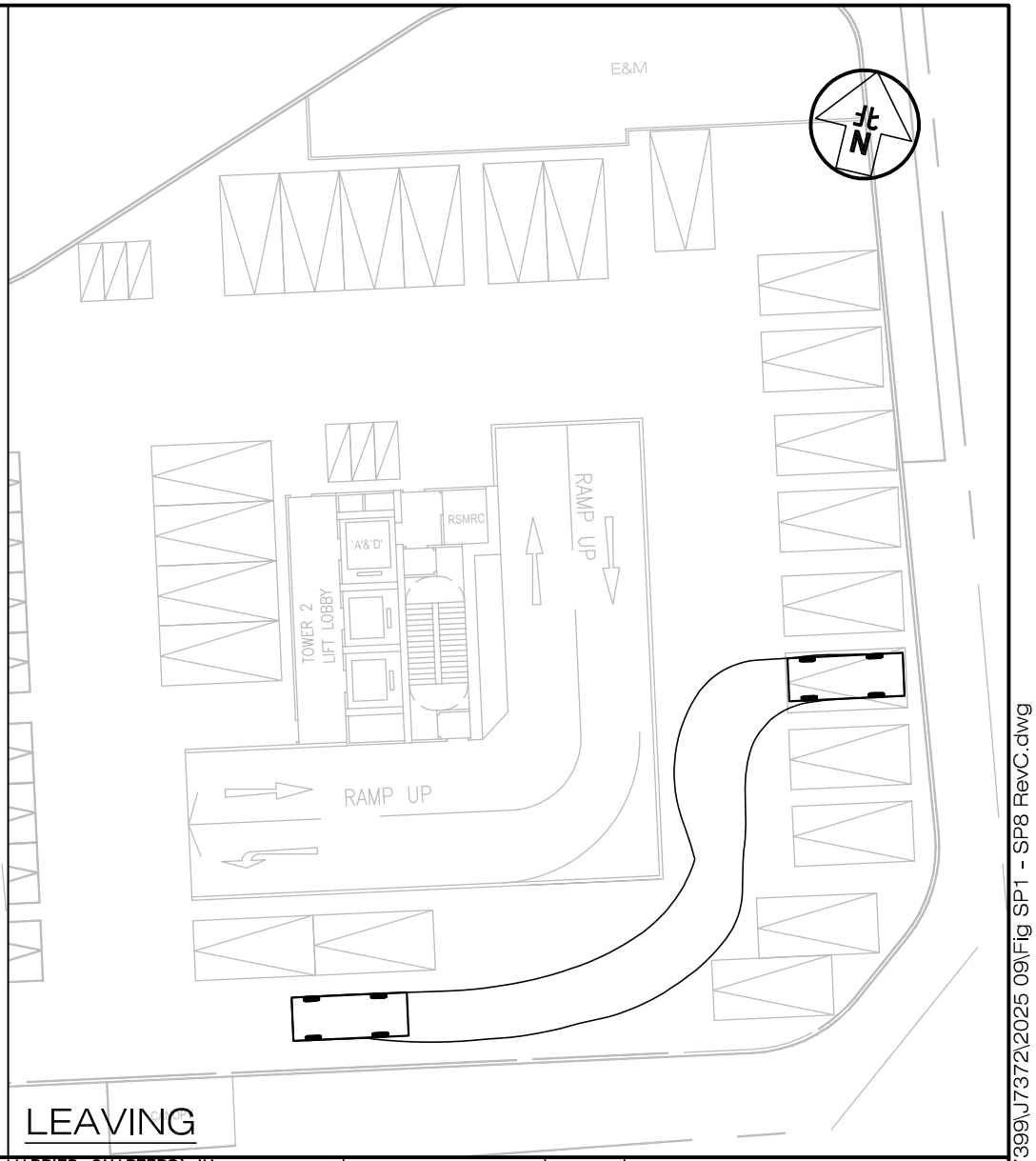

LEAVING

Project Title: PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY(1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND J7372

Figure Title

SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE ON 1/F

Figure No.	Revision
SP5	C

Designed by	Drawn by	Checked by
L C H	N C M	K C

Scale in A4	Date
1 : 300	10 SEP 2025

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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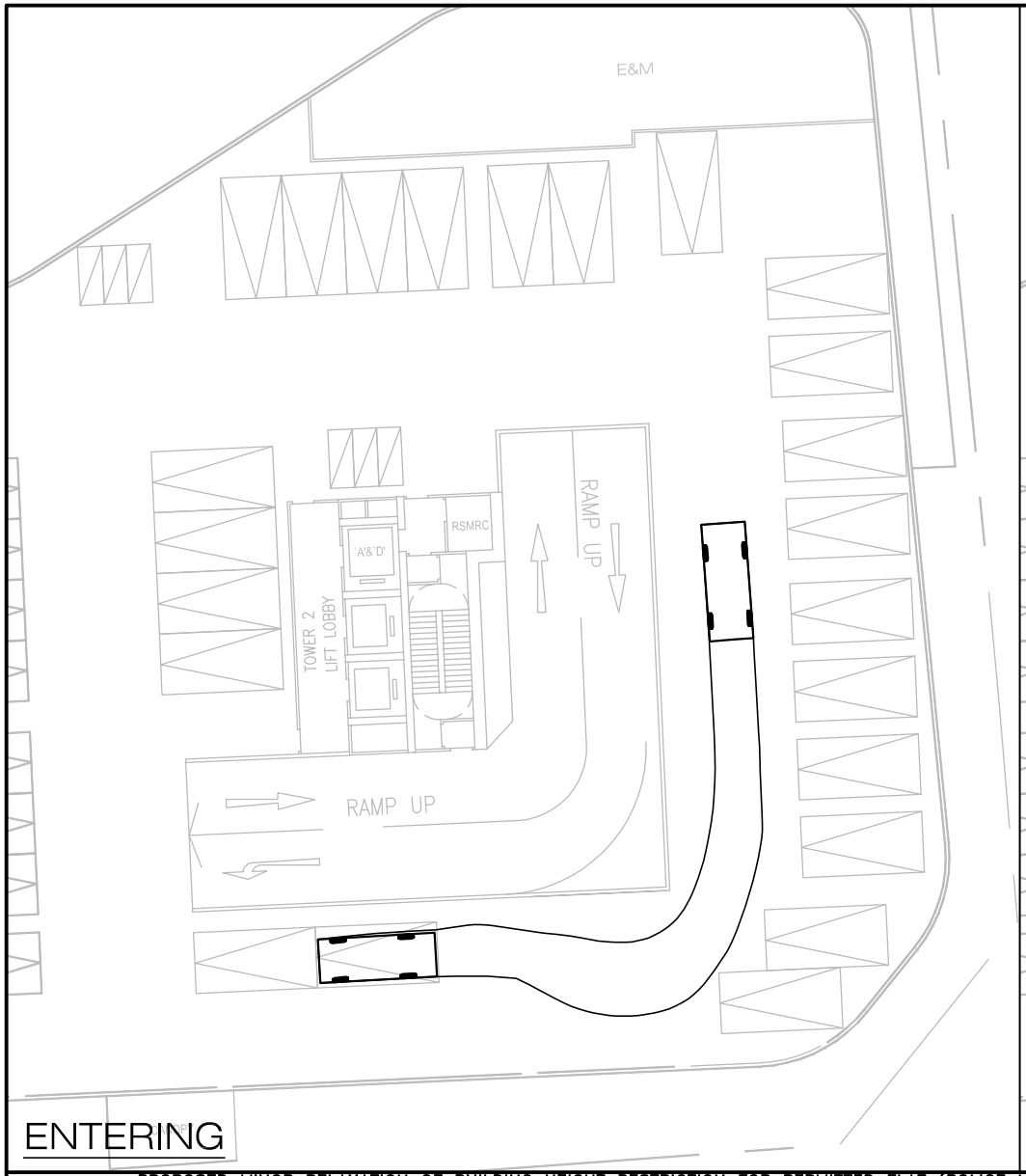

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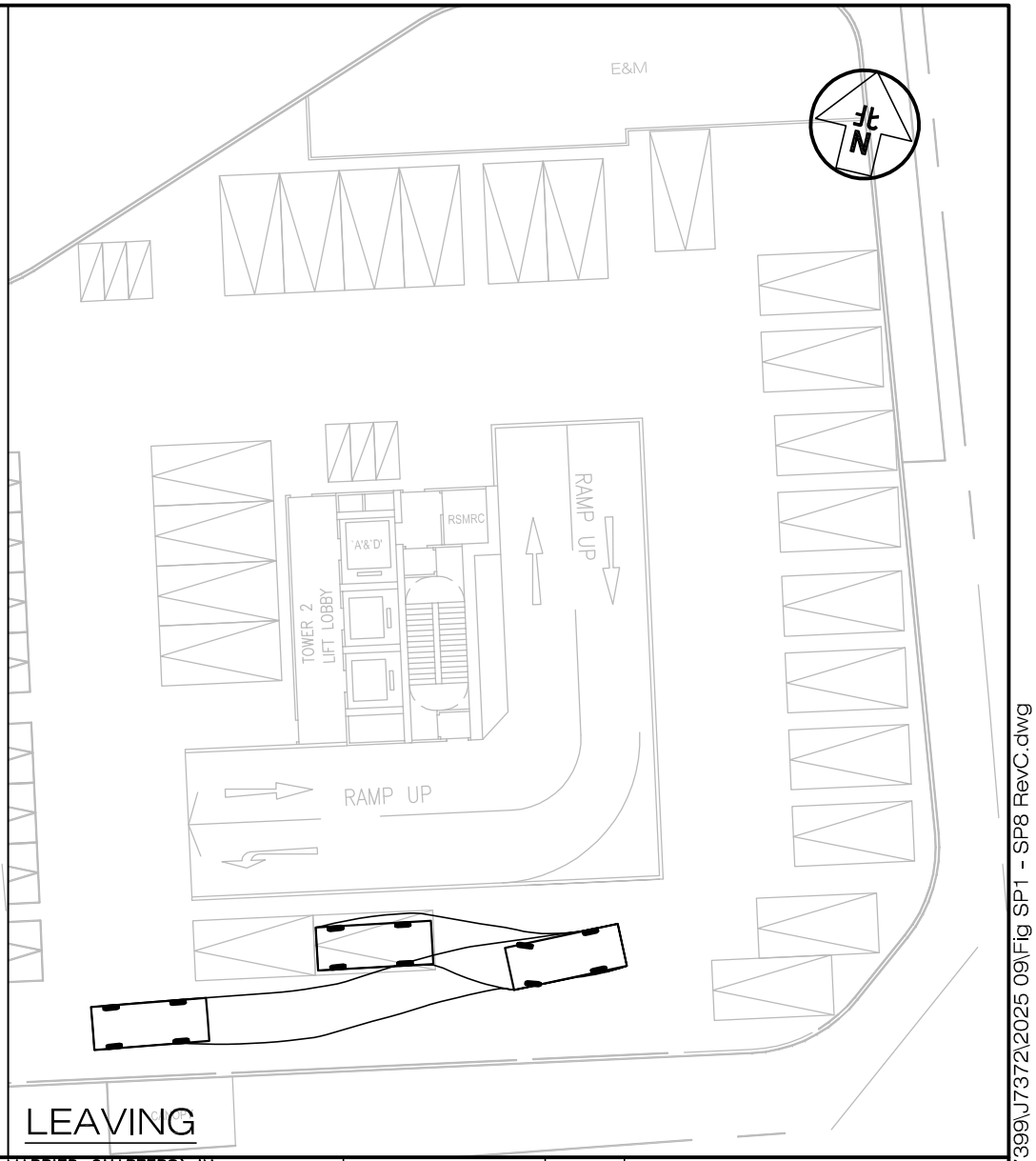

LEAVING

Project Title: PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY(1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND J7372

Figure Title

SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE ON 1/F

Figure No.	Revision
SP6	C

Designed by	Drawn by	Checked by
L C H	N C M	K C

Scale in A4	Date
1 : 300	10 SEP 2025

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Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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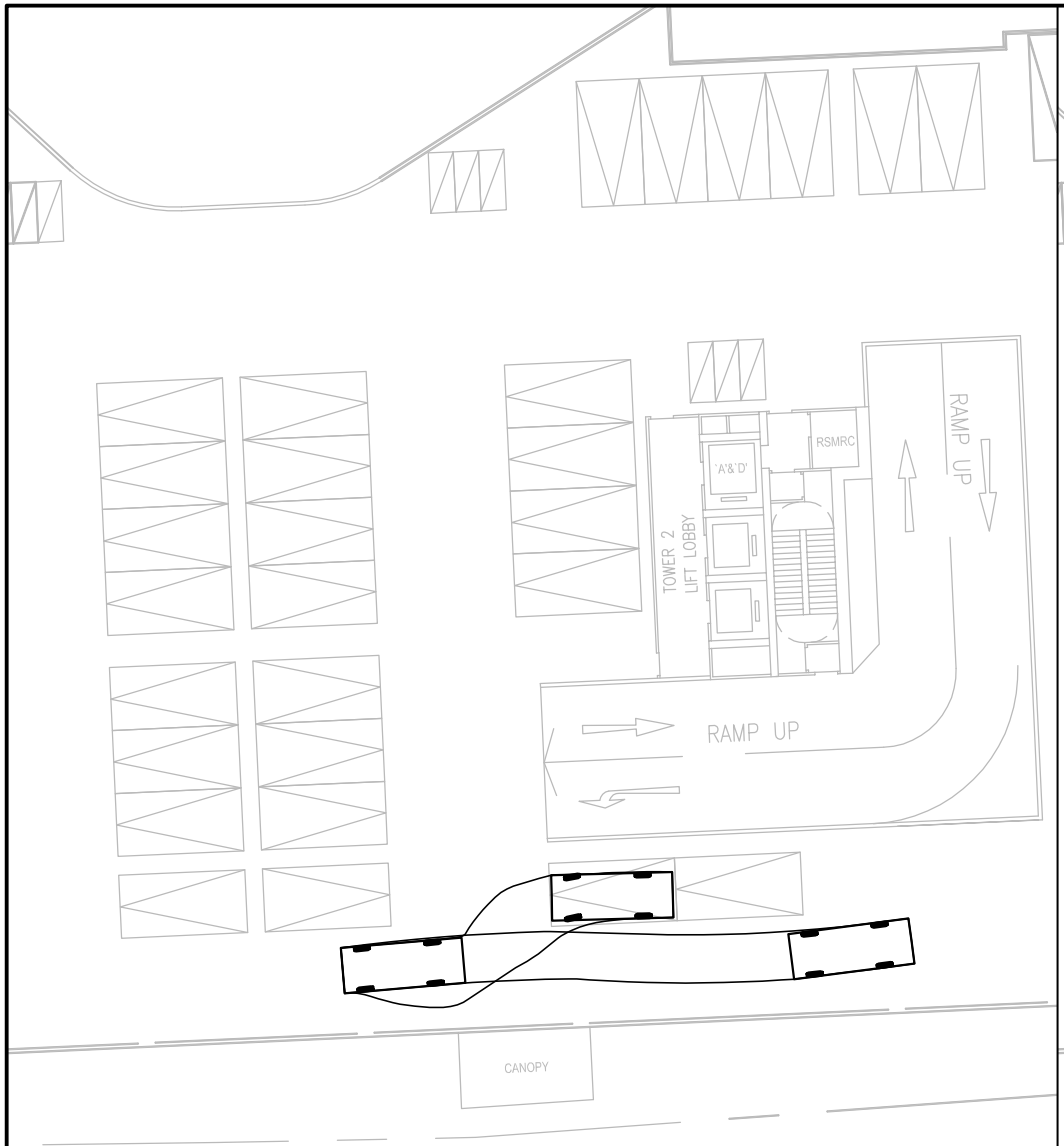

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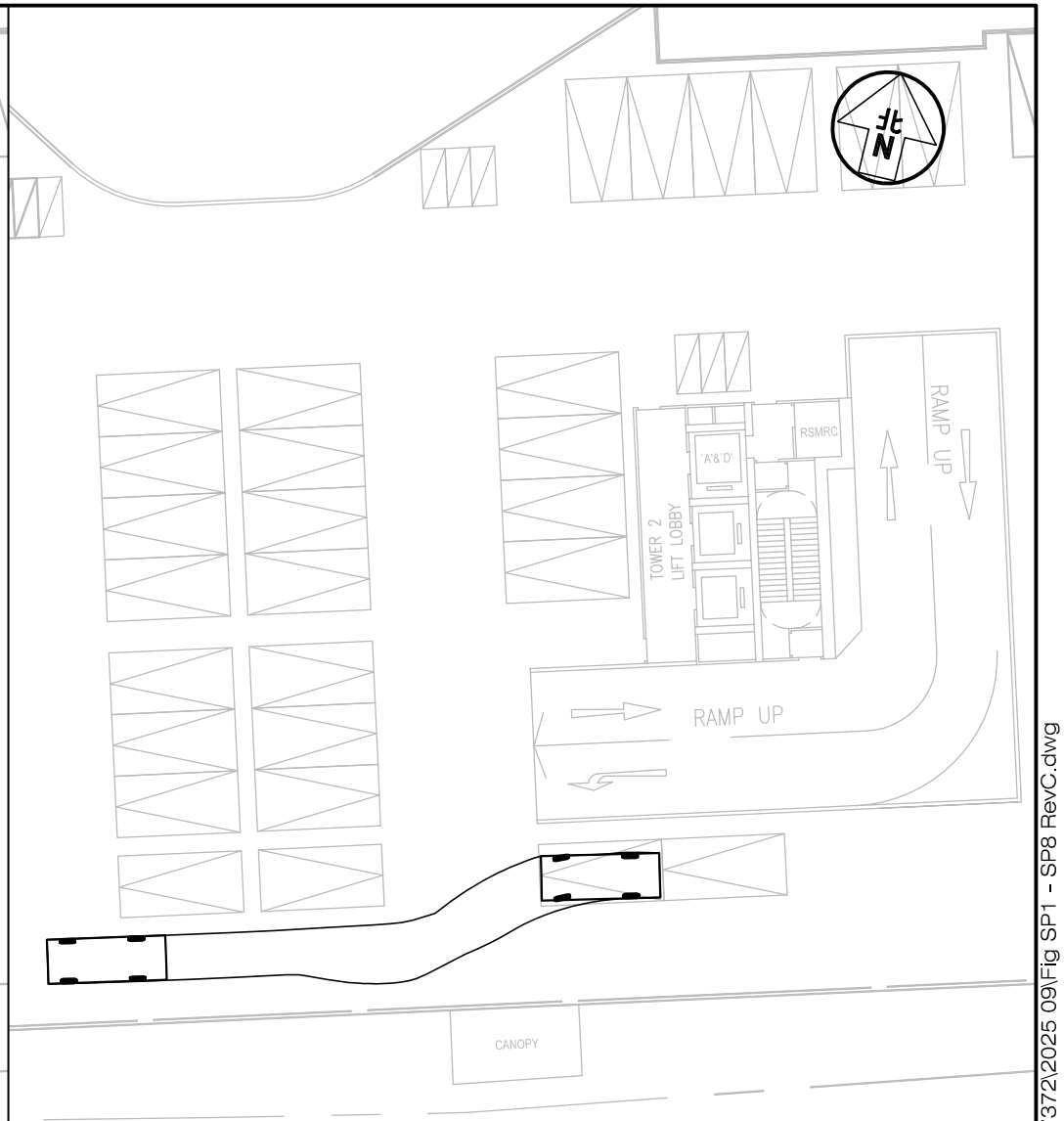

LEAVING

Project Title: PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY(1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND J7372

Figure Title

SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE ON 1/F

Figure No.	Revision
SP7	C

Designed by	Drawn by	Checked by
L C H	N C M	K C

Scale in A4	Date
1 : 300	10 SEP 2025

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Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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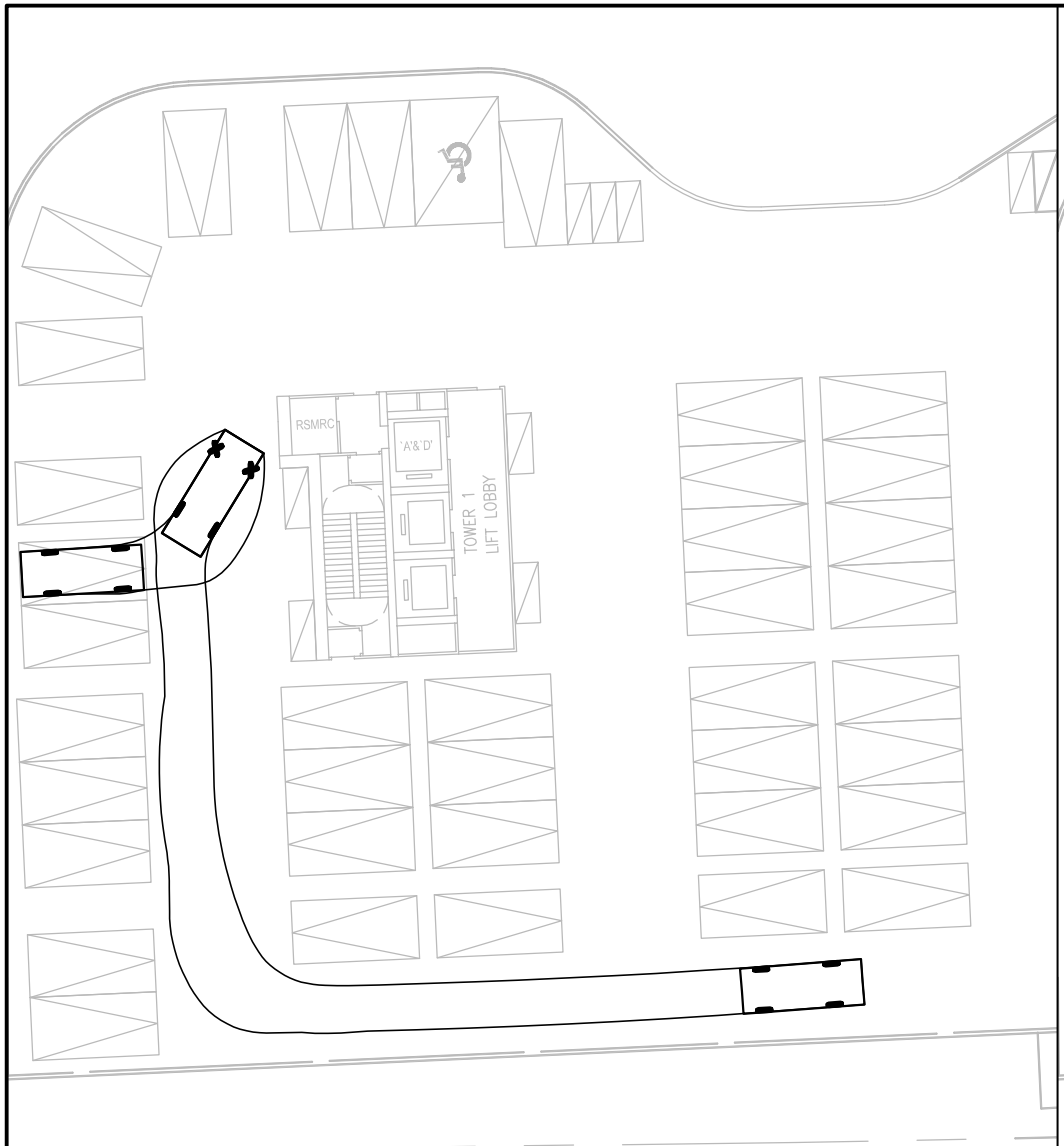

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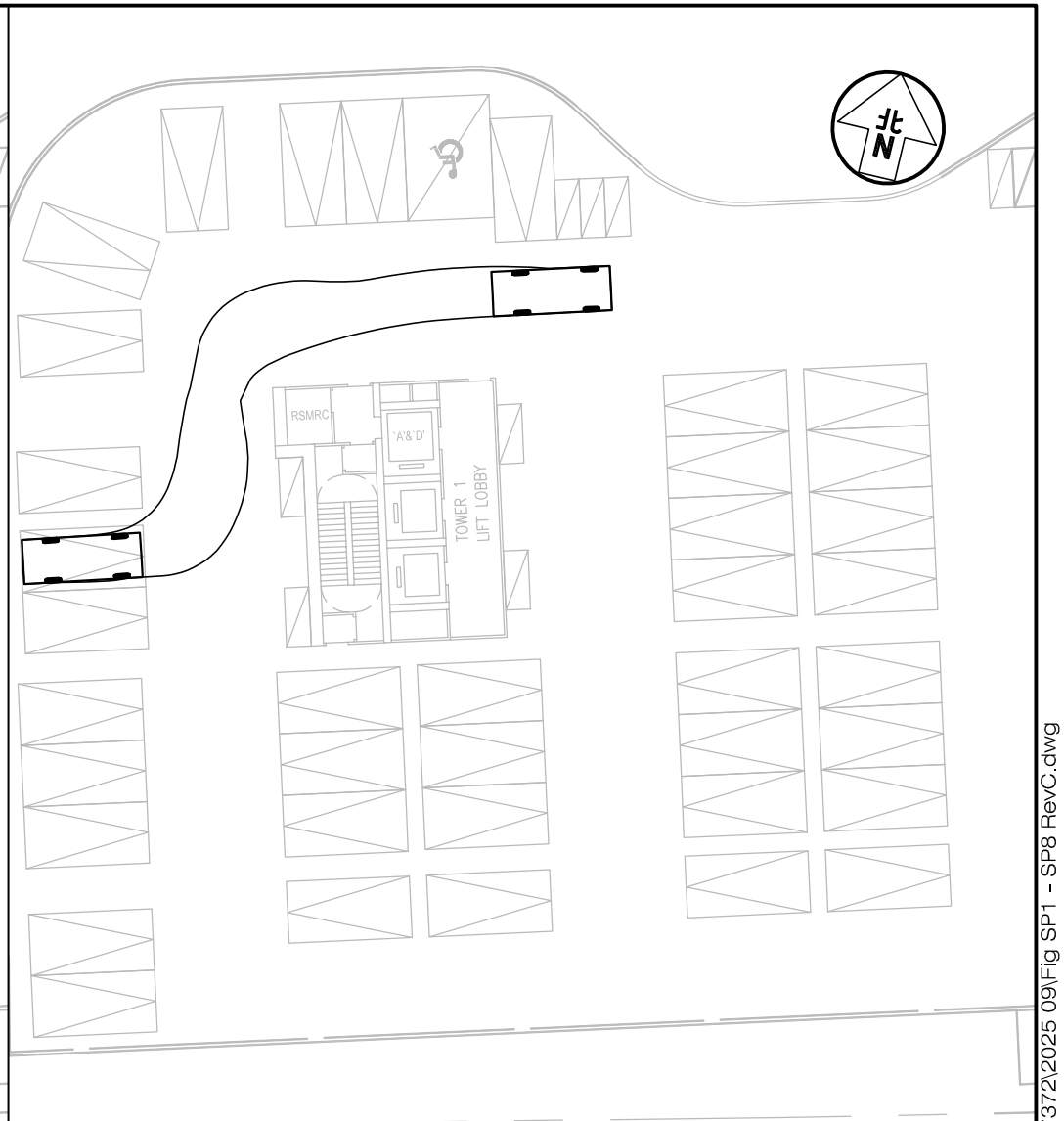

LEAVING

Project Title: PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY(1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND J7372

Figure Title

SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE ON 1/F

Figure No.	Revision
SP8	C

Designed by	Drawn by	Checked by
L C H	N C M	K C

Scale in A4	Date
1 : 300	10 SEP 2025

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Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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Appendix B – Calculation

Signal Junction Analysis

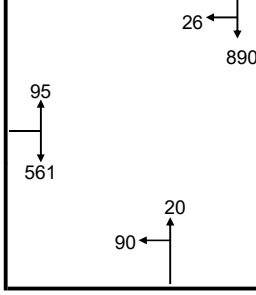
Junction: Road D2 / Road L7 Job Number: J7372

Scenario: Future Condition (Without Proposed JPOMQ) P. 1

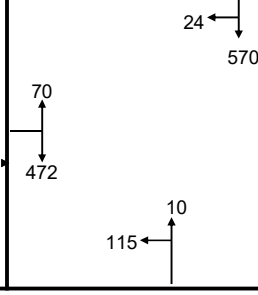
Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road D2 SB	SA	A1	1	3.30				1945	292	0.150	0.150		1945	189	0.097	
	SA	A2	1	3.30				2085	313	0.150			2085	203	0.097	
	SA+RT	A3	1	3.30	30.0		10	2075	311	0.150		15	2069	202	0.098	0.098
Road L7 EB	LT+RT	B1	2	3.50	18.0		100	1814	315	0.174	0.174	100	1814	261	0.144	0.144
	RT	B2	2	3.50	20.0		100	1958	341	0.174		100	1958	281	0.144	
Road D2 NB	LT	C1	3	3.80	18.0		100	1842	90	0.049	0.049	100	1842	115	0.062	0.062
	SA	C2	3	3.80				2135	20	0.009			2135	10	0.005	
pedestrian phase		D(p)	4		min crossing time =		10	sec GM +		8	sec FGM =		18	sec		
		E(p)	4		min crossing time =		10	sec GM +		8	sec FGM =		18	sec		
		F(p)	4		min crossing time =		10	sec GM +		8	sec FGM =		18	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

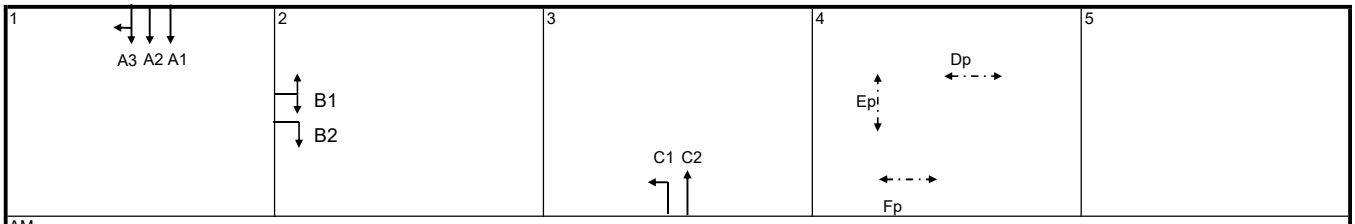


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3		1+2+3	
Sum y	0.373		0.304	
L (s)	38		38	
C (s)	95		95	
practical y	0.540		0.540	
R.C. (%)	45%		78%	

Note:



AM																					
	G =		I/G =	5	G =		I/G =	5	G =		I/G =	11	G =	10	I/G =	10	G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		
PM																					
	G =		I/G =	5	G =		I/G =	5	G =		I/G =	11	G =	10	I/G =	10	G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		

Signal Junction Analysis

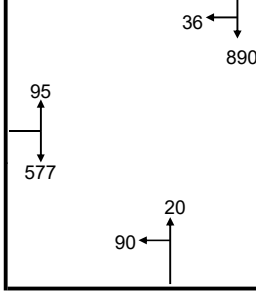
Junction: Road D2 / Road L7 Job Number: J7372

Scenario: Future Condition (With Proposed JPOMQ) P. 2

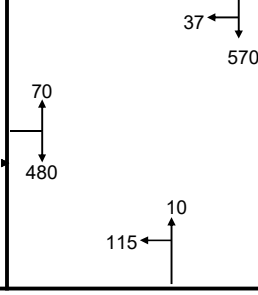
Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road D2 SB	SA	A1	1	3.30				1945	295	0.152	0.152		1945	194	0.100	0.100
	SA	A2	1	3.30				2085	316	0.152			2085	208	0.100	
	SA+RT	A3	1	3.30	30.0		10	2075	315	0.152		15	2069	205	0.099	
Road L7 EB	LT+RT	B1	2	3.50	18.0		100	1814	323	0.178	0.178	100	1814	265	0.146	0.146
	RT	B2	2	3.50	20.0		100	1958	349	0.178		100	1958	285	0.146	
Road D2 NB	LT	C1	3	3.80	18.0		100	1842	90	0.049	0.049	100	1842	115	0.062	0.062
	SA	C2	3	3.80				2135	20	0.009			2135	10	0.005	
pedestrian phase		D(p)	4		min crossing time =		10	sec GM +		8	sec FGM =		18	sec		
		E(p)	4		min crossing time =		10	sec GM +		8	sec FGM =		18	sec		
		F(p)	4		min crossing time =		10	sec GM +		8	sec FGM =		18	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

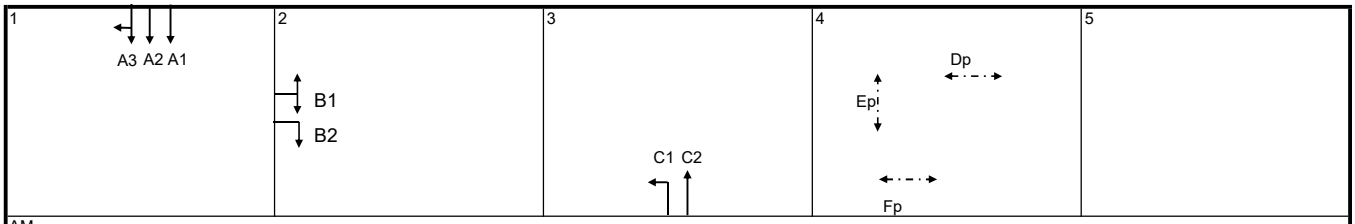


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3		1+2+3	
Sum y	0.379		0.308	
L (s)	38		38	
C (s)	95		95	
practical y	0.540		0.540	
R.C. (%)	43%		75%	

Note:



AM																					
	G =		I/G =	5	G =		I/G =	5	G =		I/G =	11	G =	10	I/G =	10	G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		
PM																					
	G =		I/G =	5	G =		I/G =	5	G =		I/G =	11	G =	10	I/G =	10	G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		

Signal Junction Analysis

Junction: Road P1 / Road D2 Job Number: J7372

Scenario: Future Condition (Without Proposed JPOMQ) P. 3

Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road P1 EB	LT	A1	1	3.30	15.0		100	1768	110	0.062		100	1768	125	0.071	0.071
	SA	A2	1,3	3.30				2085	647	0.310	0.310		2085	495	0.237	
	SA	A3	1,3	3.30				2085	646	0.310			2085	494	0.237	
Road D2 SB	LT	B1	2	3.40	15.0		100	1777	462	0.260	0.260	100	1777	335	0.189	0.189
	LT	B2	2	3.40	15.0		100	1905	495	0.260		100	1905	359	0.188	
	LT	B3	2	3.40	15.0		100	1905	494	0.259		100	1905	358	0.188	
pedestrian phase		C(p)	3		min crossing time =		14	sec GM +		12		sec FGM =		26	sec	

AM Traffic Flow (pcu/hr)

1451

110

1294

PM Traffic Flow (pcu/hr)

1052

125

989

$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1,3+2		1+2	
Sum y	0.570		0.259	
L (s)	9		35	
C (s)	75		75	
practical y	0.792		0.480	
R.C. (%)	39%		85%	

Note:

1	2	3	4	5
A1, A2, A3	B3 B2 B1	Cp, A2, A3		
AM				
G = I/G = 6	G = I/G = 5	G = I/G =	G = I/G =	G = I/G =
G = I/G =	G = I/G =	G = I/G =	G = I/G =	G = I/G =
PM				
G = I/G = 5	G = I/G = 4	G = 14 I/G = 14	G = I/G =	G = I/G =
G = I/G =	G = I/G =	G = I/G =	G = I/G =	G = I/G =

Signal Junction Analysis

Junction: Road P1 / Road D2 Job Number: J7372

Scenario: Future Condition (With Proposed JPOMQ) P. 4

Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road P1 EB	LT	A1	1	3.30	15.0		100	1768	110	0.062		100	1768	125	0.071	0.071
	SA	A2	1,3	3.30				2085	647	0.310	0.310		2085	495	0.237	
	SA	A3	1,3	3.30				2085	646	0.310			2085	494	0.237	
Road D2 SB	LT	B1	2	3.40	15.0		100	1777	467	0.263	0.263	100	1777	337	0.190	0.190
	LT	B2	2	3.40	15.0		100	1905	500	0.262		100	1905	361	0.190	
	LT	B3	2	3.40	15.0		100	1905	500	0.262		100	1905	362	0.190	
pedestrian phase		C(p)	3		min crossing time =		14	sec GM +		12		sec FGM =		26	sec	

AM Traffic Flow (pcu/hr)

1467

110

1294

PM Traffic Flow (pcu/hr)

1060

125

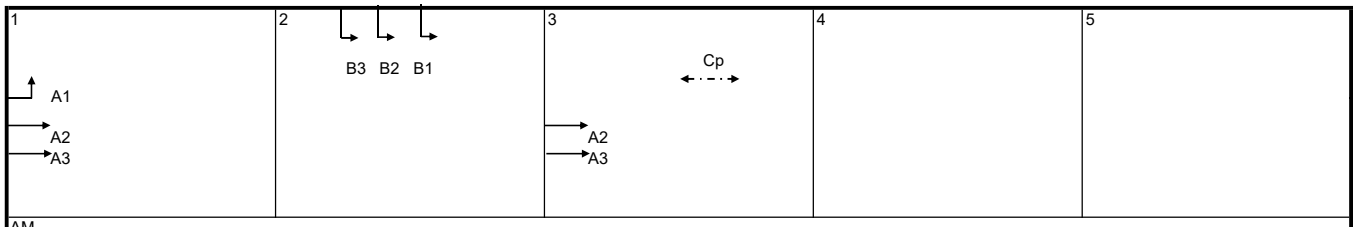
989

$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

Note:

	AM Peak		PM Peak	
Group	1,3+2		1+2	
Sum y	0.573		0.260	
L (s)	9		35	
C (s)	75		75	
practical y	0.792		0.480	
R.C. (%)	38%		84%	



AM																					
	G =	I/G =	6	G =	I/G =	5	G =		I/G =		G =	I/G =		G =	I/G =						
	G =	I/G =		G =	I/G =		G =		I/G =		G =	I/G =		G =	I/G =						
PM																					
	G =	I/G =	5	G =	I/G =	4	G =	14	I/G =	14	G =	I/G =		G =	I/G =						
	G =	I/G =		G =	I/G =		G =		I/G =		G =	I/G =		G =	I/G =						

Signal Junction Analysis

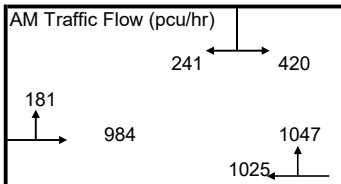
Junction: Road P1 / Road D3 Job Number: J7372

Scenario: Future Condition (Without Proposed JPOMQ) P. 5

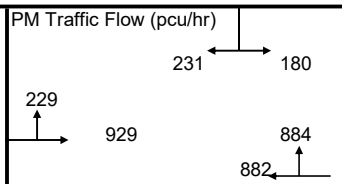
Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road P1 EB	LT	A1	3	3.20	15.0		100	1759	181	0.103		100	1759	229	0.130	0.130
	SA	A2	1	3.20				2075	492	0.237	0.237		2075	465	0.224	
	SA	A3	1	3.20				2075	492	0.237			2075	465	0.224	
Road P1 WB	SA	B1	1,2	3.50				1965	1025	0.522			1965	882	0.449	
	RT	B2	2	3.00	25.0		100	1939	524	0.270	0.270	100	1939	442	0.228	0.228
	RT	B3	2	3.00	25.0		100	1939	523	0.270		100	1939	442	0.228	
Road D3 SB	LT	C1	3	3.40	15.0		100	1777	206	0.116		100	1777	180	0.101	
	LT+RT	C2	3	3.40	20.0		100	1949	226	0.116	0.116	100	1949	115	0.059	
	RT	C3	3	3.40	25.0		100	1976	229	0.116		100	1976	116	0.059	
pedestrian phase		F(p)	4		min crossing time =		14	sec GM +		12	sec FGM =		26	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

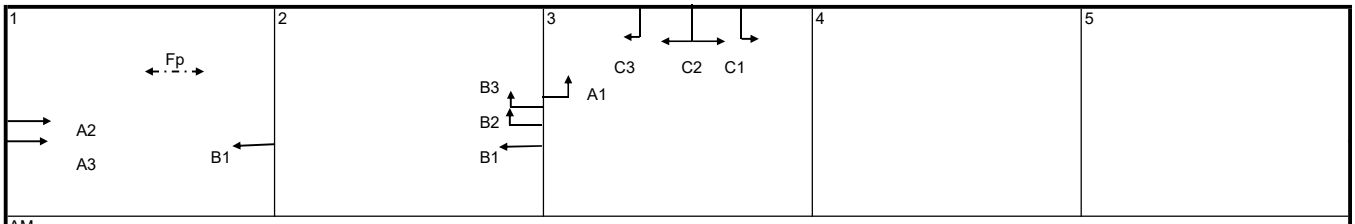


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3		2+3	
Sum y	0.623		0.358	
L (s)	12		40	
C (s)	95		95	
practical y	0.786		0.521	
R.C. (%)	26%		45%	

Note:



AM																					
	G =		I/G =	5	G =		I/G =	5	G =		I/G =	5	G =		I/G =		G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		
PM																					
	G =	14	I/G =	14	G =		I/G =	5	G =		I/G =	9	G =		I/G =		G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		

Signal Junction Analysis

Junction: Road P1 / Road D3 Job Number: J7372

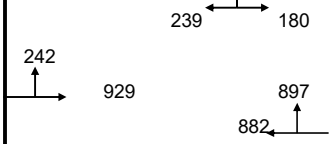
Scenario: Future Condition (With Proposed JPOMQ) P. 6

Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road P1 EB	LT	A1	3	3.20	15.0		100	1759	191	0.109		100	1759	242	0.138	0.138
	SA	A2	1	3.20				2075	492	0.237	0.237		2075	465	0.224	
	SA	A3	1	3.20				2075	492	0.237			2075	465	0.224	
Road P1 WB	SA	B1	1,2	3.00				1915	1025	0.535			1915	882	0.461	
	RT	B2	2	3.00	25.0		100	1939	529	0.273	0.273	100	1939	449	0.232	0.232
	RT	B3	2	3.00	25.0		100	1939	528	0.272		100	1939	448	0.231	
Road D3 SB	LT	C1	3	3.40	15.0		100	1777	211	0.119		100	1777	180	0.101	
	LT+RT	C2	3	3.40	20.0		100	1949	231	0.119	0.119	100	1949	119	0.061	
	RT	C3	3	3.40	25.0		100	1976	235	0.119		100	1976	120	0.061	
pedestrian phase		F(p)	4		min crossing time =		14	sec GM +		12		sec FGM =		26	sec	

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

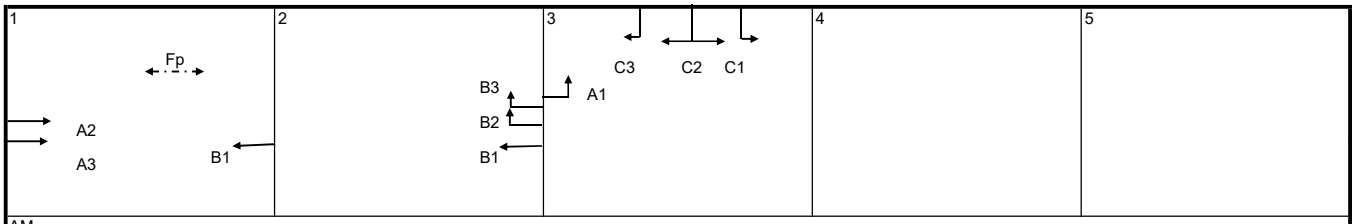


S=1940+100(W–3.25) **S=2080+100(W–3.25)**

S_M=S÷(1+1.5f/r) **S_M=(S–230)÷(1+1.5f/r)**

	AM Peak		PM Peak	
Group	1+2+3		2+3	
Sum y	0.628		0.369	
L (s)	12		40	
C (s)	95		95	
practical y	0.786		0.521	
R.C. (%)	25%		41%	

Note:



AM																					
	G =		I/G =	5	G =		I/G =	5	G =		I/G =	5	G =		I/G =		G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		
PM																					
	G =	14	I/G =	14	G =		I/G =	5	G =		I/G =	9	G =		I/G =		G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		

Signal Junction Analysis

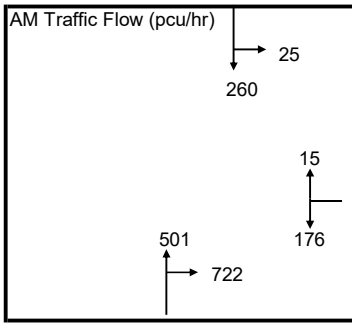
Junction: Road D3 / Road L7 Job Number: J7372

Scenario: Future Condition (Without Proposed JPOMQ) P. 7

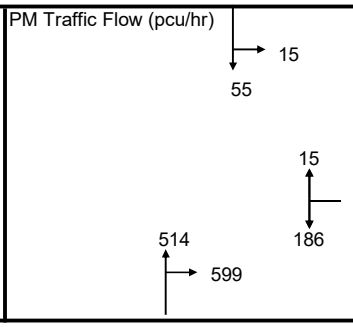
Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road D3 NB	SA	A1	1	3.50				1965	402	0.205	0.205		1965	365	0.186	
	SA+RT	A2	1	3.50	30.0		76	2028	415	0.205		61	2043	379	0.186	
	RT	A3	1	3.50	25.0		100	1986	406	0.204		100	1986	369	0.186	0.186
Road L7 WB	LT	B1	2	3.30	15.0		100	1768	92	0.052	0.052	100	1768	97	0.055	
	LT+RT	B2	2	3.30	15.0		100	1895	99	0.052		100	1895	104	0.055	0.055
Road D3 SB	LT+SA	C1	3	3.65	15.0		18	1945	136	0.070		45	1895	33	0.017	
	SA	C2	3	3.65				2120	149	0.070	0.070		2120	37	0.017	
pedestrian phase		D(p)	5		min crossing time =			12	sec GM +		10	sec FGM =		22	sec	
		E(p)	5		min crossing time =			12	sec GM +		10	sec FGM =		22	sec	
		F(p)	5		min crossing time =			9	sec GM +		7	sec FGM =		16	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

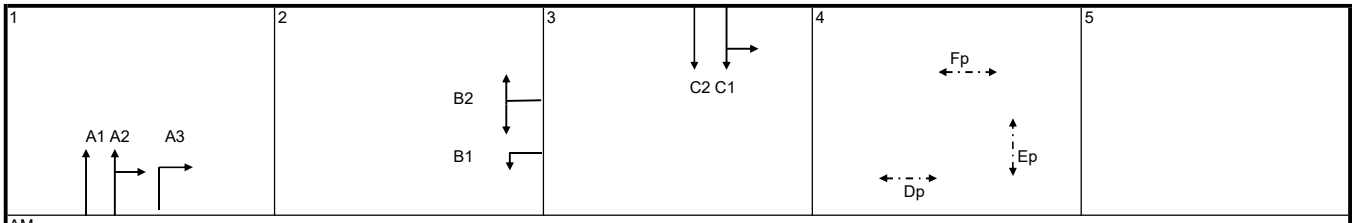


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3+4		1+2+3+4	
Sum y	0.327		0.241	
L (s)	41		47	
C (s)	90		90	
practical y	0.490		0.430	
R.C. (%)	50%		79%	

Note:



AM																			
	G =		I/G =	5	G =		I/G =	5	G =		I/G =	9	G =	12	I/G =	13	G =		I/G =
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =
PM																			
	G =		I/G =	5	G =		I/G =	5	G =	5	I/G =	9	G =	12	I/G =	13	G =		I/G =
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =

Signal Junction Analysis

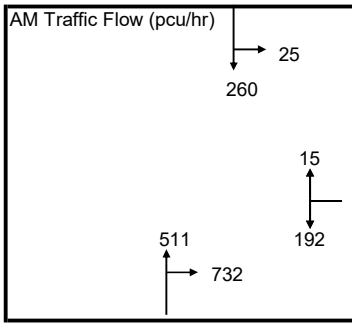
Junction: Road D3 / Road L7 Job Number: J7372

Scenario: Future Condition (With Proposed JPOMQ) P. 8

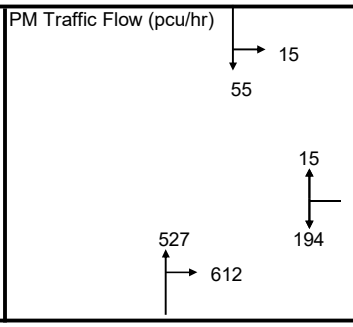
Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road D3 NB	SA	A1	1	3.50				1965	409	0.208	0.208		1965	373	0.190	
	SA+RT	A2	1	3.50	30.0		76	2028	422	0.208		61	2043	388	0.190	
	RT	A3	1	3.50	25.0		100	1986	412	0.207		100	1986	378	0.190	0.190
Road L7 WB	LT	B1	2	3.30	15.0		100	1768	100	0.057	0.057	100	1768	101	0.057	
	LT+RT	B2	2	3.30	15.0		100	1895	107	0.056		100	1895	108	0.057	0.057
Road D3 SB	LT+SA	C1	3	3.65	15.0		18	1945	136	0.070		45	1895	33	0.017	
	SA	C2	3	3.65				2120	149	0.070	0.070		2120	37	0.017	
pedestrian phase		D(p)	5		min crossing time =			12	sec GM +		10	sec FGM =		22	sec	
		E(p)	5		min crossing time =			12	sec GM +		10	sec FGM =		22	sec	
		F(p)	5		min crossing time =			9	sec GM +		7	sec FGM =		16	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

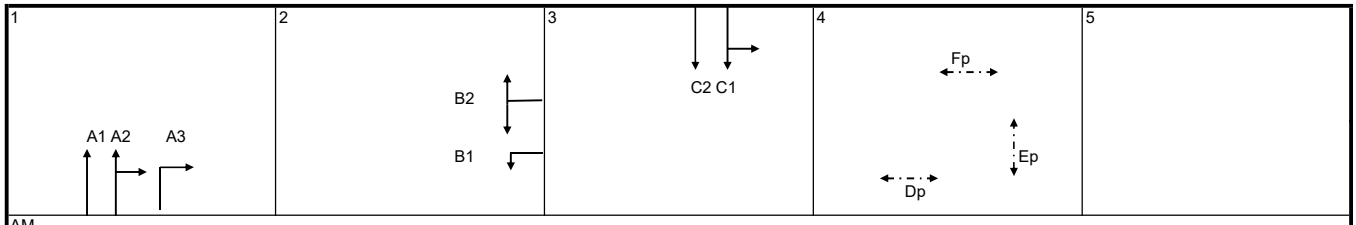


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3+4		1+2+3+4	
Sum y	0.335		0.247	
L (s)	41		47	
C (s)	90		90	
practical y	0.490		0.430	
R.C. (%)	46%		74%	

Note:



AM

G = I/G = 5 | G = I/G = 5 | G = I/G = 9 | G = 12 I/G = 13 | G = I/G =

G = I/G = | G = I/G = | G = I/G = | G = I/G = | G = I/G =

PM

G = I/G = 5 | G = I/G = 5 | G = 5 I/G = 9 | G = 12 I/G = 13 | G = I/G =

G = I/G = | G = I/G = | G = I/G = | G = I/G = | G = I/G =

Signal Junction Analysis

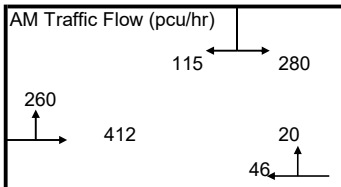
Junction: Road L6 / Road L7 Job Number: J7372

Scenario: Future Condition (Without Proposed JPOMQ) P. 9

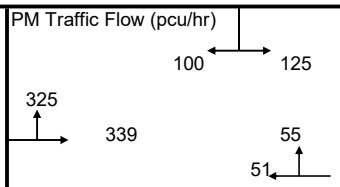
Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road L7 WB	SA+RT	A1	1	3.65	25.0		27	1948	66	0.034		50	1922	106	0.055	0.055
Road L6 SB	LT+RT	B1	2	3.65	20.0		100	1842	395	0.214	0.214	100	1842	225	0.122	0.122
Road L7 EB	LT	C1	3	3.30	15.0		100	1768	260	0.147		100	1768	325	0.184	0.184
	SA	C2	3	3.30				2085	412	0.198	0.198		2085	339	0.163	
pedestrian phase		D(p)	4		min crossing time =		7	sec GM +		5	sec FGM =		12	sec		
		E(p)	4		min crossing time =		7	sec GM +		5	sec FGM =		12	sec		
		F(p)	4		min crossing time =		8	sec GM +		6	sec FGM =		14	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

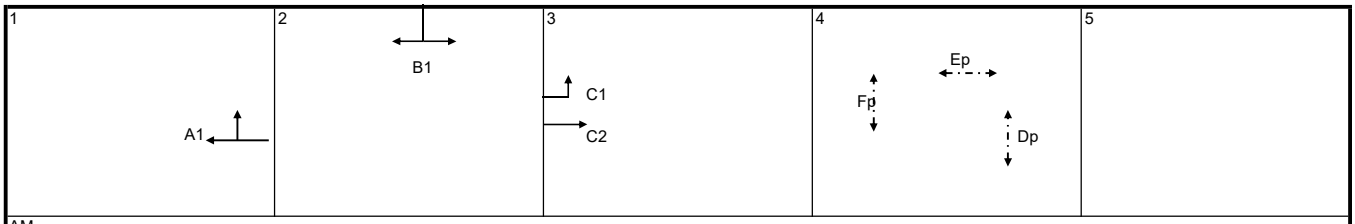


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3		1+2+3	
Sum y	0.412		0.361	
L (s)	38		32	
C (s)	90		90	
practical y	0.520		0.580	
R.C. (%)	26%		61%	

Note:



AM	G =	5	I/G =	6	G =		I/G =	5	G =		I/G =	9	G =	7	I/G =	8	G =		I/G =	
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =	
PM	G =		I/G =	6	G =		I/G =	5	G =		I/G =	9	G =	7	I/G =	8	G =		I/G =	
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =	

Signal Junction Analysis

Junction: Road L6 / Road L7 Job Number: J7372

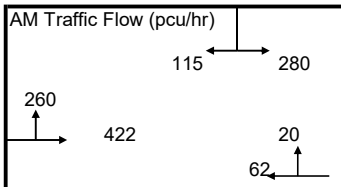
Scenario: Future Condition (With Proposed JPOMQ) P. 10

Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

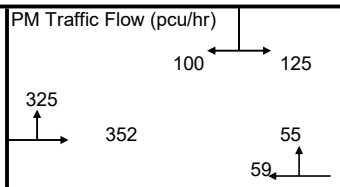
Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road L7 WB SA+RT	A1	1	3.65	25.0		27	1948	82	0.042		50	1922	114	0.059	0.059
Road L6 SB LT+RT	B1	2	3.65	20.0		100	1842	395	0.214	0.214	100	1842	225	0.122	0.122
Road L7 EB LT	C1	3	3.30	15.0		100	1768	260	0.147		100	1768	325	0.184	0.184
SA	C2	3	3.30				2085	422	0.202	0.202		2085	352	0.169	

pedestrian phase	D(p)	4		min crossing time =	7	sec GM +	5	sec FGM =	12	sec		
	E(p)	4		min crossing time =	7	sec GM +	5	sec FGM =	12	sec		
	F(p)	4		min crossing time =	8	sec GM +	6	sec FGM =	14	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

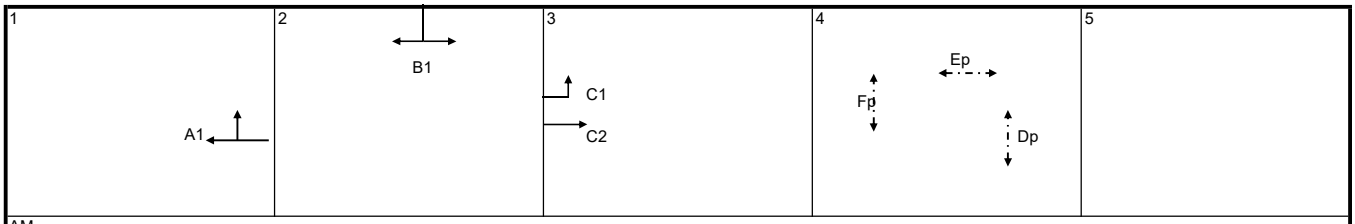


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

Note:

	AM Peak		PM Peak	
Group	1+2+3		1+2+3	
Sum y	0.417		0.365	
L (s)	38		32	
C (s)	90		90	
practical y	0.520		0.580	
R.C. (%)	25%		59%	



AM

G = 5 I/G = 6 G = I/G = 5 G = I/G = 9 G = 7 I/G = 8 G = I/G =

G = I/G = G = I/G = G = I/G = G = I/G = G = I/G =

PM

G = I/G = 6 G = I/G = 5 G = I/G = 9 G = 7 I/G = 8 G = I/G =

G = I/G = G = I/G = G = I/G = G = I/G = G = I/G =

Signal Junction Analysis

Junction: Road D1 / Road D2 / Road D3 Job Number: J7372

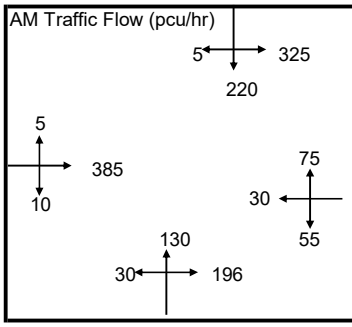
Scenario: Future Condition (Without Proposed JPOMQ) P. 11

Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

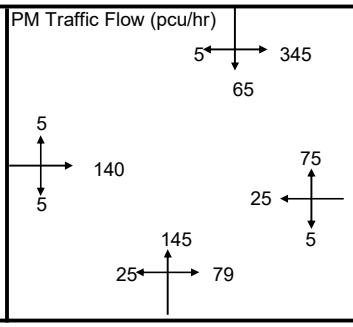
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road D1 EB	LT+SA	A1	1	3.65	15.0		3	1974	193	0.098		7	1966	72	0.037	0.037
	SA+RT	A2	1	3.65	25.0		5	2114	207	0.098	0.098	6	2112	78	0.037	
Road D3 NB	LT+SA	B1	2	3.65	15.0		19	1943	160	0.082		20	1941	121	0.062	
	SA+RT	B2	2	3.65	25.0		100	2000	196	0.098	0.098	65	2040	128	0.063	0.063
Road D2 WB	LT+SA	C1	3	3.65	15.0		72	1847	77	0.042		17	1947	30	0.015	
	SA+RT	C2	3	3.65	25.0		90	2011	83	0.041		100	2000	75	0.038	
Road D3 SB	LT	D1	4	3.30	15.0		100	1768	168	0.095	0.095	100	1768	165	0.093	0.093
	LT+SA	D2	4	3.30	18.0		85	1947	185	0.095		100	1925	180	0.094	
	SA+RT	D3	4	3.30	25.0		3	2081	197	0.095		7	2076	70	0.034	

pedestrian phase	E(p)	5		min crossing time =	10	sec GM +	7	sec FGM =	17	sec
	F(p)	5		min crossing time =	9	sec GM +	7	sec FGM =	16	sec
	G(p)	5		min crossing time =	9	sec GM +	7	sec FGM =	16	sec
	H(p)	5		min crossing time =	11	sec GM +	9	sec FGM =	20	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

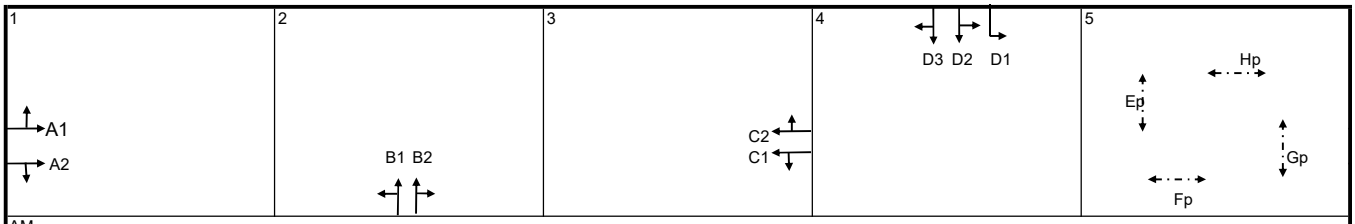


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

Note:

	AM Peak		PM Peak	
Group	1+2+3+4		1+2+3+4	
Sum y	0.291		0.193	
L (s)	52		52	
C (s)	90		90	
practical y	0.380		0.380	
R.C. (%)	31%		97%	



AM	G =		I/G =	6	G =		I/G =	5	G =	5	I/G =	5	G =		I/G =	14	G =	10	I/G =	10
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =	
PM	G =		I/G =	6	G =		I/G =	5	G =	5	I/G =	5	G =		I/G =	14	G =	10	I/G =	10
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =	

Signal Junction Analysis

Junction: Road D1 / Road D2 / Road D3 Job Number: J7372

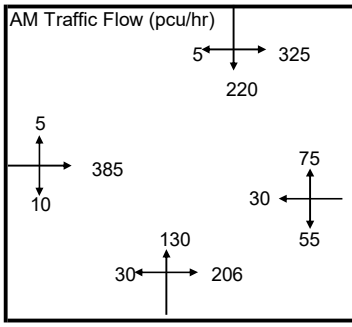
Scenario: Future Condition (With Proposed JPOMQ) P. 12

Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

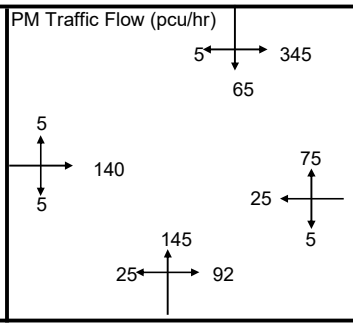
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road D1 EB	LT+SA	A1	1	3.65	15.0		3	1974	193	0.098		7	1966	72	0.037	0.037
	SA+RT	A2	1	3.65	25.0		5	2114	207	0.098	0.098	6	2112	78	0.037	
Road D3 NB	LT+SA	B1	2	3.65	15.0		19	1943	160	0.082		20	1941	128	0.066	
	SA+RT	B2	2	3.65	25.0		100	2000	206	0.103	0.103	65	2040	134	0.066	0.066
Road D2 WB	LT+SA	C1	3	3.65	15.0		72	1847	77	0.042		17	1947	30	0.015	
	SA+RT	C2	3	3.65	25.0		90	2011	83	0.041		100	2000	75	0.038	
Road D3 SB	LT	D1	4	3.30	15.0		100	1768	168	0.095	0.095	100	1768	165	0.093	0.093
	LT+SA	D2	4	3.30	18.0		85	1947	185	0.095		100	1925	180	0.094	
	SA+RT	D3	4	3.30	25.0		3	2081	197	0.095		7	2076	70	0.034	

pedestrian phase	E(p)	5		min crossing time =	10	sec GM +	7	sec FGM =	17	sec
	F(p)	5		min crossing time =	9	sec GM +	7	sec FGM =	16	sec
	G(p)	5		min crossing time =	9	sec GM +	7	sec FGM =	16	sec
	H(p)	5		min crossing time =	11	sec GM +	9	sec FGM =	20	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

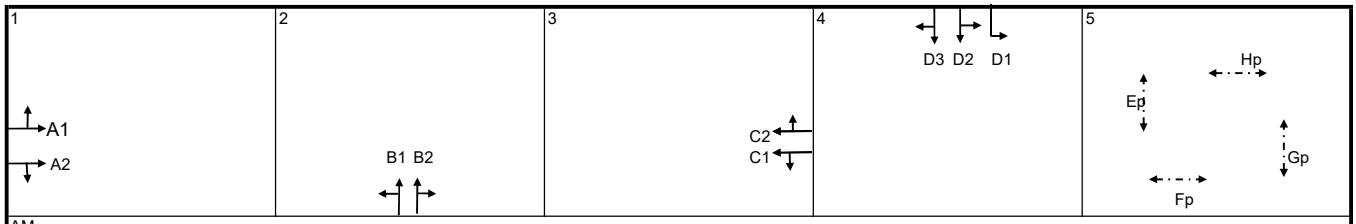


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3+4		1+2+3+4	
Sum y	0.296		0.196	
L (s)	52		52	
C (s)	90		90	
practical y	0.380		0.380	
R.C. (%)	28%		94%	

Note:



AM	G =		I/G =	6	G =		I/G =	5	G =	5	I/G =	5	G =		I/G =	14	G =	10	I/G =	10
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =	
PM	G =		I/G =	6	G =		I/G =	5	G =	5	I/G =	5	G =		I/G =	14	G =	10	I/G =	10
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =	

Signal Junction Analysis

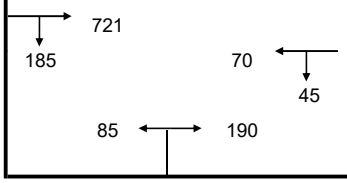
Junction: Road D1 / Road D2 / Road L6 Job Number: J7372

Scenario: Future Condition (Without Proposed JPOMQ) P. 13

Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road D1 EB	SA	A1	1	3.60				1975	443	0.224	0.224		1975	279	0.141	0.141
	SA+RT	A2	1	3.60	25.0		40	2065	463	0.224		46	2058	290	0.141	
Road L6 NB	LT+RT	B1	2	3.80	20.0		100	1856	275	0.148	0.148	100	1856	250	0.135	0.135
Road D2 WB	LT+SA	C1	3	3.65	15.0		85	1825	45	0.025		100	1800	60	0.033	
	SA	C2	3	3.65				2120	70	0.033			2120	20	0.009	
pedestrian phase		D(p)	4		min crossing time =		9	sec GM +		7	sec FGM =		16	sec		
		E(p)	4		min crossing time =		10	sec GM +		8	sec FGM =		18	sec		
		F(p)	4		min crossing time =		10	sec GM +		8	sec FGM =		18	sec		

AM Traffic Flow (pcu/hr)



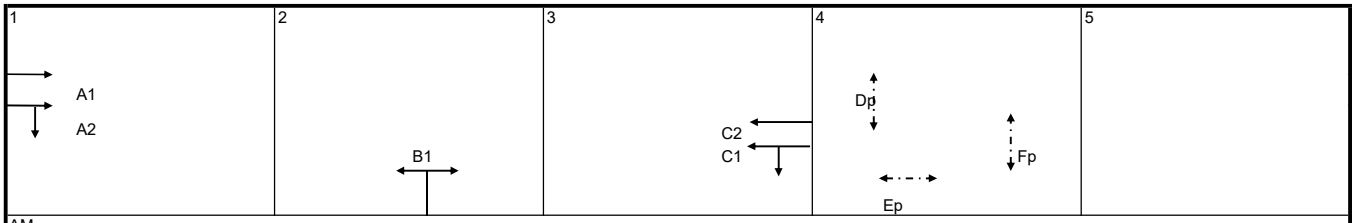
PM Traffic Flow (pcu/hr)

$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3		1+2+3	
Sum y	0.372		0.276	
L (s)	42		42	
C (s)	90		90	
practical y	0.480		0.480	
R.C. (%)	29%		74%	

Note:



AM	G =	I/G =	5	G =	I/G =	5	G =	5	I/G =	10	G =	9	I/G =	10	G =	I/G =					
	G =	I/G =		G =	I/G =		G =		I/G =		G =		I/G =		G =	I/G =					
PM	G =	I/G =	5	G =	I/G =	5	G =	5	I/G =	10	G =	9	I/G =	10	G =	I/G =					
	G =	I/G =		G =	I/G =		G =		I/G =		G =		I/G =		G =	I/G =					

Signal Junction Analysis

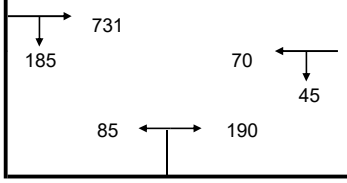
Junction: Road D1 / Road D2 / Road L6 Job Number: J7372

Scenario: Future Condition (With Proposed JPOMQ) P. 14

Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road D1 EB	SA	A1	1	3.60				1975	448	0.227	0.227		1975	285	0.144	0.144
	SA+RT	A2	1	3.60	25.0		40	2065	468	0.227		46	2058	297	0.144	
Road L6 NB	LT+RT	B1	2	3.80	20.0		100	1856	275	0.148	0.148	100	1856	250	0.135	0.135
Road D2 WB	LT+SA	C1	3	3.65	15.0		85	1825	45	0.025		100	1800	60	0.033	
	SA	C2	3	3.65				2120	70	0.033			2120	20	0.009	
pedestrian phase		D(p)	4		min crossing time =		9	sec GM +		7	sec FGM =		16	sec		
		E(p)	4		min crossing time =		10	sec GM +		8	sec FGM =		18	sec		
		F(p)	4		min crossing time =		10	sec GM +		8	sec FGM =		18	sec		

AM Traffic Flow (pcu/hr)



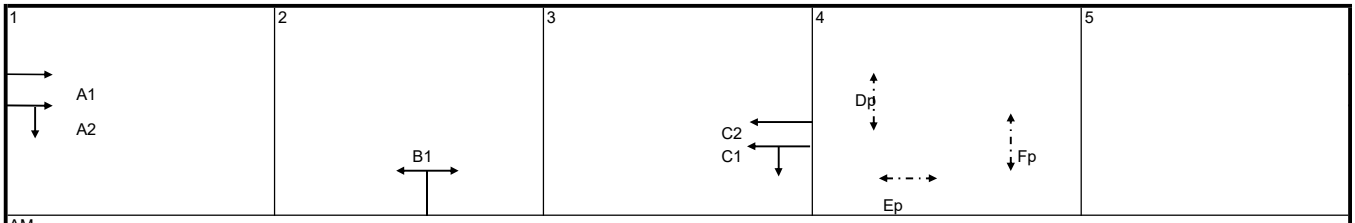
PM Traffic Flow (pcu/hr)

$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3		1+2+3	
Sum y	0.375		0.279	
L (s)	42		42	
C (s)	90		90	
practical y	0.480		0.480	
R.C. (%)	28%		72%	

Note:



AM	G =		I/G =	5	G =		I/G =	5	G =	5	I/G =	10	G =	9	I/G =	10	G =		I/G =	
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =	
PM	G =		I/G =	5	G =		I/G =	5	G =	5	I/G =	10	G =	9	I/G =	10	G =		I/G =	
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =	

Signal Junction Analysis

Junction: Road P1 / Road D5 Job Number: J7372

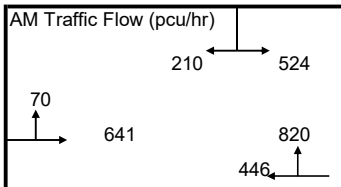
Scenario: Future Condition (Without Proposed JPOMQ) P. 15

Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

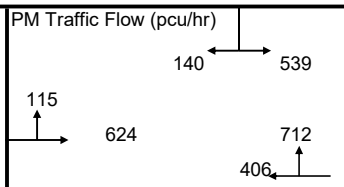
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road P1 EB	LT	A1	1	3.20	15.0		100	1759	70	0.040		100	1759	115	0.065	0.065
	SA	A2	1,4	3.20				2075	321	0.154			2075	312	0.150	
	SA	A3	1,4	3.20				2075	321	0.154			2075	312	0.150	
Road P1 WB	SA	B1	1,2,4	3.50				1965	446	0.227			1965	406	0.207	
	RT	B2	2	3.50	25.0		100	1854	410	0.221	0.221	100	1854	356	0.192	0.192
	RT	B3	2	3.50	25.0		100	1854	410	0.221		100	1854	356	0.192	
Road D5 SB	LT	C1	3	3.50	20.0		100	1828	231	0.126	0.126	100	1828	258	0.141	0.141
	LT+RT	C2	3	3.50	25.0		100	1986	251	0.126		100	1986	281	0.141	
	RT	C3	3	3.50	25.0		100	1986	252	0.127		100	1986	140	0.070	

pedestrian phase	D(p)	4		min crossing time =	14	sec GM +	12	sec FGM =	26	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

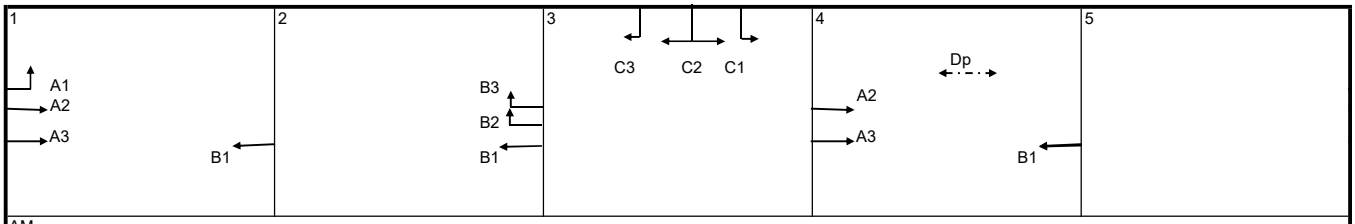


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3		1+2+3	
Sum y	0.348		0.399	
L (s)	45		39	
C (s)	90		90	
practical y	0.450		0.510	
R.C. (%)	29%		28%	

Note:



AM																				
	G =	5	I/G =	5	G =		I/G =	5	G =		I/G =	4	G =	14	I/G =	14	G =		I/G =	
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =	
PM																				
	G =		I/G =	5	G =		I/G =	5	G =		I/G =	4	G =	14	I/G =	14	G =		I/G =	
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =	

Signal Junction Analysis

Junction: Road P1 / Road D5 Job Number: J7372

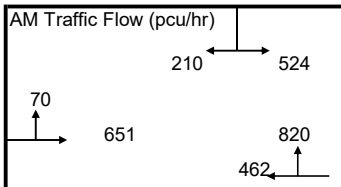
Scenario: Future Condition (With Proposed JPOMQ) P. 16

Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

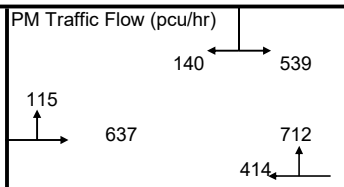
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Road P1 EB	LT	A1	1	3.20	15.0		100	1759	70	0.040		100	1759	115	0.065	0.065
	SA	A2	1,4	3.20				2075	326	0.157			2075	319	0.153	
	SA	A3	1,4	3.20				2075	326	0.157			2075	319	0.153	
Road P1 WB	SA	B1	1,2,4	3.50				1965	462	0.235			1965	414	0.211	
	RT	B2	2	3.50	25.0		100	1854	410	0.221	0.221	100	1854	356	0.192	0.192
	RT	B3	2	3.50	25.0		100	1854	410	0.221		100	1854	356	0.192	
Road D5 SB	LT	C1	3	3.50	20.0		100	1828	231	0.126	0.126	100	1828	258	0.141	0.141
	LT+RT	C2	3	3.50	25.0		100	1986	251	0.126		100	1986	281	0.141	
	RT	C3	3	3.50	25.0		100	1986	252	0.127		100	1986	140	0.070	

pedestrian phase	D(p)	4		min crossing time =	14	sec GM +	12	sec FGM =	26	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

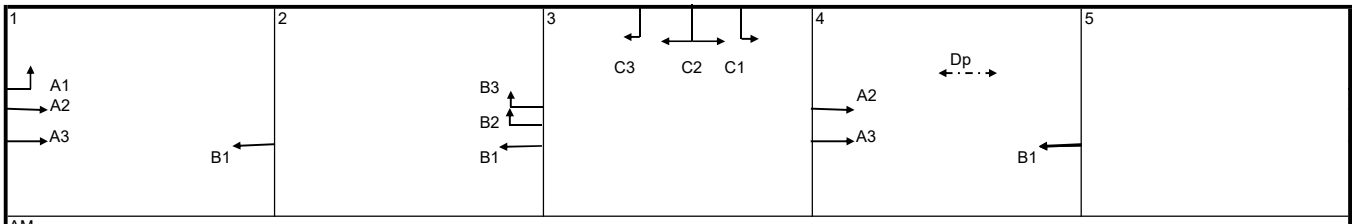


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3		1+2+3	
Sum y	0.348		0.399	
L (s)	45		39	
C (s)	90		90	
practical y	0.450		0.510	
R.C. (%)	29%		28%	

Note:



AM																				
	G =	5	I/G =	5	G =		I/G =	5	G =		I/G =	4	G =	14	I/G =	14	G =		I/G =	
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =	
PM																				
	G =		I/G =	5	G =		I/G =	5	G =		I/G =	4	G =	14	I/G =	14	G =		I/G =	
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =	

Signal Junction Analysis

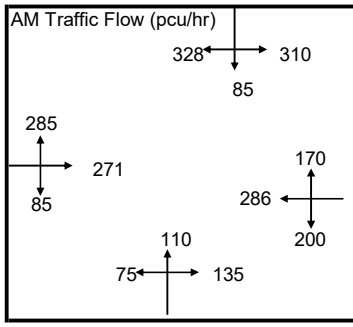
Junction: Ying Hei Road / Ying Tung Road / Road P1 Job Number: J7372

Scenario: Future Condition (Without Proposed JPOMQ) P. 17

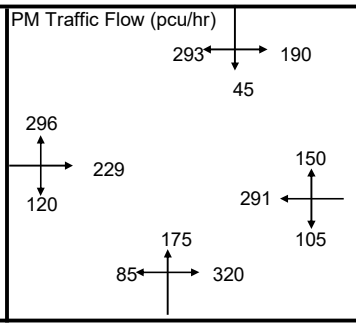
Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Ying Hei Road EB	LT	A1	1	3.65	15.0		100	1800	195	0.108	0.108	100	1800	197	0.109	
	LT+SA	A2	1	3.65	18.0		40	2052	222	0.108		40	2052	225	0.110	0.110
	SA+RT	A3	1	3.65	20.0		38	2061	224	0.109		54	2037	223	0.109	
Man Tung Road NB	LT+SA	B1	2	3.00	15.0		48	1827	157	0.086	0.086	33	1854	260	0.140	
	SA+RT	B2	2	3.00	15.0		83	1898	163	0.086		100	1868	320	0.171	0.171
Road P1 WB	LT+SA	C1	3	3.65	15.0		63	1863	313	0.168		40	1904	264	0.139	0.139
	SA+RT	C2	3	3.65	20.0		49	2045	343	0.168	0.168	53	2039	282	0.138	
Ying Tung Road SB	LT+SA	D1	4	3.40	15.0		100	1777	310	0.174	0.174	100	1777	190	0.107	0.107
	SA+RT	D2	4	3.40	25.0		59	2023	210	0.104		74	2006	171	0.085	
	RT	D3	4	3.40	20.0		100	1949	203	0.104		100	1949	167	0.086	
pedestrian phase																

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

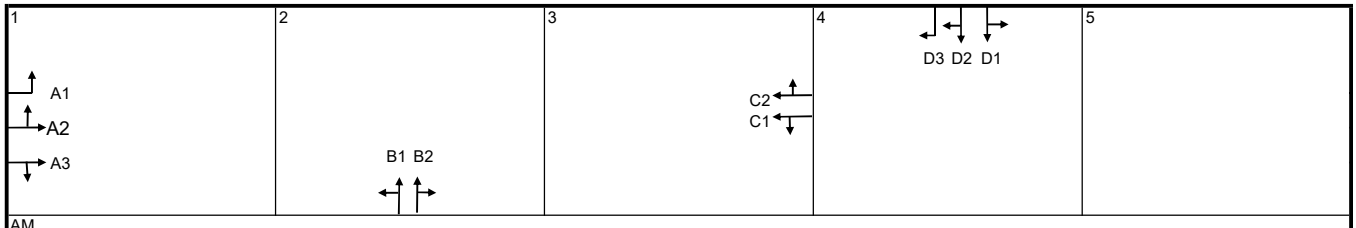


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3+4		1+2+3+4	
Sum y	0.536		0.527	
L (s)	18		18	
C (s)	120		120	
practical y	0.765		0.765	
R.C. (%)	43%		45%	

Note:



AM																					
	G =		I/G =	5	G =		I/G =	5	G =		I/G =	7	G =		I/G =	5	G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		
PM																					
	G =		I/G =	5	G =		I/G =	5	G =		I/G =	7	G =		I/G =	5	G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		

Signal Junction Analysis

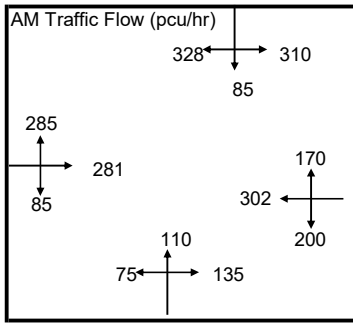
Junction: Ying Hei Road / Ying Tung Road / Road P1 Job Number: J7372

Scenario: Future Condition (With Proposed JPOMQ) P. 18

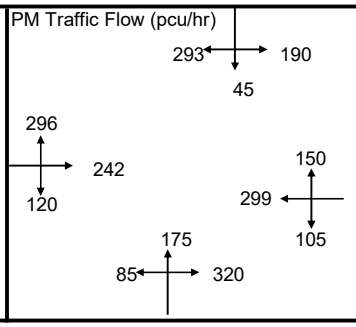
Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Ying Hei Road EB	LT	A1	1	3.65	15.0		100	1800	198	0.110	0.110	100	1800	201	0.112	
	LT+SA	A2	1	3.65	18.0		40	2052	226	0.110		40	2052	229	0.112	0.112
	SA+RT	A3	1	3.65	20.0		38	2061	227	0.110		54	2037	228	0.112	
Man Tung Road NB	LT+SA	B1	2	3.00	15.0		48	1827	157	0.086	0.086	33	1854	260	0.140	
	SA+RT	B2	2	3.00	15.0		83	1898	163	0.086		100	1868	320	0.171	0.171
Road P1 WB	LT+SA	C1	3	3.65	15.0		63	1863	320	0.172		40	1904	268	0.141	0.141
	SA+RT	C2	3	3.65	20.0		49	2045	352	0.172	0.172	53	2039	286	0.140	
Ying Tung Road SB	LT+SA	D1	4	3.40	15.0		100	1777	310	0.174	0.174	100	1777	190	0.107	0.107
	SA+RT	D2	4	3.40	25.0		59	2023	210	0.104		74	2006	171	0.085	
	RT	D3	4	3.40	20.0		100	1949	203	0.104		100	1949	167	0.086	
pedestrian phase																

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

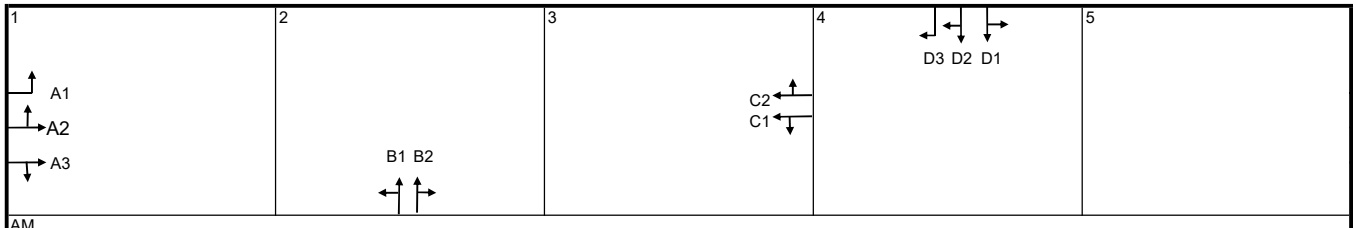


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3+4		1+2+3+4	
Sum y	0.543		0.531	
L (s)	18		18	
C (s)	120		120	
practical y	0.765		0.765	
R.C. (%)	41%		44%	

Note:



AM																
	G =	I/G =	5	G =	I/G =	5	G =	I/G =	7	G =	I/G =	5	G =	I/G =		
	G =	I/G =		G =	I/G =		G =	I/G =		G =	I/G =		G =	I/G =		
PM																
	G =	I/G =	5	G =	I/G =	5	G =	I/G =	7	G =	I/G =	5	G =	I/G =		
	G =	I/G =		G =	I/G =		G =	I/G =		G =	I/G =		G =	I/G =		

Signal Junction Analysis

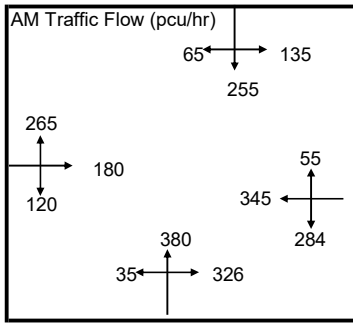
Junction: Tung Chung Waterfront Road / Ying Hei Road / Yi Tung Road / Road L3 Job Number: J7372

Scenario: Future Condition (Without Proposed JPOMQ) P. 19

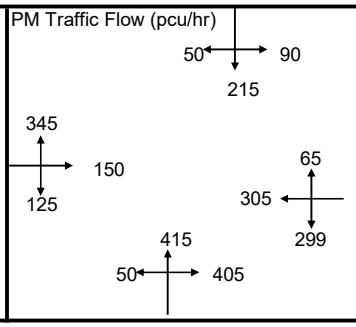
Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Yi Tung Road NB	LT+SA	A1	1	3.65	15.0		15	1951	239	0.123		18	1945	281	0.144	
	SA+RT	A2	1	3.65	30.0		32	2087	256	0.123		38	2080	300	0.144	
	RT	A3	1	3.65	25.0		100	2000	245	0.123	0.123	100	2000	289	0.145	0.145
Tung Chung	LT	B1	2	3.65	20.0		100	1842	210	0.114		100	1842	206	0.112	
Waterfront Road WB	LT+SA	B2	2	3.65	25.0		32	2080	237	0.114		41	2069	231	0.112	
	SA+RT	B3	2	3.65	20.0		23	2084	237	0.114	0.114	28	2076	232	0.112	0.112
Yi Tung Road SB	LT+SA	C1	3	3.65	20.0		62	1892	217	0.115		53	1904	170	0.089	
	SA+RT	C2	3	3.65	20.0		27	2078	238	0.115	0.115	27	2078	185	0.089	0.089
Tung Chung	LT	D1	4	3.50	15.0		100	1786	173	0.097	0.097	100	1786	191	0.107	0.107
Waterfront Road EB	LT+SA	D2	4	3.50	18.0		47	2026	196	0.097		73	1984	212	0.107	
	SA+RT	D3	4	3.50	25.0		61	2031	196	0.097		58	2034	217	0.107	
pedestrian phase																

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

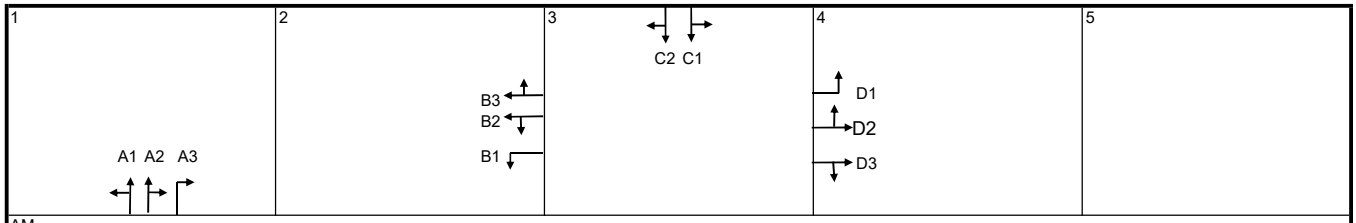


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3+4		1+2+3+4	
Sum y	0.448		0.452	
L (s)	18		18	
C (s)	120		120	
practical y	0.765		0.765	
R.C. (%)	71%		69%	

Note:



AM																					
	G =		I/G =	7	G =		I/G =	5	G =		I/G =	5	G =		I/G =	5	G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		
PM																					
	G =		I/G =	7	G =		I/G =	5	G =		I/G =	5	G =		I/G =	5	G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		

Signal Junction Analysis

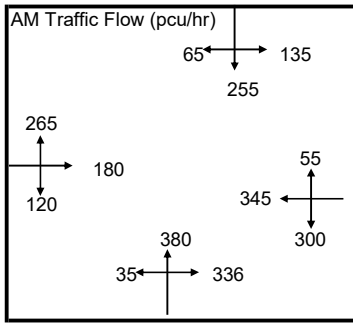
Junction: Tung Chung Waterfront Road / Ying Hei Road / Yi Tung Road / Road L3 Job Number: J7372

Scenario: Future Condition (With Proposed JPOMQ) P. 20

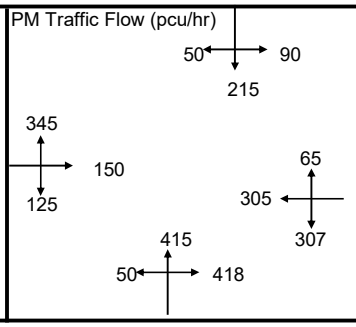
Design Year: 2036 Designed By: Checked By: Date: 7 Feb 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Yi Tung Road NB	LT+SA	A1	1	3.65	15.0		15	1951	243	0.125		18	1945	285	0.147	
	SA+RT	A2	1	3.65	30.0		32	2087	260	0.125		38	2080	305	0.147	
	RT	A3	1	3.65	25.0		100	2000	249	0.125	0.125	100	2000	293	0.147	0.147
Tung Chung	LT	B1	2	3.65	20.0		100	1842	215	0.117		100	1842	208	0.113	
Waterfront Road WB	LT+SA	B2	2	3.65	25.0		32	2080	242	0.116		41	2069	234	0.113	
	SA+RT	B3	2	3.65	20.0		23	2084	243	0.117	0.117	28	2076	235	0.113	0.113
Yi Tung Road SB	LT+SA	C1	3	3.65	20.0		62	1892	217	0.115		53	1904	170	0.089	
	SA+RT	C2	3	3.65	20.0		27	2078	238	0.115	0.115	27	2078	185	0.089	0.089
Tung Chung	LT	D1	4	3.50	15.0		100	1786	173	0.097	0.097	100	1786	191	0.107	0.107
Waterfront Road EB	LT+SA	D2	4	3.50	18.0		47	2026	196	0.097		73	1984	212	0.107	
	SA+RT	D3	4	3.50	25.0		61	2031	196	0.097		58	2034	217	0.107	
pedestrian phase																

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

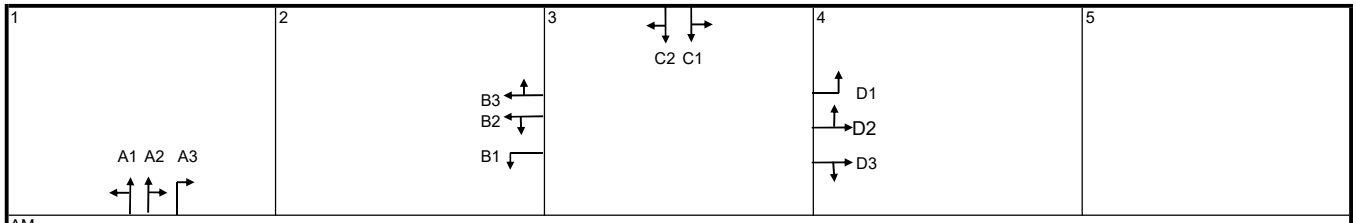


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3+4		1+2+3+4	
Sum y	0.453		0.456	
L (s)	18		18	
C (s)	120		120	
practical y	0.765		0.765	
R.C. (%)	69%		68%	

Note:



AM																					
	G =		I/G =	7	G =		I/G =	5	G =		I/G =	5	G =		I/G =	5	G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		
PM																					
	G =		I/G =	7	G =		I/G =	5	G =		I/G =	5	G =		I/G =	5	G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		

Roundabout Analysis

Junction: Tai Ho Interchange | Job Number: J7372

Scenario: Future Condition (Without Proposed JPOMQ) | P. 21

Design Year: 2036 | Designed By: | Checked By: | Date: 7 Feb 2025

AM Peak

Arm	To A	To B	To C	To D	To E	to F	Total	q_c
From A	10	0	100	255			365	450
From B	67	0	250	5			322	525
From C	80	175	0	80			335	497
From D	5	115	0	160			280	332
From E								
From F								
Total	162	290	350	500			1302	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	Total	q_c
From A	15	0	65	260			340	345
From B	61	0	135	5			201	515
From C	85	135	0	100			320	516
From D	5	35	0	175			215	296
From E								
From F								
Total	166	170	200	540			1076	

Note : Arm A to B is a free flow movement.

Legend

Arm	Road (in clockwise order)
A	Road P1 SB
B	North Lantau Highway WB
C	Cheung Tung Road NB
D	North Lantau Highway EB
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	7.5	7.3	29.0	1.0	80	40	0.3
From B	7.9	7.3	26.0	2.0	80	35	0.5
From C	8.0	7.0	26.0	1.0	80	40	1.6
From D	8.5	3.65	26.0	10.0	80	40	0.8
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	7.42	7.39	1.06	0.98	2248.85	0.55	1961.03	2018	365	340	0.19	0.17
From B	7.61	7.39	1.06	0.99	2304.66	0.56	1997.93	2004	322	201	0.16	0.10
From C	7.24	7.39	1.06	0.98	2193.14	0.54	1877.44	1867	335	320	0.18	0.17
From D	5.55	7.39	1.06	0.98	1681.79	0.47	1490.18	1507	280	215	0.19	0.14
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: Tai Ho Interchange | Job Number: J7372

Scenario: Future Condition (With Proposed JPOMQ) | P. 22

Design Year: 2036 | Designed By: | Checked By: | Date: 7 Feb 2025

AM Peak

Arm	To A	To B	To C	To D	To E	to F	Total	q_c
From A	10	0	100	255			365	450
From B	77	0	250	5			332	525
From C	80	175	0	80			335	507
From D	5	115	0	160			280	342
From E								
From F								
Total	172	290	350	500			1312	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	Total	q_c
From A	15	0	65	260			340	345
From B	74	0	135	5			214	515
From C	85	135	0	100			320	529
From D	5	35	0	175			215	309
From E								
From F								
Total	179	170	200	540			1089	

Note : Arm A to B is a free flow movement.

Legend

Arm	Road (in clockwise order)
A	Road P1 SB
B	North Lantau Highway WB
C	Cheung Tung Road NB
D	North Lantau Highway EB
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	7.5	7.3	29.0	1.0	80	40	0.3
From B	7.9	7.3	26.0	2.0	80	35	0.5
From C	8.0	7.0	26.0	1.0	80	40	1.6
From D	8.5	3.7	26.0	10.0	80	40	0.8
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	7.42	7.39	1.06	0.98	2248.85	0.55	1961	2018	365	340	0.19	0.17
From B	7.61	7.39	1.06	0.99	2304.66	0.56	1998	2004	332	214	0.17	0.11
From C	7.24	7.39	1.06	0.98	2193.14	0.54	1872	1860	335	320	0.18	0.17
From D	5.55	7.39	1.06	0.98	1681.79	0.47	1486	1501	280	215	0.19	0.14
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: Tung Chung East Interchange | Job Number: J7372
Scenario: Future Condition (Without Proposed JPOMQ) | P. 23
Design Year: 2036 | Designed By: | Checked By: | Date: 7 Feb 2025

AM Peak

Arm	To A	To B	To C	To D	To E	to F	Total	q_c
From A	5	320	339				664	1105
From B	510	5	805				1320	349
From C	231	1095	5				1331	520
From D								
From E								
From F								
Total	746	1420	1149				3315	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	Total	q_c
From A	5	240	394				639	915
From B	485	10	855				1350	404
From C	385	900	5				1290	500
From D								
From E								
From F								
Total	875	1150	1254				3279	

Legend

Arm	Road (in clockwise order)
A	Yi Tung Road SB
B	Yi Tung Road NB
C	North Lantau Highway WB
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	12.0	8.0	55.0	10.0	107	40	0.6
From B	12.0	7.1	60.0	12.0	107	45	0.7
From C	12.0	8.0	40.0	12.0	107	45	0.5
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	9.75	109.95	1.00	1.00	2955.58	0.62	2260	2377	664	639	0.29	0.27
From B	9.22	109.95	1.00	0.98	2794.96	0.60	2535	2503	1320	1350	0.52	0.54
From C	9.94	109.95	1.00	0.97	3010.45	0.63	2609	2621	1331	1290	0.51	0.49
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: Tung Chung East Interchange | Job Number: J7372
Scenario: Future Condition (With Proposed JPOMQ) | P. 24
Design Year: 2036 | Designed By: | Checked By: | Date: 7 Feb 2025

AM Peak

Arm	To A	To B	To C	To D	To E	to F	Total	q_c
From A	5	320	355				680	1105
From B	510	5	805				1320	365
From C	241	1095	5				1341	520
From D								
From E								
From F								
Total	756	1420	1165				3341	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	Total	q_c
From A	5	240	402				647	915
From B	485	10	855				1350	412
From C	398	900	5				1303	500
From D								
From E								
From F								
Total	888	1150	1262				3300	

Legend

Arm	Road (in clockwise order)
A	Yi Tung Road SB
B	Yi Tung Road NB
C	North Lantau Highway WB
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	12.0	8.0	55.0	10.0	107	40	0.6
From B	12.0	7.1	60.0	12.0	107	45	0.7
From C	12.0	8.0	40.0	12.0	107	45	0.5
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	9.75	109.95	1.00	1.00	2955.58	0.62	2260	2377	680	647	0.30	0.27
From B	9.22	109.95	1.00	0.98	2794.96	0.60	2526	2498	1320	1350	0.52	0.54
From C	9.94	109.95	1.00	0.97	3010.45	0.63	2609	2621	1341	1303	0.51	0.50
From D												
From E												
From F												
From G												
From H												

Appendix 5

SEWERAGE IMPACT ASSESSMENT

Issue No. : Issue 3
Issue Date : October 2025
Project No. : 2240

SEWERAGE IMPACT ASSESSMENT

FOR

PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

Allied Environmental Consultants Limited
Member of AEC Group (HKEX Stock Code: 8320.HK)
27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
www.asecg.com T: +852 2815 7028 F: +852 2815 5399

沛然環境評估工程顧問有限公司
沛然環保集團成員（港交所股份代號：8320.HK）
香港灣仔告士打道 160 號海外信託銀行大廈 27 樓

Document Verification

Project Title	PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND	**Project No.**	2240
Document Title	SEWERAGE IMPACT ASSESSMENT		

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
1	May 2025	Issue 1	Christine Goh	Cathy Man	Grace Kwok
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3	October 2025	Issue 3	Christine Goh	Cathy Man	Grace Kwok

Allied Environmental Consultants Limited
Member of AEC Group (HKEX Stock Code: 8320.HK)
27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
www.asecg.com T: +852 2815 7028 F: +852 2815 5399

沛然環境評估工程顧問有限公司
沛然環保集團成員（港交所股份代號：8320.HK）
香港灣仔告士打道 160 號海外信託銀行大廈 27 樓

Table of Contents

1. Introduction 3
1.1. Background 3
1.2. Objectives of the SIA 3
1.3. Report Structure 3
2. Site Context 4
2.1. Site Location and Its Environs 4
2.2. Proposed Development Scheme 4
2.3. Existing Sewerage Condition 5
3. Sewerage Impact Assessment 7
3.1. Legislation, Standards and Guidelines 7
3.2. Assessment Methodology and Assessment 7
4. Estimation of Sewage Flow from Proposed Development 9
4.1. Methodology for Estimation of Average Dry Weather Flow 9
4.2. Estimation of Sewage Flow from Existing and Proposed Developments 11
4.3. Estimation of Sewage Flow from Catchment Areas 12
4.4. Estimation of Peak Discharge 13
4.5. Peak Discharge from Study Areas 14
5. Sewerage Capacity 15
6. Result and Discussion 16
6.1. Daily Flow and Peak Flow from Existing and Proposed Development 16
6.2. Sewage Generation after Proposed Development 16
6.3. Liability 17
7. Conclusion 18

List of Tables

Table 2-1 Development Schedule 4
Table 2-2 Reference from CEDD report 6
Table 4-1 Unit Flow Factors Adopted for the Assessment 10
Table 4-2 Sewage Flow Estimation for the Proposed Development 11
Table 4-3 Worker Density Adopted for the Assessment 12
Table 4-4 Peaking Factors 13
Table 4-5 Population and Sewage Flow Estimation 14
Table 5-1 Comparison between Original and Updated Sewage Flow Contribution to East Sewerage Pumping Station 15
Table 6-1 Sewage Generated from Proposed Development 16
Table 6-2 Used Capacity from Proposed Development 16

List of Figures

Figure 2.1 Site Location and Its Environs
Figure 3.1 Overview of Sewerage System and Catchments

List of Appendices

Appendix A Layout Design Scheme of the Proposed Development
Appendix B Extract from CEDD report "Sewerage System and Sewage Implication Review for Population Increase and Development Intensity – Case 2 (Final)" (Ref. P149-03)
Appendix C Sewerage Plan of the Application Site
Appendix D Estimation of Sewage Discharge from the Site
Appendix E Estimation of Sewage Discharge from Catchment Areas
Appendix F Calculation of Flow Capacity of Proposed Development

1. Introduction

1.1. Background

1.1.1. The Hong Kong Police Force (the Applicant) intends to develop a Junior Police Officers Married Quarters (JPOMQ) (hereafter as "the proposed development") at Tung Chung Area 134, Lantau Island (hereafter as "the Application Site"). The Application Site covers an area of about 4,876m^2.

1.1.2. The Application Site is located in Tung Chung East (TCE) of Tung Chung New Town Extension (TCNTE). It is predominantly zoned "Government, Institution or Community (1)" ("G/IC (1)") with minor encroachment into the "Government, Institution or Community" ("G/IC") zone. The "G/IC" and "G/IC (1)" zones are subject to BH restrictions of 50mPD and 70mPD respectively. A Section 16 (S16) Planning Application is being submitted in support of the Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "G/IC (1)" Zone and Proposed Flat (Police Married Quarters) in "G/IC" Zone at the Application Site.

1.1.3. Allied Environmental Consultants Limited (AEC) is commissioned to conduct a sewerage impact assessment (SIA) in support of the Section 16 Planning Application. A full SIA is required to demonstrate the sufficient capacities of the downstream public sewer to receive any additional discharge from the captioned project.

1.2. Objectives of the SIA

1.2.1. The objectives of this SIA are to assess whether the capacity of the existing sewerage network to the Application Site is sufficient to cope with the sewage flow from the proposed development.

1.3. Report Structure

1.3.1. The remaining chapters of this report are shown below:

Chapter 2 – Site Context
Chapter 3 – Sewerage Impact Assessment
Chapter 4 – Estimation of Sewage Flow from Proposed Development
Chapter 5 – Sewage Capacity
Chapter 6 – Result and Discussion
Chapter 7 – Conclusion

2. Site Context

2.1. Site Location and Its Environs

2.1.1. The proposed development is located at Area 134 in TCNTE which is at the junction of Road D2 to the east and Road L7 to the south. Across Road D2 are Area 137 and Area 138, located to the east, designated for a post-secondary institution and other educational uses, and a sports ground respectively. Area 131 is a planned police station and Area 132 is the planned Eastern Sewage Pumping System (ESPS) across Road L7 located to the south. Area 133C is located to the west, planned for public housing while Area 135 is designated for other educational use and is located to the immediate north. The Application Site is currently located on reclaimed land within TCNTE in Islands District.

2.1.2. ***Figure 2.1*** shows the site location and its environs.

2.2. Proposed Development Scheme

2.2.1. The proposed development comprises two residential towers with 3 podium floors and 27 residential floors with about 432 domestic units. Carpark is proposed at G/F and 1/F while E&M facilities and Loading/Unloading Bays are proposed at the G/F. Podium garden is located at 2/F.

2.2.2. The development schedule of the proposed development is tabulated in ***Table 2-1***. The layout design scheme of the proposed development is shown in ***Appendix A***.

Table 2-1 Development Schedule

Floor	Use
G/F	Carpark, E&M Facilities, Loading/Unloading Bays, Management Office/Toilet & Changing Room/ Multipurpose Room
1/F	Carpark
2/F	Podium garden
3/F – 29/F	Flat

2.2.3. According to the latest programme, the commencement of construction works will start in October 2027 tentatively and the proposed development is expected to be completed in Q4 2031.

2.3. Existing Sewerage Condition

2.3.1. The latest Drainage information was obtained from the Civil Engineering and Development Department (CEDD) in February 2025 to gather the background information on sewerage infrastructure in the vicinity of the Application Site. The infrastructure works, including drainage works, sewerage works (including two sewage pumping stations) are under construction. Concerned sewerage network was identified for estimation of the potential sewerage impact to the downstream sewers associated with the proposed development.

2.3.2. As refer to CEDD report "Sewerage System and Sewage Implication Review for Population Increase and Development Intensity – Case 2 (Final)" (Ref. P149-03), a sewerage network comprising gravity sewer is proposed to convey the collected sewage to the ESPS, which will be locating to the south of the application development. Extract from CEDD report is shown in ***Appendix B***. The implication review was conducted to identify and address possible implication due to the proposed increase in population and residential flats due to the continuous pressing need for housing and further housing intensification in private developments.

2.3.3. Reference to P149-03 report is adopted as conservative approach for this SIA report to assess the cumulative impact from the Application Site and the increased population and development density on the sewerage system within the Tung Chung New Town Extension (TCNTE), and to incorporate the recommended mitigation measures based on latest design information and inputs from relevant authorities. The estimation of the design catchment of ESPS and the estimated average dry weather flow of the subject site are as follows.

Table 2-2 Reference from CEDD report

Development	**ADWF (m^3/day)**	**Peak Flow (m^3/day)**	**Remarks and Assumption**
Design Catchment to ESPS (Area 132)	35,727 (Design)	67,723[(1)] (Maximum)	Information from CEDD report "Sewerage System and Sewage Implication Review for Population Increase and Development Intensity – Case 2 (Final)" (Ref. P149-03)
Application Site (Area 134)	**314.8 [(2)]**	-	
Area 129	786.1	-	
Area 130	875.8	-	
Area 131	65.2	-	
Area 135	337.8	-	
Area 137	256.6	-	
Area 138	84.2	-	
Area 133A	4,572.2	-	
Area 133B	1,614.7	-	
Area 133C	1,708.7	-	
Area 132 [(3)]	3.3	-	
Area 52 (E6)	141.9	-	

Notes:

(1) Peaking Factor 1.89 (excluding stormwater allowance) is adopted according to CEDD Report (Ref. P149-03)

(2) Estimated population of 1,166 people adopted based on CEDD Report (Ref. P149-03)

(3) Sewage generated from the employee of east sewage pumping station (ESPS)

3. Sewerage Impact Assessment

3.1. Legislation, Standards and Guidelines

3.1.1. With reference to ProPECC PN 1/23 Drainage Plans Subject to Comment by the Environmental Protection Department ("EPD"), foul water should be discharged to a foul sewer under the Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations (Cap.123I) Section 40(1), 40(2), 41(1) and 90.

3.1.2. The following standards and guidelines are adopted for the estimation, assessment and evaluation of sewerage implication of the proposed development:

- "Hong Kong Planning Standards and Guidelines" issued by the Planning Department;
- "Sewerage Manual Part 1" published by DSD; and
- "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning Version 1.0 (Report No.: EPD/TP1/05)" ("GESF") published by Environmental Protection Department ("EPD");

3.2. Assessment Methodology and Assessment

3.2.1. As shown in the drainage plan in ***Appendix C***, the sewage generated from the proposed development will be discharged through the existing terminal manhole (S1: PLUG C0.2) at the south of the Application Site. This terminal hole will be connected to the existing public foul water manhole (S2: SE-C13) outside the Application Site through a 280mm diameter polyethylene (PE) sewage pipe system. The existing sewers in the vicinity of the proposed development are shown in ***Figure 3.1***.

3.2.2. According to the "Sewerage Manual – Key Planning Issues and Gravity Collection System" published by DSD in 2013, the capacities of respective sewers have been calculated based on Colebrook-White equation for circular pipes:

$$V = -2(2gDS)^{0.5} log\left(\frac{k_s}{3.7D} + \frac{2.5v}{D(2gDS)^{0.5}}\right)$$

Where

V = mean velocity (m/s)

g = gravitational acceleration (m/s^2)

D = pipe diameter (m)

k_s = hydraulic pipeline roughness (m)

(0.0015m is adopted for polyethylene sewers, with reference to CEDD report)

v = kinematic viscosity of fluid (m^2/s)

s = frictional slope (energy gradient due to frictional loss)

3.2.3. The detailed calculations of sewage generation from Application Site and catchment areas have been provided in ***Appendix D*** and ***Appendix E*** respectively for reference.

4. Estimation of Sewage Flow from Proposed Development

4.1. Methodology for Estimation of Average Dry Weather Flow

4.1.1. The unit flow factors as recommended in the *Guideline for Estimating Sewage Flows for Sewage Infrastructure Planning* (hereafter as "GESF") published by EPD in 2005 has been adopted in the assessment to estimate sewage flow. Unit flow factors applied for the sewage generation estimation are tabulated in ***Table 4-1*** below.

Table 4-1 Unit Flow Factors Adopted for the Assessment

Type of People	**Unit Flow Factors [2]**	**Category [1]**
Residents of the Residential Development R1 / Welfare facilities OK	0.190 m^3/person/day	Domestic (housing type specific) – R1
Residents of the Residential Development R2 OK	0.270 m^3/person/day	Domestic (housing type specific) – R2
Employee of F&B Trade OK	1.580 m^3/person/day	Commercial Employee + Commercial activities (J10 Restaurants & Hotels)
Employee of Retail/Commercial	0.280 m^3/person/day	Commercial Employee + Commercial activities (J4 Wholesale and Retail)
Employee of Office	0.080 m^3/person/day	Commercial Employee + Commercial activities (J6 Business Services)
Employee of Fire Station/ Sports Ground/ Welfare Facilities/ Police Station/ Management Office/ Open Space	0.280 m^3/person/day	Commercial Employee + Commercial activities (J11 Community, Social & Personal Services)
Spectator of Sports Ground [3]	0.032 m^3/person/day	-
School Teacher	0.280 m^3/person/day	Commercial Employee + Commercial activities (J11 Community, Social & Personal Services)
Kindergarten/ School Student	0.04 m^3/person/day	School Student
Employee of Sewage Pumping Station [4]	0.33m^3/person/day	-
Toilets of Open Space (without shower room) [5]	10.8m^3/person/day	-
Visitors of Open Space [5]	0.01m^3/person/day	-

Notes:
[1] Environmental Protection Department, HKSARG [EPD] (2005). Guidelines for estimating sewage flows for sewage infrastructure planning (EPD/TP 1/05).
[2] UFF for various occupancy types are adopted according to Table T-1 and Table T-2 of the GESF.
[3] UFF for Sports Ground is estimated by HAB in 2015, based on the employment figures of Tseung Kwan O Sports Ground. According to 2015 employment figures of Tseung Kwan O Sports Ground with 5,000 spectators, the permanent employees are 30.
[4] UFF for employees working at sewage pumping station is adopted based on the CEDD Report (Ref. P149-03).
[5] UFF for visitors and toilet (without shower room) of open space in Area 52 is adopted based on open space data retrieved from agreed SIA for Open Space Development in Tung Chung New Town Extension (East) in Agreement No. 9AJ126.

4.2. Estimation of Sewage Flow from Existing and Proposed Developments

4.2.1. The sewage generated from the proposed development will be collected and discharged into an existing terminal sewage manhole PLUG C0.2, as shown in ***Figure 3.1***. This terminal manhole will be connected to the existing public manhole S1 (SE-C13) with 280mm polyethylene sewage pipe.

4.2.2. The proposed development comprises of two 27-storey towers with about 432 residential units. The estimated sewage flow is given in ***Appendix D***.

4.2.3. With reference to **Table 4-2**, the total estimated Average Dry Weather Flow ("ADWF") from the proposed development is 315.7 m^3/day. The population and the estimated ADWF of proposed development are summarized in Table 1 of ***Appendix D***.

Table 4-2 Sewage Flow Estimation for the Proposed Development

Proposed Development			
Residential	**Value**	**Unit**	**Remark**
Total Number of Units	432	units	
Average Household Size	2.7	person/unit	Referred to the average domestic household size of Islands District Council in 2021 Population Census: Summary Results, published by the Census and Statistics Department
Total Number of residents	1,167	persons	
Unit flow	0.27	m^3/person/day	Referred to the planning unit flow for Domestic (housing type specific) – R2 in Table T-1 of GESF.
Average Sewage Discharge	315.1	m^3/day	
Management Office (G/F)			
GFA	58.64	m^2	Provided by project team
Worker Density per GFA (in 100m^2)	3.4	person/100m^2	Refer to worker density of All Economic Activities (All Type) in Table 8 of CIFSUS
Total number of employees	2	persons	
Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF
Average Sewage Discharge	0.6	m^3/day	
Total Average dry weather flow of the Proposed Development	**315.7**	**m^3/day**	

4.3. Estimation of Sewage Flow from Catchment Areas

4.3.1. Reference has been made to CEDD report "Sewerage System and Sewage Implication Review for Population Increase and Development Intensity – Case 2 (Final)" (Ref. P149-03) to estimate the sewage flow from nearby catchment areas.

4.3.2. Different catchment areas are defined as shown in ***Figure 3.1*** to consider nearby sewage generation. The catchment consists of residential buildings, welfare facilities, retail shops, restaurants, kindergartens, educational use, post-secondary institution, offices, police station, fire station, sports ground, open space and sewage pumping station. Catchment A to Catchment E cover the sewage flow from the upstream area, with manhole S2 (SE-C13) collecting discharge from Catchment A to Catchment E and proposed development. Manhole S3 (SE-E28) collects sewage generated from both upstream Catchment A to Catchment E, downstream Catchment F to Catchment M and the proposed development. The combined sewage is then discharged into the existing public sewerage pipes along Road L7 and to the ESPS located at Area 132.

4.3.3. Residential density is referred to the "2021 Population Census: Summary Results" issued by Census and Statistics Department. An average household size of 2.7 persons is deployed for Islands District Council to estimate the residential population in the vicinity.

4.3.4. The number of employees is estimated with reference to the "Commercial and Industrial Floor Space Utilization Survey" issued by the Planning Department. Different worker densities per $100m^2$ of Gross Floor Area (GFA) have been adopted in the assessment to estimate the number of employees within the study area. Relative worker density applied for the sewage generation estimation is tabulated in **Table 4-3** below.

Table 4-3 Worker Density Adopted for the Assessment

Economic Activities	**Worker Density (worker per GFA, in $100m^2$)**
All Economic Activities (All Type)	3.4 worker/$100m^2$

4.3.5. Based on information collected from the desktop study, sewage flow from different catchments in the study area is calculated as given in ***Appendix E***.

4.4. Estimation of Peak Discharge

4.4.1. Catchment inflow factor ("P_{CIF}") caters for the net overall ingress of wastewater to the sewerage system. They are catchment dependent and applicable to major sewerage facilities of a catchment.

4.4.2. In accordance with Table T-4 of the GESF, P_{CIF} of 1.0 is adopted for existing sewerage as concerned sewerage system is identified in "Central, North Point, Sandy Bay, Wan Chai, Wah Fu, Stanley, Central Kowloon, Yuen Long, San Wai, North District, Tai Po, North Lantau, Mui Wo".

4.4.3. Revised average dry weather flow ("revised ADWF") is determined by production of average dry weather flow and catchment inflow factor. Contributing population is then calculated by dividing the revised ADWF by 0.27. The calculated contributing population is finally used for selection of peaking factors.

4.4.4. Based on **Table 4-4** which is also presented in Table T-5 in GESF, the peaking factors for each sewer are chosen in the hydraulic calculation for peak flow estimation.

Table 4-4 Peaking Factors

Population Range for Sewers [1] [2]	Peaking Factor (including storm water allowance) for facility with existing upstream sewerage	Peaking Factor (excluding storm water allowance) for facility with new upstream sewerage
< 1000	8	6
1000 - 5000	6	5
5000 - 10000	5	4
10000 - 50000	4	3
> 50000	Max (7.3 / $N^{0.15}$, 2.4)	Max (6 / $N^{0.175}$, 1.6)

Notes:
[1] N is the contributing population in thousands.
[2] According to Section 12.1 of GESF,
Contributing Population = Calculated Total Average Flow (m^3/day) ÷ 0.27 (m^3/person/day)

4.5. Peak Discharge from Study Areas

4.5.1. Flow rates of peak discharge from the proposed development and other catchment areas are estimated in accordance with the DSD's "Sewerage Manual Part 1". Peak flows from different catchments at the study area are summarized in **Table 4-5** and detailed calculation for proposed development are given in ***Appendix F***.

Table 4-5 Population and Sewage Flow Estimation

Contributing Catchment Area	Connected Manhole	Revised ADWF (m^3/day)[1]	Contributing Population[2]	Peaking Factor[3]	Total Peak Discharge (m^3/s)[4]
Application Site	PLUG C0.2	315.7	1,169	6.0	0.022
Application Site + Catchment A to Catchment E	SE-C13	1059.5	3,924	6.0	0.074
Application Site + Catchment A to Catchment M	SE-E28	35,539.7	131,628	3.5	1.444

Notes:
[1] Revised ADWF (m^3/day) = ADWF (m^3/day) × Catchment Inflow Factor
[2] According to Section 12.1 of GESF, Contributing Population = Calculated Total Average Flow (m^3/day) ÷ 0.27 (m^3/person/day)
[3] According to Table T-5 of GESF
[4] Total Peak Discharge (m^3/s) = (Revised ADWF (m^3/day) × Peaking Factor ÷ 86400s/day)

5. Sewerage Capacity

5.1.1. According to the "Sewerage Manual – Key Planning Issues and Gravity Collection System" (Sewerage Manual) published by DSD in 2013, the capacities of respective sewers have been calculated based on the Colebrook White's equation. The roughness coefficients (k_s) of 1.5mm for polyethylene sewer pipe, under poor condition are adopted in the assessment in accordance with Table 5 of DSD's "Sewerage Manual Part 1".

5.1.2. The sewerage impact on various segments of the sewer was evaluated by comparing the estimated peak flow against the capacity of the respective sewer segments. The detailed calculations are provided in ***Appendix F***.

5.1.3. For the capacity of the ESPS, the design capacity is 35,727m^3/day. Given that the ADWF and peak flow from the Application Site are 315.7m^3/day and 0.022m^3/s respectively. Comparing with CEDD report "Sewerage System and Sewage Implication Review for Population Increase and Development Intensity – Case 2 (Final)" (Ref. P149-03), the original designed sewage flow generated from Area 134 is 314.8m^3/day which is lower than the latest designed sewage flow rate. However, the increase represents an overall percentage change of 0.003%, and the sewage discharge from the Application Site accounts for less than 1% of the ESPS design capacity, as shown in table below. As the sewage contribution from the Application Site is minimal, no adverse sewerage impact is expected from the increased population in the proposed development.

Table 5-1 Comparison between Original and Updated Sewage Flow Contribution to East Sewerage Pumping Station

	Original	**Newly estimated**
ADWF	314.8m^3/day	315.7m^3/day
Capacity of ESPS (Design)	35,727m^3/day	
Percentage contribution to ESPS	0.881%	0.884%
Overall percentage change [1]	**+ 0.003%**	

Notes:
[1] Positive sign denotes increase, whereas negative sign denotes reduction

6. Result and Discussion

6.1. Daily Flow and Peak Flow from Existing and Proposed Development

6.1.1. The estimated daily flow and peak flow of the proposed redevelopment will be 315.7 m^3/day and 0.022 m^3/s, taking catchment inflow factor of 1.0 into account. **Table 6-1** tabulates the sewage generated proposed development.

Table 6-1 Sewage Generated from Proposed Development

Development	Daily Flow (m^3/day)	Peak Flow (m^3/s)
Proposed Development	315.7	0.022

6.2. Sewage Generation after Proposed Development

6.2.1. After the development, the percentages of used capacity for the existing sewers (segment S1 – S4) range from 18% to 77%. Flow estimation and capacity checking are detailed in ***Appendix D*** and ***Appendix F***, respectively. Used capacity of proposed development is presented in **Table 6-2** below.

Table 6-2 Used Capacity from Proposed Development

Pipe Segments	Used Capacity, % Proposed Development
S1 – S2	18%
S2 – S3	20%
S3 – S4	77%

Notes:
Pipe segment that exceeded 100% used capacity are bolded and underlined.

6.2.2. Based on the results shown above, none of the sewer pipes exceeded their used capacity.

6.3. Liability

6.3.1. The Applicant will be responsible for the construction works for the pipe convey sewerage from the terminal manhole (S1: PLUG C0.2) to the existing public sewer (S2: SE-C13). All drainage facilities shall be designed and constructed to conform to the requirements outlined below while future maintenance of the sewers outside the Application Site boundary will be carried out by DSD:

a. The Stormwater Drainage Manual, DSD
b. The Sewerage Manual, DSD
c. The General Specification for Civil Engineering Works, Hong Kong Government
d. The DSD Standard Drawings
e. The DSD Technical Circulars and Practice Notes

6.3.2. During operation phase, regular inspection of the sewers within the Application Site should be conducted by the property management office to ensure proper performance. Regular maintenance should also be carried out in accordance with standard practices stated in the DSD's "Sewerage Manual Part 1".

7. Conclusion

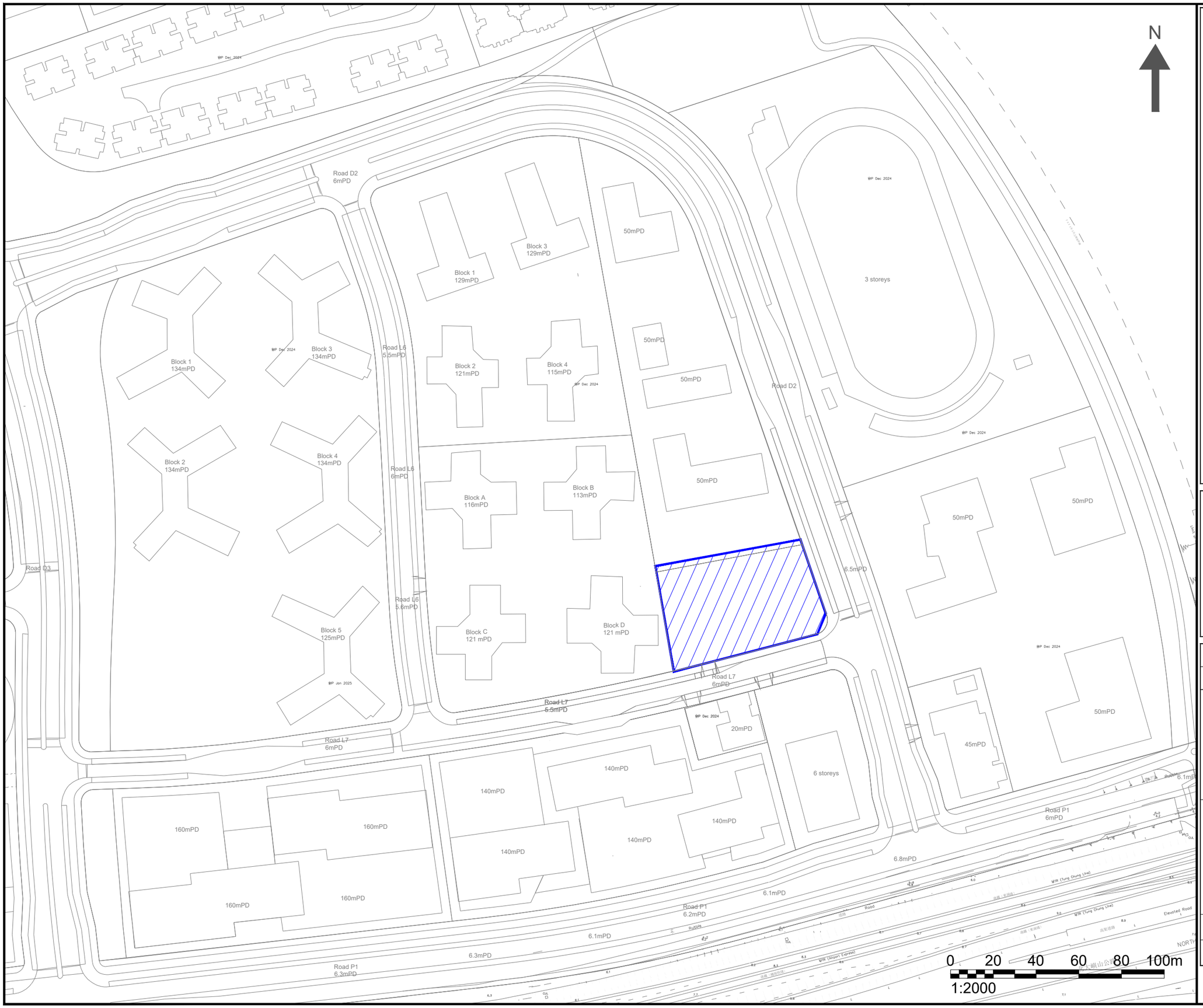
7.1.1. A Sewerage Impact Assessment (SIA) has been conducted to evaluate the possible impacts on the public sewerage network due to the proposed development. The sewage generated from the proposed development will be collected and discharged into the existing 280mm public sewers via Manhole (PLUG C0.2). The result showed that 315.7m^3/day of average sewage discharge and 0.022m^3/s of peak sewage discharge are expected to be generated from the proposed development.

7.1.2. The assessment results demonstrated that all sewers have sufficient sewer capacity to cope with the sewage flow from catchments and the proposed development. Therefore, significant sewerage impact arising from the proposed development on the existing sewers is not expected, no mitigation measures are considered necessary for the existing sewers.

7.1.3. The Applicant will be responsible for the design and construction of the proposed sewer segments between the existing public sewers and the proposed development, which will be further discussed with DSD, while future maintenance of sewers outside the Application Site boundary will be carried out by DSD.

7.1.4. Based on the above, it is concluded that the sewerage impact arising from the proposed development should be acceptable.

Figures



NOTES :

Subject Site

Consultant

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Drawing By :	CC

Project :

PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PROJECT SITE AND ITS ENVIRON

Drawing No : FIGURE 2.1	Revision : 0
Scale : AS SHOWN	Date : MAY 2025

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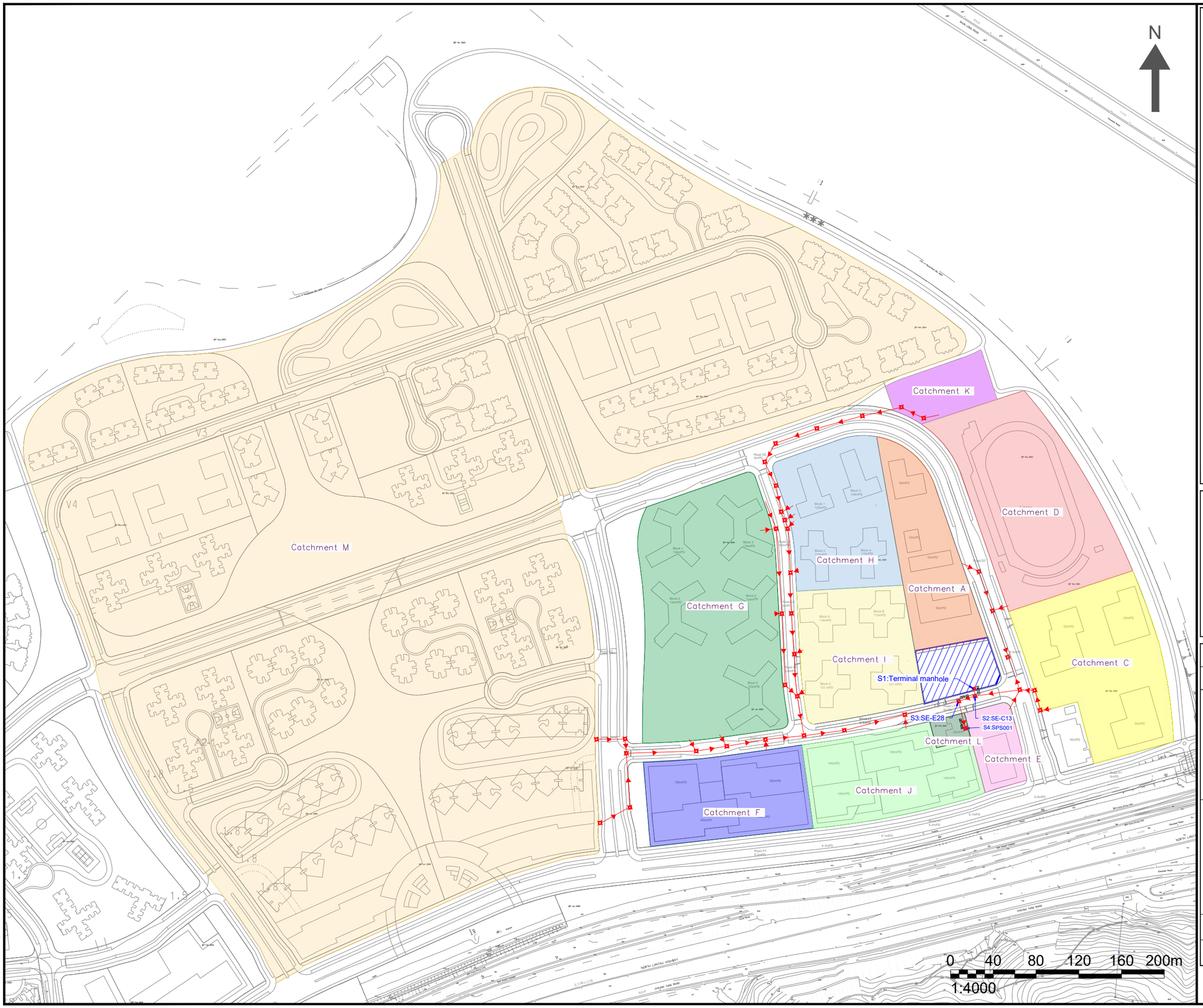

NOTES :

- Subject Site
- Catchment Area
- Sewer Pipe
- Sewer Manhole

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

OVERVIEW OF EXISTING SEWAGE NETWORK AND CATCHMENTS

Drawing No : FIGURE 3.1	Revision : 2
Scale : AS SHOWN	Date : OCT 2025

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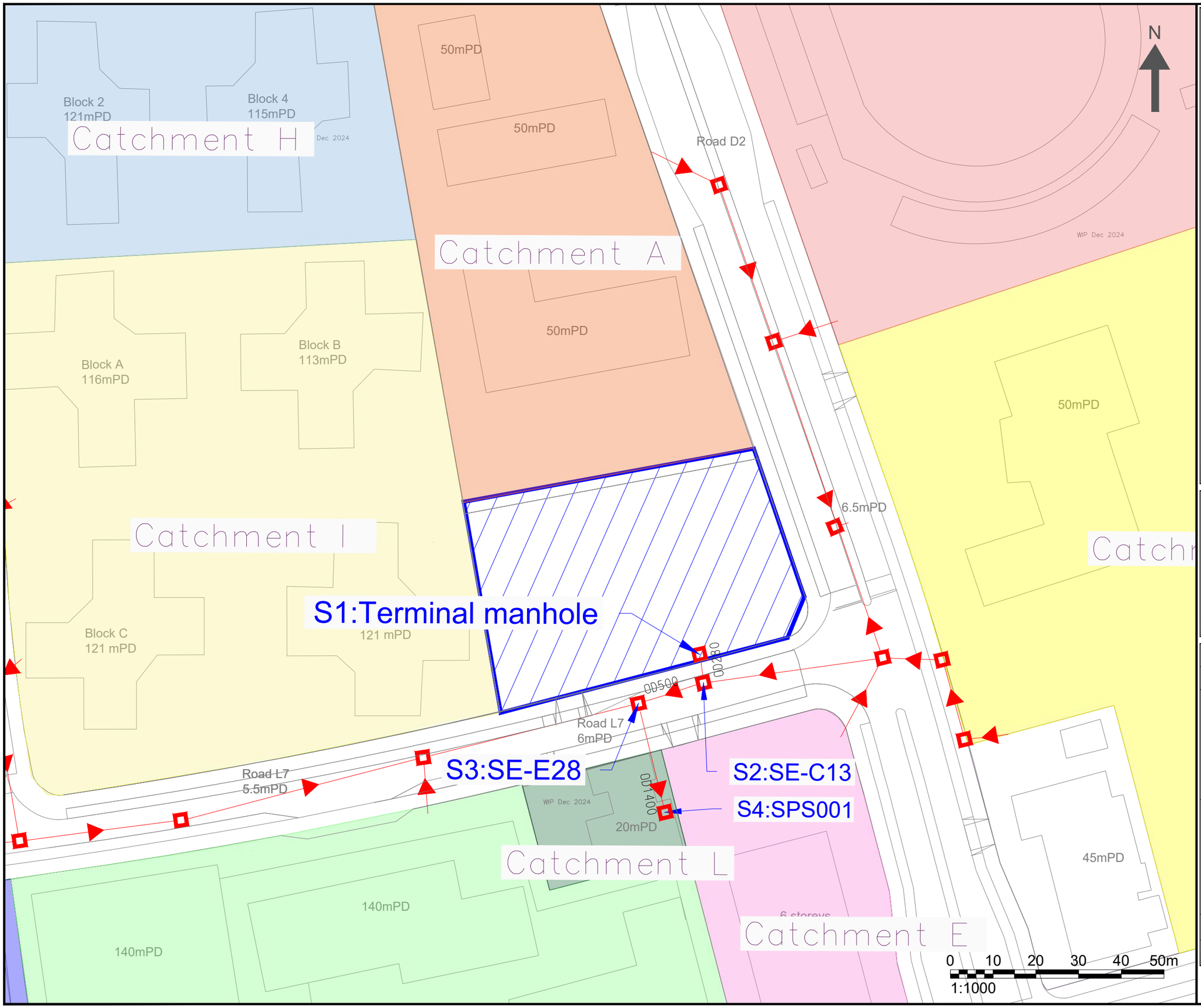

NOTES :

- Subject Site
- Catchment Area
- Sewer Pipe
- Sewer Manhole

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

OVERVIEW OF EXISTING SEWAGE NETWORK AND CATCHMENTS

Drawing No : FIGURE 3.1a	Revision : 2
Scale : AS SHOWN	Date : OCT 2025

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Appendix A

Layout Design Scheme of the Proposed Development

(Please refer to Appendix 1 of the Supplementary Planning Statement)

Appendix B

Extract from CEDD report "Sewerage System and Sewage Implication Review for Population Increase and Development Intensity – Case 2 (Final)" (Ref. P149-03)

89	Primary School (Student)	2400	0.04	96.0
89	Primary School (Teacher)	160	0.28	44.8
	Sewerage Flow for Assumed F&B Trade	-123	1.58	-194.0
Total				672.4 **(say 673)**

Notes:

(1) Calculation of ADWF in open space retrieved from agreed SIA for Open Space Development in Tung Chung New Town Extension (East) in Agreement No. 9AJ126.

Table 4-2 Changes in Sewage Flow of the East SPS under CASE 2

Area No. (Catchment)	Category	Changes in Population/ Employee (Head)	Unit Flow Factor (m3/head/day)	Changes of Flow (m^3/day)
115 (A2-2)	Residential Population (R1)	53	0.19	10.1
116 (A2-3)	Residential Population (R1)	53	0.19	10.1
133A (C1-1)	Residential Population (RS)	-2454	0.19	-466.3
	Commercial (Retail)	-104	0.28	-29.1
	Management Office	50	0.28	14.0
	F&B Trade	393	1.58	620.0
	Kindergarten (Student)	272	0.04	10.9
	Kindergarten (Teacher)	31	0.28	8.7
	GIC Facilities (Employee)	-235	0.28	-65.8
	Welfare Facilities (Employee)	-490	0.28	-137.2
133C (C2-1)	Residential Population (RS)	514	0.19	97.0
	Commercial (Retail)	-372	0.28	-104.0
	Management Office	25	0.28	7.0
	Kindergarten (Student)	233	0.04	9.3

Area No. (Catchment)	Category	Changes in Population/ Employee (Head)	Unit Flow Factor (m3/head/day)	Changes of Flow (m^3/day)
	Kindergarten (Teacher)	26	0.28	7.3
	Welfare Facilities (Resident)	180	0.19	34.0
	Welfare Facilities (Employee)	-20	0.28	-5.6
133B (C2-2)	Residential Population (RS)	-1015	0.19	-192.0
	Commercial (Retail)	-362	0.28	-101.4
	Managing Office	25	0.28	7.0
	Kindergarten (Student)	239	0.04	9.6
	Kindergarten (Teacher)	26	0.28	7.3
	Welfare Facilities (Resident)	100	0.19	19.0
	Welfare Facilities (Employee)	-27	0.28	-7.6
121 (E1-2)	Residential Population (R2)	16	0.27	4.3
123 (E1-3)	Residential Population (R2)	15	0.27	4.1
125 (E1-4)	Residential Population (R3)	-691	0.37	-255.7
	Residential Population (R2)	1052	0.27	284.0
126 (E3-1)	Residential Population (R3)	-1045	0.37	-386.7
	Residential Population (R2)	1592	0.27	429.0
127 (E3-2)	Residential Population (R3)	-803	0.37	-297.1
	Residential Population (R2)	1222	0.27	329.0
139 (F1-1)	Residential Population (R3)	-1326	0.37	-490.6
	Residential Population (R2)	2018	0.27	544.0
141B (F1-2)	Residential Population (R3)	-1328	0.37	-491.4
	Residential Population (R2)	2022	0.27	545.0
142 (F2-1)	Residential Population (R3)	-877	0.37	-324.5
	Residential Population (R2)	1335	0.27	360.0
141A (F2-2)	Residential Population (R3)	-1319	0.37	-488.0
	Residential Population (R2)	2009	0.27	542.4
134 (C0-2)	Residential Population (R2)	14	0.27	3.8

Area No. (Catchment)	Category	Changes in Population/ Employee (Head)	Unit Flow Factor (m3/head/day)	Changes of Flow (m^3/day)
135 (C0-1)	Other School Use (Teacher)	104	0.28	29.1
	FSD quarters	810	0.27	218.7
	Sub-divisional fire Station cum ambulance depot	150	0.28	42.0
136 (G0-3)	Fire Station	-148	0.28	-41.4
120 (E0-2)	Community & Social Centres	100	0.28	28.0
124 (E0-4)	Community & Social Centres	-348	0.28	-97.4
120 (E0-1)	Secondary School (Student)	-1200	0.04	-48.0
120 (E0-1)	Secondary School (Teacher)	-98	0.28	-27.4
124 (E0-4)	Secondary School (Student)	1200	0.04	48.0
124 (E0-4)	Secondary School (Teacher)	98	0.28	27.4
118 (E2)	Open space (Visitor)	5000	0.01 (1)	50.0
118 (E3)	Open space (Employee)	45	0.28	12.6
118 (E4)	Open space (Visitor)	5000	0.01(1)	50.0
52 (E1)	Open space (Visitor)	2000	0.01(1)	20.0
52 (E5)	Open space (Employee)	32	0.28	9.0
52 (E5)	Open space (Visitor)	3000	0.01(1)	30.0
52 (E6)	Open space (Employee)	14	0.28	3.9
52 (E6)	Open space (No. Shower Room)	10	10.8(1)	108
52 (E6)	Open space (Visitor)	3000	0.01(1)	30.0
132	Sewage Pumping Station (Employee)	10	0.33	3.3
138	Sports Ground (spectator)	2,500	0.032(2)	80.0
138	Sports Ground (spectator)	-2,500	0.025	-62.5
147	Cycle Park	-50	0.28	-14.0
	Sewerage Flow for Assumed F&B Trade	-73.8	1.58	-116.6
Total				457.4 (say 458)

Notes:

(1) Calculation of ADWF in open space retrieved from agreed SIA for Open Space Development in Tung Chung New Town Extension (East) in Agreement No. 9AJ126.
(2) Estimated by HAB in 2015, based on the employment figures of Tseung Kwan O Sports Ground. According to 2015 employment figures of Tseung Kwan O Sports Ground with 5,000 spectators, the permanent employees are 30. The UFF of 0.032 is estimated by making reference to the deviation under Section 7.4 of the EIA report of Kai Tak Multi-purpose Sports Complex.

4.1.3 The total ADWF generated from the western sewage catchment is increased from 14,740m^3/day to 15,413m^3/day whereas the ADWF generated in eastern catchment is increased from 35,269m^3/day to 35,874m^3/day. The increased sewage build-up of the Western and Eastern sewerage catchment is summarized in **Table 4-3** and **Table4-5**.

Table 4-3 Revised Sewage Build-up of the WSPS for Population Increase of Tung Chung Phase 1 and 2 Areas under CASE 2

Area No. (Catchment)	Category	Population/Employee (Head)	Unit Flow Factor (m^3/head/day)	ADWF (m^3/day)
106A (D1-1)	Residential Population (R2)	2660	0.27	718.2
106B (D1-2)	Residential Population (R2)	2012	0.27	543.2
106C (D2-1)	Residential Population (R2)	2800	0.27	756.0
110 (D2-2)	Residential Population (R2)	3464	0.27	935.3
	Commercial (Retail)	330	0.28	92.0
109 (D2-3)	Residential Population (RS)	3763	0.19	715.0
	Commercial (Retail)	180	0.28	50.0
103 (D2-4)	Residential Population (RS)	5651	0.19	1073.7
	Commercial (Retail)	287	0.28	80.0
	Kindergarten (Student)	180	0.04	7.0
	Kindergarten (Employee)	20	0.28	6.0
	Community & Social Centres	33	0.28	9.0
99 (B1-1)	Residential Population (RS)	14,880	0.19	2827.0
	Commercial (Retail)	288	0.28	81.0
	Kindergarten (Student)	180	0.04	7.0
	Kindergarten (Employee)	20	0.28	6.0
100 (B1-2)	Residential Population (RS)	16,120	0.19	3063.0
	Commercial (Retail)	676	0.28	189.0
	Kindergarten (Student)	180	0.04	7.0
	Kindergarten (Employee)	20	0.28	6.0
	Community & Social Centres	128	0.28	36.0
57 (com-1)	Commercial (Office)	5350	0.08	428.0
	Commercial (Retail)	539	0.28	150.9
105 (D0-2)	Salt-water Pumping Station	10	0.33	3.0

Table 4-4 Revised Sewage F&B Trade Build-up of the WSPS for Population Increase of Tung Chung Phase 1 and 2 Areas under CASE 2

Area No. (Catchment)	Category	Population of possible F&B trade(1) (head)	Unit flow factor (m^3/head/day)	ADWF (m^3/day)
110 (D2-2)	Commercial	33	1.58	52.1
109 (D2-3)	Commercial	18	1.58	28.4
103 (D2-4)	Commercial	28.7	1.58	45.3
99 (B1-1)	Commercial	28.8	1.58	45.5
100 (B1-2)	Commercial	67.6	1.58	106.8
57 (com-1-Retail)	COM-1 (Retail)	53.9	1.58	85.2
Total		**230**		**363.4**

Notes:

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

Table 4-5 Revised Sewage Build-up of the ESPS for Population Increase of Tung Chung Phase 3 and 4 Areas under CASE 2

Area No. (Catchment)	Category	Population/Employee (Head)	Unit Flow Factor (m^3/head/day)	ADWF (m^3/day)
113 (A1-1)	Comprehensive Development Area	9,339	0.28	2,614.9
	Metro Core Area (Office)	2,350	0.08	188.0
	Metro Core Area (Retail)	2,526	0.28	707.3
	Kindergarten (Student)	180	0.04	7.2
	Kindergarten (Teacher)	20	0.28	5.6
113 (A1-2)	Comprehensive Development Area	8,966	0.28	2,510.5
	Metro Core Area (Office)	3,150	0.08	252.0
	Metro Core Area (Retail)	1,531	0.28	428.7
	Kindergarten (Student)	180	0.04	7.2
	Kindergarten (Teacher)	20	0.28	5.6
114 (A2-1)(7)	Special Residential (RS)	7,886	0.19	1,498.3
	Commercial	285	0.28	79.8
	Kindergarten (Student)	180	0.04	7.2
	Kindergarten (Teacher)	20	0.28	5.6
	Welfare Facilities	183(1)	0.28	51.2
115 (A2-2)	Residential Population (R1)	3578	0.19	679.8
116 (A2-3)	Residential Population (R1)	3578	0.19	679.8

Area No. (Catchment)	Category	Population/Employee (Head)	Unit Flow Factor (m^3/head/day)	ADWF (m^3/day)
117 (A2-4) (7)	Special Residential (RS)	8,293	0.19	1,575.7
	Commercial	301	0.28	84.3
	Kindergarten (Student)	180	0.04	7.2
	Kindergarten (Teacher)	20	0.28	5.6
	Welfare Facilities	192(1)	0.28	53.8
133A (C1-1)	Special Residential (RS)	18,406	0.19	3497.1
	Commercial	913	0.28	255.6
	Management Office	50	0.28	14.0
	F&B Trade	393	1.58	620.9
	Kindergarten (Student)	452	0.04	18.1
	Kindergarten (Teacher)	51	0.28	14.3
133C (C2-1)	Special Residential (RS)	8,382	0.19	1592.6
	Management Office	25	0.28	7.0
	Kindergarten (Student)	233	0.04	9.3
	Kindergarten (Teacher)	26	0.28	7.3
	Welfare Facilities (Resident)	180	0.19	34.2
	Welfare Facilities (Employees)	194(1)	0.28	54.3
133B (C2-2)	Special Residential (RS)	7984	0.19	1517.0
	Management Office	25	0.28	7.0
	Kindergarten (Student)	239	0.04	9.6
	Kindergarten (Teacher)	26	0.28	7.3
	Welfare Facilities (Resident)	100	0.19	19.0
	Welfare Facilities (Employees)	182(1)	0.28	51.0
119 (E1-1)	Special Residential (RS)	5,145	0.19	977.6
	Commercial	287	0.28	80.4
	Community & Social Centres	120	0.28	33.6
	Welfare Facilities	142(1)	0.28	39.8
121 (E1-2)	Residential Population (R2)	1031	0.27	278.4
	Commercial	92	0.28	25.8
123 (E1-3)	Residential Population (R2)	1030	0.27	278.1
	Commercial	92	0.28	25.8
125 (E1-4)	Residential Population (R2)	1052	0.27	284.0
	Commercial	140	0.28	39.2

Area No. (Catchment)	Category	Population/Employee (Head)	Unit Flow Factor (m^3/head/day)	ADWF (m^3/day)
122 (E1-5)	Special Residential (RS)	5,097	0.19	968.4
	Commercial	253	0.28	70.8
	Kindergarten (Student)	180	0.04	7.2
	Kindergarten (Teacher)	20	0.28	5.6
	Community & Social Centres	70	0.28	19.6
	Welfare Facilities	140(1)	0.28	39.2
118 (E3)	Open space (Employee)	45	0.28	12.6
118 (E2)	Open space (Visitor)	5000	0.01(6)	50.0
118 (E4)	Open space (Visitor)	5000	0.01(6)	50.0
52 (E1)	Open space (Visitor)	2000	0.01(6)	20.0
52 (E5)	Open space (Employee)	32	0.28	9.0
	Open space (Visitor)	3000	0.01(6)	30.0
52 (E6)	Open space (Employee)	14	0.28	3.9
	Open space (No. Shower Room)	10	10.8(6)	108.0
	Open space (Visitor)	3000	0.01(6)	30.0
126 (E3-1)	Residential Population (R2)	1592	0.27	429.8
	Commercial	152	0.28	42.6
127 (E3-2)	Residential Population (R2)	1222	0.27	329.9
	Commercial	181	0.28	50.7
139 (F1-1)	Residential Population (R2)	2018	0.27	544.9
	Commercial	237	0.28	66.4
	Kindergarten (Student)	180	0.04	7.2
	Kindergarten (Teacher)	20	0.28	5.6
141B (F1-2)	Residential Population (R2)	2022	0.27	545.9
142 (F2-1)	Residential Population (R2)	1335	0.27	360.5
	Commercial	146	0.28	40.9
	Kindergarten (Student)	180	0.04	7.2
	Kindergarten (Teacher)	20	0.28	5.6
141A (F2-2)	Residential Population (R2)	2009	0.27	542.4
129 (Com-2)	Com-2 (Office)	7,250	0.08	580.0
	Com-2 (Retail)	736	0.28	206.1
130 (Com-3)	Com-3 (Office)	6,900	0.08	552.0
	Com-3 (Retail)	739	0.28	206.9
128 (Com-4)	Com-4 (Hotel)	2,429	1.58	3,837.8
143 (Com-5)	Com-5 (Yacht Club+Commercial)	2,096	0.28	586.9

Area No. (Catchment)	Category	Population/Employee (Head)	Unit Flow Factor (m^3/head/day)	ADWF (m^3/day)
140 (F0-1)	Sports Centre	317	0.28	88.8
131 (G0-2)	Police Station	233	0.28	65.2
135 (C0-1)	Other School Use (Student)	1,200	0.04	48.0
	Other School Use (Teacher)	104	0.28	29.1
	FSD quarters	810	0.27	218.7
	Sub-divisional fire Station cum ambulance depot	150	0.28	42.0
134 (C0-2)	Police Married Quarters	1166	0.27	314.8
137 (C0-3)	Post Secondary Institution (Student)	4,000	0.04	160.0
	Post Secondary Institution (Employee)	345	0.28	96.6
138 (G0-1)	Sports Ground	15	0.28	4.2
	Sports Ground	2,500	0.032(5)	80.0
120 (E0-2)	Undesignated GIC	100	0.28	28.0
124 (E0-4)	Secondary School (Student)	1,200	0.04	48.0
	Secondary School (Teacher)	98	0.28	27.4
120 (E0-2)	Primary School (Student)	765	0.04	30.6
	Primary School (Teacher)	54	0.28	15.1
120 (E0-3)	Primary School (Student)	765	0.04	30.6
	Primary School (Teacher)	54	0.28	15.1
140 (F0-4)	Secondary School (Student)	1,200	0.04	48.0
	Secondary School (Teacher)	98	0.28	27.4
140 (F0-2)	Primary School (Student)	765	0.04	30.6
	Primary School (Teacher)	54	0.28	15.1
140 (F0-3)	Primary School (Student)	765	0.04	30.6
	Primary School (Teacher)	54	0.28	15.1
MTR TCE Station				1,023.0(2)
Tai Ho Villages (i.e. Tai Ho San Tsuen, Ngau Kwu Long Tsuen, Pak Mong Tsuen) (8)	Residential Population	696	0.27	187.9(3)
132	Sewage Pumping Station (Employee)	10	0.33	3.3
Sewage F&B Trade		871.1	1.58	**1376.3** (4)

Area No. (Catchment)	Category	Population/Employee (Head)	Unit Flow Factor (m^3/head/day)	ADWF (m^3/day)
Total				35,726.1 **(Say 35,727)**

Notes:

(1) Assumptions: 30m^2 per bed and 3 employees per bed

(2) According to information provided by MTR, peak flow of TCE MTR station is 1,944m^3/day, which is estimated based on no. of fitment. Peaking factor (excluding stormwater) for East SPS is assumed for calculation of the ADWF of TCE MTR station, i.e. 1.9. So, the ADWF of MTR TCE station can be estimate by following formula:

ADWF of TCE station = Peak flow / Peaking Factor= 1944 / 1.9=1,023 m^3/day

(3) The estimated ADWF is based on number of village houses (approximately 116 houses) and subject to further review. Details refer to Appendix G.

(4) For Sewage F&B Trade, **Table 4.6** refers.

(5) Estimated by HAB in 2015, based on the employment figures of Tseung Kwan O Sports Ground. According to 2015 employment figures of Tseung Kwan O Sports Ground with 5,000 spectators, the permanent employees are 30. The UFF of 0.032 is estimated by making reference to the deviation under Section 7.4 of the EIA report of Kai Tak Multi-purpose Sports Complex.

(6) Calculation of ADWF in open space retrieved from agreed SIA for Open Space Development in Tung Chung New Town Extension (East) in Agreement No. 9AJ126.

(7) Latest planning parameters for Area 114 and 117 have been to be adopted in Case 2 have been agreed on May 2024 with CEDD.

(8) The concerned Tai Ho villages is out of TCNTE area.

Table 4-6 Revised Sewage F&B Trade Build-up of the ESPS for Population Increase of Tung Chung Phase 3 and 4 Areas under CASE 2

Area No. (Catchment)	Category	Population/Employee (Head)	Population of possible F&B trade(1)	Unit flow factor (2) (m^3/head/d)	ADWF (m^3/day)
114 (A2-1)	Commercial	285	28.5	1.58	45.0
117 (A2-4)	Commercial	301	30.1	1.58	47.6
133A (C1-1)	Commercial	963	96.3	1.58	152.2
133C (C2-1)	Commercial	25	2.5	1.58	4.0
133B (C2-2)	Commercial	25	2.5	1.58	4.0
119 (E1-1)	Commercial	287	28.7	1.58	45.3
121 (E1-2)	Commercial	92	9.2	1.58	14.5
123 (E1-3)	Commercial	92	9.2	1.58	14.5
125 (E1-4)	Commercial	140	14.0	1.58	22.1
122 (E1-5)	Commercial	253	25.3	1.58	40.0
126 (E3-1)	Commercial	152	15.2	1.58	24.0
127 (E3-2)	Commercial	181	18.1	1.58	28.6
139 (F1-1)	Commercial	237	23.7	1.58	37.4
142 (F2-1)	Commercial	146	14.6	1.58	23.1
113 (A1-1)	Metro Core Area	2,526	252.6	1.58	399.1

	(Retail)				
133 (A1-2)	Metro Core Area (Retail)	1,531	153.1	1.58	241.9
129 (com-2)	COM-2 (Retail)	736	73.6	1.58	116.3
130 (com-3)	COM-3 (Retail)	739	73.9	1.58	116.8
Total		**8,711**	**871.1**		**1376.4**

Notes:

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

6 IMPACT ASSESSMENT AND PROPOSED MITIGATION MEASURES FOR EASTERN SEWERAGE CATCHMENT

6.1 General

6.1.1 The sewerage system for flow conveyance of the eastern sewerage catchment of TCE development consists of the following components: -

(i) Proposed gravity sewer network in eastern sewerage catchment;

(ii) Proposed East Sewage Pumping Station (East SPS) and the rising mains at downstream of the pumping station;

(iii) Siu Ho Wan Sewage Treatment Works (SHWSTW)

6.1.2 The impact assessment on each component of the sewerage system arising from the increase in sewage flow in the eastern sewerage catchment will be described in the following sections.

6.2 Proposed Gravity Sewer Network

Impact

6.2.1 Due to the revision, the increased ADWF will be 458 m^3/day (i.e. from 35,269m^3/day to 35,727 m^3/day) which is equivalent to an approx. 1.30% increase. Estimated sewage flows (ADWF & Peak Flows) of Eastern Sewerage Catchment under Case 2 of AS25 and previous Case 2 Scenario 2B are shown in **Table 6-1**. Hydraulic checking of the proposed work has been carried out and attached in **Appendix H**. The result shows that the increased flow has insignificant adverse impact on downstream sewer. The proposed east sewerage pumping station layout plan is shown in **Figure 8.1**.

Table 6-1 Comparison of Peak Flow of Eastern Sewerage Catchment between Case 2 Scenario 2B and Case 2

Case	Catchment	ADWF (m^3/day)	Contributing Population (Head)	Peaking Factor	Peak Flow (m^3/day)
Case 2 Scenario 2B	Catchments for TCE East SPS	35,269	130,626	1.89(1)	66,658
Case 2	Catchments for TCE East SPS	35,727	132,322	1.89(2)	67,723

Notes:

(1) Peaking factor (excluding stormwater allowance) is adopted in Case 2 Scenario 2B.

(2) Peaking factor (excluding stormwater allowance) is adopted in Case 2.

6.2.2 In view of low sewage flow to be discharged from the proposed Cycle Park Development, there will be Membrane bioreactor at the cycle park for wastewater treatment. Cycle Park Development is no longer handled by ESPS.

Mitigation Measures

6.2.3 Due to the slight adverse impact on downstream sewers arising from the increased flow, only lead-in sewer is proposed to be upgraded. The summary table is shown in **Table 6-2** below.

case 2

AECOM

Tung Chung East Development
Additonal Service CASE 2
Sewerage Design of East Catchment of TCNTE(East).

Reference to the SDR report Submitted to PM Team on 15/02/2022

PROJECT NO.60507694
DATE 24/1/2025

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19.00	20	22	23	24	25	26	27.000	28.000	29.000	**30.000**	**22.000**	23	24.000	25.000	26.000	27.000	28				
Parameters																										29.602			**Roughness:**		Ks=	1.500	mm for PE		1.500	mm for VC		BY	hxy	CHKD
Pipe	Manhole				Population (Persons)											Flow		Accumulation		EPD																	Pipe Parameter				
Source	UP_MH NO.	DN_MH NO.	Back-drop	UP_MH TYPE	Pravite R1/Public Rental 0.190	J11 Community Social & 0.280	Pravite R3 0.370	School Student 0.040	Commercial employee 0.080	Pravite R2 0.270	J2 Electricity Gas & Water 0.330	Sports Ground 0.032	J10 1.580	Other 0.0100	Inflow (m^3/d)	DWF (m^3/d)	CON_POP (person)	ACC_POP (person)	ACC_DWF (m^3/d)	Contribute People (person)	PEAK FACTOR	PEAK FLOW (m^3/s)	DIA (mm)	Inner Diameter mm	thickness mm	LEN (m)	UP_GL (mPD)	DN_GL (mPD)	UP_INV (mPD)	DN_INV (mPD)	GRAD. (1 IN)	UP_COV to Invert(m)	DN_COV to Invert(m)	VEL. (m/s)	CAP[1] (m^3/s)	PF/CAP	PIPE MAT.	PIPE CLASS	BEDDING TYPE
Area 122 (E1-5) + Area 125 (E1-4) + Area 124 (E0-4)	SE-E11a.1	SE-E11a	SE-E11b	normal	L	5097	721		1380		1052			39			1571.64	8289	8289	1571.64	5821	4.000	0.073	450	380	35	44.560	6.0	5.8	1.75	1.53	203	4.235	4.263	1.266	0.144	51%	PE	PE100	B
	SE-E11b.1	SE-E11b	SE-E11	normal	L											0.00	0	8289	1571.64	5821	4.000	0.073	450	380	35	39.092	5.8	6.6	1.53	1.02	77	4.263	5.534	2.061	0.234	31%	PE	PE100	B
Area 123 (E1-3)	SE-E9.1	SE-E9	SE-E10	normal	F1		92				1030			9		318.40	1131	1131	318.40	1179	5.000	0.018	355	300	27.5	51.704	7.550	7.092	4.265	3.705	92	3.285	3.387	1.610	0.114	16%	PE	PE100	B
	SE-E10.1	SE-E10	SE-E11	BD3	F1											0.00	0	1131	318.40	1179	5.000	0.018	355	300	27.5	59.190	7.092	6.554	3.705	3.085	95	3.387	3.469	1.583	0.112	16%	PE	PE100	B
	SE-E11.1	SE-E11	SE-E12	normal	L											0.00	0	9421	1890.04	7000	4.000	0.088	560	475	42.5	37.249	6.554	6.405	1.020	0.913	348	5.534	5.492	1.110	0.197	44%	PE	PE100	B
	SE-E12.1	SE-E12	SE-E13	normal	L											0.00	0	9421	1890.04	7000	4.000	0.088	560	475	42.5	63.419	6.405	5.869	0.913	0.680	272	5.492	5.189	1.256	0.223	39%	PE	PE100	B
Area 128 (Com-4)	SE-E13.1	SE-E13	SE-E14	normal	L								2429			3837.82	2429	11850	5727.86	21214	3.000	0.199	710	600	55	24.952	5.869	5.682	0.650	0.350	83	5.219	5.332	2.649	0.749	27%	PE	PE100	B
	SE-E14.1	SE-E14	SE-E15	normal	L											0.00	0	28119	8707.61	32250	3.000	0.302	1200	1020	90	72.752	5.682	5.697	0.090	-0.099	385	5.592	5.796	1.711	1.398	22%	PE	PE100	B
Area 140 (F0-1)	SE-E15.1	SE-E15	SE-E16	normal	L		317									88.76	317	28436	8796.37	32579	3.000	0.305	1200	1020	90	73.381	5.697	5.592	-0.099	-0.294	376	5.796	5.886	1.731	1.414	22%	PE	PE100	B
	SE-E16.1	SE-E16	SE-E17	normal	L											0.00	0	28436	8796.37	32579	3.000	0.305	1200	1020	90	49.968	5.592	6.045	-0.294	-0.483	264	5.886	6.528	2.066	1.688	18%	PE	PE100	B
	SE-E17.1	SE-E17	SE-E17A	normal	S1											0.00	0	67082	17638.47	65328	2.887	0.589	1200	1020	90	54.569	6.045	5.662	-0.483	-0.550	814	6.528	6.212	1.174	0.960	61%	PE	PE100	B
Area 118 (E2)	SE-E17A.1	SE-E17A	SE-E18	normal	S1									5000		50.00	5000	72082	17688.47	65513	2.886	0.591	1200	1020	90	39.216	5.662	5.669	-0.550	-0.646	409	6.212	6.315	1.661	1.357	44%	PE	PE100	B
	SE-E18.1	SE-E18	SE-E19	normal	S1											0.00	0	72082	17688.47	65513	2.886	0.591	1200	1020	90	57.518	5.669	5.600	-0.646	-0.825	321	6.315	6.425	1.873	1.531	39%	PE	PE100	B
	SE-E19.1	SE-E19	SE-E19A	normal	S1											0.00	0	72082	17688.47	65513	2.886	0.591	1200	1020	90	31.513	5.600	5.569	-0.825	-0.885	525	6.425	6.454	1.464	1.196	49%	PE	PE100	B
	SE-E19A.1	SE-E19A	SE-E20	normal	S1											0.00	0	72082	17688.47	65513	2.886	0.591	1200	1020	90	27.993	5.569	5.729	-0.885	-0.945	467	6.454	6.674	1.554	1.269	47%	PE	PE100	B
	SE-E20.1	SE-E20	SE-E21	normal	S1											0.00	0	103676	23638.21	87549	2.743	0.751	1400	1190	105	37.211	5.729	5.676	-1.145	-1.270	298	6.874	6.946	2.143	2.384	31%	PE	PE100	B
	SE-E21.1	SE-E21	SE-E22	normal	S1											0.00	0	103676	23638.21	87549	2.743	0.751	1400	1190	105	31.611	5.500	5.700	-1.270	-1.393	257	6.770	7.093	2.307	2.566	29%	PE	PE100	B
	SE-E22.1	SE-E22	SE-E23	normal	S1											0.00	0	103676	23638.21	87549	2.743	0.751	1400	1190	105	31.320	5.700	5.700	-1.393	-1.480	360	7.093	7.180	1.949	2.167	35%	PE	PE100	B
	SE-E23.1	SE-E23	SE-A15	normal	S1											0.00	0	103676	23638.21	87549	2.743	0.751	1400	1190	105	21.840	5.700	5.700	-1.480	-1.550	312	7.180	7.250	2.094	2.329	32%	PE	PE100	B
Area 133A (C1-1)	SE-E23A.1	SE-E23A	SE-E23B	normal	S1	18406	1014		452					489		4572.23	20361	124038	29233.45	108272	2.643	0.917	1400	1190	105	33.200	5.900	5.650	-1.658	-1.738	415	7.558	7.388	1.815	2.018	45%	PE	PE100	B
	SE-E23B.1	SE-E23B	SE-E24	normal	S1											0.00	0	124038	29233.45	108272	2.643	0.917	1400	1190	105	44.622	5.650	5.750	-1.738	-1.849	402	7.388	7.599	1.844	2.051	45%	PE	PE100	B
Area 129 (Com-2)	SE-E24.1	SE-E24	SE-E25	normal	S1		736			7250				74		902.37	8060	132097	30135.82	111614	2.629	0.940	1400	1190	105	43.452	5.750	5.950	-1.849	-1.951	426	7.599	7.901	1.791	1.992	47%	PE	PE100	B
	SE-E25.1	SE-E25	SE-E26	normal	S1											0.00	0	152712	33601.10	124449	2.579	1.026	1400	1190	105	45.630	5.945	5.785	-1.951	-2.081	351	7.896	7.866	1.974	2.195	47%	PE	PE100	B
	SE-E26.1	SE-E26	SE-E27	normal	S1											0.00	0	152712	33601.10	124449	2.579	1.026	1400	1190	105	70.090	5.785	5.785	-2.081	-2.244	430	7.866	8.029	1.782	1.982	52%	PE	PE100	B
Area 130 (Com-3)	SE-E27.1	SE-E27	SE-E28	normal	S1		739			6900				74		875.68	7713	160425	34476.78	127692	2.568	1.047	1400	1190	105	62.225	5.785	5.604	-2.244	-2.339	655	8.029	7.943	1.443	1.605	65%	PE	PE100	B
Area 132	SE-E28.1	SE-E28	SPS001	normal	S1							10				3.30	10	171654	35726.68	132321	2.552	1.078	1400	1190	105	29.760	5.604	5.500	-2.339	-2.401	480	7.943	7.901	1.687	1.876	57%	PE	PE100	B
Area 139 (F1-1)	SE-F1.1	SE-F1	SE-F2	normal	E1		257		180		2018			24		661.47	2479	2479	661.47	2450	5.000	0.038	500	420	40	40.000	5.650	5.950	3.518	3.318	200	2.133	2.633	1.363	0.189	20%	PE	120	B
Area 141B (F1-2)	SE-F2.1	SE-F2	SE-F3	normal	E1						2022					545.94	2022	4501	1207.41	4472	5.000	0.070	630	535	47.5	46.000	5.950	6.000	3.158	2.928	200	2.793	3.073	1.581	0.355	20%	PE	120	B
	SE-F3.1	SE-F3	SE-F4	normal	F1											0.00	0	4501	1207.41	4472	5.000	0.070	630	535	47.5	37.000	6.000	6.250	2.928	2.743	200	3.073	3.508	1.581	0.355	20%	PE	120	B
Area 140 (F0-4)	SE-F4.1	SE-F4	SE-F5	normal	I		98		1200							75.44	1298	5799	1282.85	4751	5.000	0.074	800	680	60	55.000	6.250	6.100	2.673	2.398	200	3.578	3.703	1.840	0.668	11%	PE	120	B
Area 141A (F2-2)	SE-F5.1	SE-F5	SE-F6	normal	I					2009						542.43	2009	7808	1825.28	6760	4.000	0.085	800	680	60	48.000	6.100	5.900	2.398	2.158	200	3.703	3.743	1.840	0.668	13%	PE	120	B
Area 140 (F0-3)	SE-F6.1	SE-F6	SE-F7	normal	I		54		765							45.72	819	8627	1871.00	6930	4.000	0.087	800	680	60	52.000	5.900	5.900	2.158	1.898	200	3.743	4.003	1.840	0.668	13%	PE	120	B
Area 140 (F0-2)	SE-F7.1	SE-F7	SE-F8	normal	I		54		765							45.72	819	9446	1916.72	7099	4.000	0.089	800	680	60	46.000	5.600	6.200	1.898	1.668	200	3.703	4.533	1.840	0.668	13%	PE	120	B
Area 142 (F2-1)	SE-F8.1	SE-F8	SE-F9	normal	L		166		180		1335			15		437.20	1696	11141	2353.91	8718	4.000	0.109	800	680	60	43.000	6.200	5.600	1.668	1.463	210	4.533	4.137	1.795	0.652	17%	PE	120	B
	SE-F9.1	SE-F9	SE-E14	BD2	I											0.00	0	11141	2353.91	8718	4.000	0.109	800	680	60	46.000	5.600	6.250	1.463	1.233	200	4.137	5.017	1.840	0.668	16%	PE	120	B
Area 143 (Com-5) & Area 52(E5)	SE-F10.1	SE-F10	SE-F11	normal	L		2128							3000		625.84	5128	5128	625.84	2318	5.000	0.036	630	535	47.5	58.600	5.730	6.150	2.000	1.566	135	3.730	4.584	1.925	0.433	8%	PE	120	B
	SE-F11.1	SE-F11	SE-F12	normal	L											0.00	0	5128	625.84	2318	5.000	0.036	630	535	47.5	54.600	6.150	6.000	1.566	1.161	135	4.584	4.839	1.925	0.433	8%	PE	120	B
	SE-F12.1	SE-F12	SE-F13	normal	L											0.00	0	5128	625.84	2318	5.000	0.036	630	535	47.5	69.800	6.000	5.850	1.161	0.644	135	4.839	5.206	1.925	0.433	8%	PE	120	B
	SE-F13.1	SE-F13	SE-E14	normal	L											0.00	0	5128	625.84	2318	5.000	0.036	800	680	60	45.400	5.850	6.250	0.644	0.308	135	5.206	5.942	2.241	0.814	4%	PE	120	B
Area 116 (A2-3) + Area 113 (A1-2) & Area 118 (E4)	SE-A20.1	SE-A20	SE-A21	BD2	L	3578	10517		180	3150			153	5000		4175.68	22578	22578	4175.68	15465	3.000	0.145	710	600	55	73.366	5.543	5.500	2.9	2.63	272	2.643	2.870	1.463	0.414	35%	PE	PE100	B
Area 117 (A2-4)	SE-A21.1	SE-A21	SE-E20	BD2	L	8293	513		180				30			1774.07	9016	31594	5949.75	22036	3.000	0.207	710	600	55	35.840	5.500	5.729	1.94	1.66	128	3.560	4.069	2.134	0.603	34%	PE	PE100	B
Area 52(E1)	FMH-E3C.1	FMH-E3C	FMH-E3B		L									2000		20.00	2000	2000	20.00	74	6.000	0.001	250	210	20	11.400	5.500	5.500	3.923	3.828	120	1.577	1.672	1.122	0.039	4%	PE	PE100	B
	FMH-E3B.1	FMH-E3B	FMH-E3A		E1											0.00	0	2000	20.00	74	6.000	0.001	250	210	20	32.400	5.500	5.500	3.828	3.558	120	1.672	1.942	1.122	0.039	4%	PE	PE100	B
	FMH-E3A.1	FMH-E3A	SE-E4		E1											0.00	0	2000	20.00	74	6.000	0.001	250	210	20	35.500	5.500	5.699	2.979	2.083	40	2.521	3.616	1.957	0.068	2%	PE	PE100	B
Area 121 (E1-2) + Area 127 (E3-2)	SE-E8.1	SE-E8	SE-E7	normal	F1		273				2253			27		727.88	2553	2553	727.88	2696	5.000	0.042	355	300	27.5	69.895	7.651	6.988	4.100	3.400	100	3.551	3.588	1.548	0.109	38%	PE	PE100	B
Area 120 (E0-3)	SE-E7.1	SE-E7	SE-E6	normal	F1		54		765							45.72	819	3372	773.60	2865	5.000	0.045	400	335	32.5	72.723	6.988	6.298	3.400	2.680	101	3.588	3.618	1.663	0.147	31%	PE	PE100	B
Area 120 (E0-2)	SE-E6.1	SE-E6	SE-E5	normal	F1		154		765							73.72	919	4291	847.32	3138	5.000	0.049	500	420	40	40.304	6.298	5.979	2.635	2.435	202	3.663	3.544	1.358	0.188	26%	PE	PE100	B
Area 126 (E3-1)	SE-E5.1	SE-E5	SE-E4	normal	L		152				1592			15		496.42	1759	6051	1343.74	4977	5.000	0.078	560	475	42.5	43.410	5.979	5.699	2.275	2.083	226	3.704	3.616	1.378	0.244	32%	PE	PE100	B
	SE-E4.1	SE-E4	SE-E3	normal	L											0.00	0	6051	1363.74	5051	4.000	0.063	710	600	55	42.742	5.699	5.827	2.083	1.923	267	3.616	3.904	1.475	0.417	15%	PE	PE100	B
Area 120 (E0-1)	SE-E3.1	SE-E3	SE-E2	normal	L		0									0.00	0	6051	1363.74	5051	4.000	0.063	710	600	55	47.313	5.827	5.794	1.853	1.653	237	3.974	4.141	1.568	0.443	14%	PE	PE100	B
	SE-E2.1	SE-E2	SE-E1	normal	L											0.00	0	6051	1363.74	5051	4.000	0.063	710	600	55	49.232	5.794	5.700	1.653	1.493	308	4.141	4.207	1.374	0.389	16%	PE	PE100	B
	SE-E1.1	SE-E1	SE-E1H	normal	L											0.00	0	6051	1363.74	5051	4.000	0.063	710	600	55	32.818	5.700	5.952	1.493	1.337	210	4.207	4.615	1.663	0.470	13%	PE	PE100	B
Area 119 (E1-1)	SE-E1H.1	SE-E1H	SE-E1A	BD2	L	5145	549							29		1176.62	5723	11773	2540.36	9409	4.000	0.118	710	600	55	28.400	5.500	5.800	1.330	1.250	355	4.170	4.550	1.279	0.362	33%	PE	PE100	B
	SE-E1A.1	SE-E1A	SE-E1G	BD2	L											0.00	0	38646	8842.09	32748	3.000	0.307	1200	1020	90	45.000	6.205	6.400	0.435	0.360	600	5.770	6.040	1.369	1.119	27%	PE	PE100	B
	SE-E1G.1	SE-E1G	SE-E1J	BD2	L											0.00	0	38646	8842.09	32748	3.000	0.307	1200	1020	90	39.600	6.400	6.100	0.360	0.294	600	6.040	5.806	1.369	1.119	27%	PE	PE100	B
	SE-E1J.1	SE-E1J	SE-E1I	BD2	L											0.00	0	38646	8842.09	32748	3.000	0.307	1200	1020	90	56.400	6.100	6.000	0.294	0.200	600	5.806	5.800	1.369	1.119	27%	PE	PE100	B
	SE-E1I.1	SE-E1I	SE-E1K	BD2	L											0.00	0	38646	8842.09	32748	3.000	0.307	1200	1020	90	79.800	6.000	6.000	0.200	0.067	600	5.800	5.933	1.369	1.119	27%	PE	PE100	B
	SE-E1K.1	SE-E1K	SE-E1L	BD2	L											0.00	0	38646	8842.09	32748	3.000	0.307	1200	1020	90	80.400	6.000	6.000	0.067	-0.067	600	5.933	6.067	1.369	1.119	27%	PE	PE100	B
	SE-E1L.1	SE-E1L	SE-E1M	BD2	L											0.00	0	38646	8842.09	32748	3.000	0.307	1200	1020	90	79.800	6.000	6.000	-0.067	-0.200	600	6.067	6.200	1.369	1.119	27%	PE	PE100	B
	SE-E1M.1	SE-E1M	SE-E1N	BD2	L											0.00	0	38646	8842.09	32748	3.000	0.307	1200	1020	90	79.800	6.000	6.000	-0.200	-0.333	600	6.200	6.333	1.369	1.119	27%	PE	PE100	B
	SE-E1N.1	SE-E1N	SE-E17	BD2	S											0.00	0	38646	8842.09	32748	3.000	0.307	1200	1020	90	80.250	6.000	6.045	-0.333	-0.483	535	6.333	6.528	1.450	1.185	26%	PE	PE100	B
Area 115 (A2-2) + Area 113 (A1-1) & Area 118 (E3)	SE-A1.1	SE-A1	SE-A1A	normal	L	3578	11930		180	2350			253			4614.53	18291	18291	4614.53	17091	3.000	0.160	710	600	55	13.440	5.800	5.827	1.700	1.580	112	4.100	4.247	2.282	0.645	25%	PE	PE100	B
Area 114 (A2-1)	SE-A1A.1	SE-A1A	SE-A2	normal	L	7886	488		180				29			1687.21	8583	26873	6301.74	23340	3.000	0.219	710	600	55	45.440	5.827	5.800	1.040	0.898	320	4.787	4.902	1.347	0.381	57%	PE	PE100	B
	SE-A2.1	SE-A2	SE-A2A	normal	L											0.00	0	26873	6301.74	23340	3.000	0.219	710	600	55	58.880	5.800	5.800	0.894	0.766	460	4.906	5.034	1.123	0.317	69%	PE	PE100	B
	SE-A2A.1	SE-A2A	SE-E1F	normal	L											0.00	0	26873	6301.74	23340	3.000	0.219	1000	850	75	8.000	5.800	5.744	0.760	0.735	320	5.040	5.009	1.674	0.950	23%	PE	PE100	B
	SE-E1F.1	SE-E1F	SE-E1E	normal	L											0.00	0	26873	6301.74	23340	3.000	0.219	1000	850	75	5.450	5.800	5.744	0.731	0.707	227	5.069	5.037	1.988	1.128	19%	PE	PE100	B
	SE-E1E.1	SE-E1E	SE-E1D	normal	L											0.00	0	26873	6301.74	23340	3.000	0.219	1000	850	75	15.000	5.800	5.744	0.703	0.644	254	5.097	5.100	1.879	1.066	21%	PE	PE100	B
	SE-E1D.1	SE-E1D	SE-E1C	normal	L											0.00	0	26873	6301.74	23340	3.000	0.219	1000	850	75	23.520	5.800	5.744	0.634	0.592	560	5.166	5.152	1.264	0.717	31%	PE	PE100	B
	SE-E1C.1	SE-E1C	SE-E1B	normal	L											0.00	0	26873	6301.74	23340	3.000	0.219	1000	850	75	20.720	5.800	5.744	0.582	0.545	560	5.218	5.199	1.264	0.717	31%	PE	PE100	B
	SE-E1B.1	SE-E1B	SE-E1A	normal	L											0.00	0	26873	6301.74	23340	3.000	0.219	1000	850	75	53.200	5.800	5.744	0.535	0.440	560	5.265	5.304	1.264	0.717	31%	PE	PE100	B
	SE-A9.1	SE-A9	SE-A10	normal	L											0.00	0	0	1023.00	3789	1.900	0.023	500	420	40	69.800	6.500	6.600	2.180	1.831	200	4.320	4.769	1.363	0.189	12%	PE	PE100	B
	SE-A10.1	SE-A10	SE-A11	normal	L											0.00	0	0	1023.00	3789	1.900	0.023	500	420	40	63.800	6.600	6.900	1.431	1.112	200	5.169	5.788	1.363	0.189	12%	PE	PE100	B
	SE-A11.1	SE-A11	SE-A12	normal	L											0.00	0	0	1023.00	3789	1.900	0.023	630	535	47.5	61.800	6.900	6.150	0.712	0.403	200	6.188	5.747	1.581	0.355	6%	PE	PE100	B
	SE-A12.1	SE-A12	SE-A13	normal	L											0.00	0	0	1023.00	3789	1.900	0.023	630	535	47.5	43.200	6.150	6.792	0.003	-0.213	200	6.147	7.005	1.581	0.355	6%	PE	PE100	B
	SE-A13.1	SE-A13	SE-A13A	normal	S1											0.00	0	0	1023.00	3789	1.900	0.023	630	535	47.5	33.000	6.792	6.792	-0.613	-0.778	200	7.405	7.570	1.581	0.355	6%	PE	PE100	B
	SE-A13A.1	SE-A13A	SE-A14	normal	S1											0.00	0	0	1023.00	3789	1.900	0.023	630	535	47.5	36.660	6.792	6.019	-1.198	-1.480	130	7.990	7.499	1.962	0.441	5%	PE	PE100	B

case 2

AECOM

Tung Chung East Development
Additonal Service CASE 2
Sewerage Design of East Catchment of TCNTE(East).

Reference to the SDR report Submitted to PM Team on 15/02/2022

PROJECT NO.60507694
DATE 24/1/2025

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19.00	20	22	23	24	25	26	27.000	28.000	29.000	**30.000**	**22.000**	23	24.000	25.000	26.000	27.000	28
Parameters																										29.602			**Roughness:**		Ks=	1.500	mm for PE		1.500	mm for VC	BY	hxy	CHKD
	Pipe	Manhole				Population (Persons)										Flow		Accumulation		EPD											Pipe Parameter								
Source	NO.	UP_MH NO.	DN_MH NO.	Back-drop	UP_MH TYPE	Pravite R1/Public Rental 0.190	J11 Community Social & 0.280	Pravite R3 0.370	School Student 0.040	Commercial employee 0.080	Pravite R2 0.270	J2 Electricity Gas & Water 0.330	Sports Ground 0.032	J10 1.580	Other 0.0100	Inflow (m^3/d)	DWF (m^3/d)	CON_POP (person)	ACC_POP (person)	ACC_DWF (m^3/d)	Contribute People (person)	PEAK FACTOR	PEAK FLOW (m^3/s)	DIA (mm)	Inner Diameter mm	thickness mm	LEN (m)	UP_GL (mPD)	DN_GL (mPD)	UP_INV (mPD)	DN_INV (mPD)	GRAD. (1 IN)	UP_COV to Invert(m)	DN_COV to Invert(m)	VEL. (m/s)	CAP[1] (m^3/s)	PF/CAP	PIPE MAT.	PIPE CLASS	BEDDING TYPE
	SE-A14.1	SE-A14	SE-A15	normal	S1											0.00	0	0	1023.00	3789	1.900	0.023	630	535	47.5	54.600	6.100	5.700	-1.480	-1.550	780	7.580	7.250	0.798	0.179	13%	PE	PE100	B
	SE-A15.1	SE-A15	SE-E23A	normal	S1											0.00	0	103676	24661.21	91338	1.900	0.023	1400	1190	105	80.460	5.700	5.900	-1.550	-1.658	745	7.250	7.558	1.353	1.505	1%	PE	PE100	B
MTR Station	SE-A9A.1	SE-A9A	SE-A9B	normal	E1										1023	1023.00	0	0	1023.00	3789	1.900	0.023	400	335	32.5	19.800	6.000	6.000	3.470	3.272	100	2.530	2.728	1.672	0.147	15%	PE	120	B
MTR Station	SE-A9B.1	SE-A9B	SE-A9	normal	E1											0.00	0	0	1023.00	3789	1.900	0.023	400	335	32.5	36.600	6.000	6.600	3.272	2.906	100	2.728	3.694	1.672	0.147	15%	PE	120	B
Area 52 (E6)	SE-C0.1	SE-C0	SE-C1A	normal	D1		14							3000		141.92	3014	3014	141.92	526	6.000	0.010	450	380	35	28.198	6.250	6.000	4.850	4.700	188	1.400	1.300	1.314	0.149	7%	PE	PE100	B
	SE-C1A.1	SE-C1A	SE-C1B	normal	D1											0.00	0	3014	141.92	526	6.000	0.010	450	380	35	44.792	6.000	6.292	4.700	4.500	224	1.300	1.792	1.203	0.136	7%	PE	PE100	B
	SE-C1B.1	SE-C1B	SE-C1C	normal	E1											0.00	0	3014	141.92	526	6.000	0.010	450	380	35	51.600	6.292	5.958	4.500	4.242	200	1.792	1.716	1.274	0.144	7%	PE	PE100	B
	SE-C1C.1	SE-C1C	SE-C1D	normal	E1											0.00	0	3014	141.92	526	6.000	0.010	450	380	35	50.400	5.958	5.698	4.242	3.990	200	1.716	1.708	1.274	0.144	7%	PE	PE100	B
	SE-C1D.1	SE-C1D	SE-C1E	BD3	E1											0.00	0	3014	141.92	526	6.000	0.010	450	380	35	25.800	5.698	5.387	3.990	3.861	200	1.708	1.526	1.274	0.144	7%	PE	PE100	B
	SE-C1E.1	SE-C1E	SE-C1F	normal	E1											0.00	0	3014	141.92	526	6.000	0.010	630	535	47.5	31.688	5.387	5.350	2.550	2.317	136	2.837	3.033	1.918	0.431	2%	PE	PE100	B
	SE-C1F.1	SE-C1F	SE-C1H	normal	F1											0.00	0	3014	141.92	526	6.000	0.010	630	535	47.5	26.040	5.600	5.700	2.017	1.800	120	3.583	3.900	2.042	0.459	2%	PE	PE100	B
	SE-C1H.1	SE-C1H	SE-C1I	normal	L											0.00	0	3014	141.92	526	6.000	0.010	630	535	47.5	6.000	5.700	5.700	1.800	1.750	120	3.900	3.950	2.042	0.459	2%	PE	PE100	B
	SE-C1I.1	SE-C1I	SE-C1	normal	L											0.00	0	3014	141.92	526	6.000	0.010	630	535	47.5	18.000	5.700	6.000	1.750	1.600	120	3.950	4.400	2.042	0.459	2%	PE	PE100	B
Area 133B (C2-2)	SE-C1.1	SE-C1	SE-C2	normal	L	8084	233		239					3		1614.71	8559	11573	1756.63	6506	4.000	0.081	630	535	47.5	49.170	6.000	5.575	1.280	1.115	298	4.720	4.460	1.294	0.291	28%	PE	PE100	B
	SE-C2.1	SE-C2	SE-C3	normal	L											0.00	0	11573	1756.63	6506	4.000	0.081	630	535	47.5	45.675	5.575	5.614	1.115	0.970	315	4.460	4.644	1.258	0.283	29%	PE	PE100	B
	SE-C3.1	SE-C3	SE-C4	normal	L											0.00	0	11573	1756.63	6506	4.000	0.081	630	535	47.5	45.760	5.614	5.889	0.970	0.810	286	4.644	5.079	1.321	0.297	27%	PE	PE100	B
Area 133C (C2-1)	SE-C4.1	SE-C4	SE-C5	BD2	L	8562	245		233					3		1708.65	9043	20615	3465.28	12834	3.000	0.120	710	600	55	47.375	5.889	5.632	0.500	0.375	379	5.389	5.257	1.238	0.350	34%	PE	PE100	B
	SE-C5.1	SE-C5	SE-E25	BD2	L											0.00	0	20615	8037.51	29769	3.000	0.279	710	600	55	44.916	5.632	5.945	-0.200	-0.428	197	5.832	6.373	1.719	0.486	57%	PE	PE100	B
Area 133A (C1-1)	SE-C1G.1	SE-C1G	SE-C3A	normal	L	18406	1014	0	452	0	0	0	0	489		4572.23	20361	20361	4572.23	16934	3.000	0.159	560	475	42.5	95.472	5.993	5.807	1.580	1.268	306	4.413	4.539	1.184	0.210	76%	PE	PE100	B
	SE-C3A.1	SE-C3A	SE-C5A	normal	L											0.00	0	20361	4572.23	16934	3.000	0.159	630	535	47.5	98.126	5.807	6.148	1.268	0.942	301	4.539	5.206	1.287	0.289	55%	PE	PE100	B
	SE-C5A.1	SE-C5A	SE-C5	normal	L											0.00	0	20361	4572.23	16934	3.000	0.159	630	535	47.5	18.525	6.148	5.632	0.042	-0.015	325	6.106	5.647	1.239	0.278	57%	PE	PE100	B
Area 135 (C0-1)	SE-C10.1	SE-C10	SE-C11	normal	E1		254		1200		810					337.82	2264	2264	337.82	1251	5.000	0.020	315	265	25	46.518	5.506	5.785	3.620	3.380	194	1.886	2.405	1.026	0.057	35%	PE	PE100	B
Area 139 (C0-1)	SE-C11.1	SE-C11	SE-C12	normal	E1		15						2500			84.20	2515	4779	422.02	1563	5.000	0.024	400	335	32.5	93.701	5.785	5.500	3.380	2.530	110	2.405	2.970	1.592	0.140	17%	PE	PE100	B
Area 131 (G0-2)	SE-C12.1	SE-C12	SE-C13	normal	F1		233									65.24	233	10053	931.78	3451	5.000	0.054	500	420	40	50.683	5.500	5.233	2.030	1.590	115	3.470	3.643	1.798	0.249	22%	PE	PE100	B
Area 134 (C0-2)	SE-C13.1	SE-C13	SE-E28	BD2	F1						1166					314.82	1166	11219	1246.60	4617	5.000	0.072	500	420	40	19.201	5.233	5.604	1.590	1.240	55	3.643	4.364	2.608	0.361	20%	PE	PE100	B
Area 136 (G0-3)	SE-C20.1	SE-C20	SE-C21	normal	D1											0.00	0	696	187.92	696	6.000	0.013	280	235	22.5	23.541	5.486	5.486	4.270	4.200	336	1.216	1.286	0.720	0.031	42%	PE	120	B
Area 137 (C0-3)	SE-C21.1	SE-C21	SE-C21A	normal	D1		345		4000							256.60	4345	5041	444.52	1646	5.000	0.026	315	265	25	23.017	5.486	5.486	4.200	4.100	230	1.286	1.386	0.941	0.052	50%	PE	PE100	B
	SE-C21A.1	SE-C21A	SE-C12	BD3	D1											0.00	0	5041	444.52	1646	5.000	0.026	315	265	25	16.840	5.486	5.500	4.100	4.000	168	1.386	1.500	1.101	0.061	42%	PE	120	B
Area 147 + Tai Ho Villages	SE-I1.1	SE-I1	SE-I2	normal	D1						696					187.92	696	696	187.92	696	6.000	0.013	250	210	20	30.000	8.300	8.100	7.114	6.914	150	1.186	1.186	1.003	0.035	38%	PE	120	B
	SE-I2.1	SE-I2	SE-I3	normal	D1											0.00	0	696	187.92	696	6.000	0.013	250	210	20	12.550	8.100	8.100	6.914	6.800	110	1.186	1.300	1.172	0.041	32%	PE	120	B
	SE-I3.1	SE-I3	SE-I4	normal	D1											0.00	0	696	187.92	696	6.000	0.013	250	210	20	64.550	8.100	7.000	6.800	5.485	49	1.300	1.515	1.758	0.061	21%	PE	120	B
	SE-I4.1	SE-I4	SE-I5	normal	E1											0.00	0	696	187.92	696	6.000	0.013	250	210	20	38.631	7.000	6.760	5.485	4.939	71	1.515	1.821	1.463	0.051	26%	PE	120	B
	SE-I5.1	SE-I5	SE-I6	normal	E1											0.00	0	696	187.92	696	6.000	0.013	250	210	20	32.668	6.760	6.978	4.939	4.600	96	1.821	2.378	1.253	0.043	30%	PE	120	B
	SE-I6.1	SE-I6	SE-I7	normal	E1											0.00	0	696	187.92	696	6.000	0.013	280	235	22.5	22.410	6.978	6.732	4.600	4.500	224	2.378	2.232	0.883	0.038	34%	PE	120	B
	SE-I7.1	SE-I7	SE-I8	normal	E1											0.00	0	696	187.92	696	6.000	0.013	280	235	22.5	28.686	6.732	5.486	4.500	4.310	151	2.232	1.176	1.077	0.047	28%	PE	120	B
	SE-I8.1	SE-I8	SE-C20	normal	D1											0.00	0	696	187.92	696	6.000	0.013	280	235	22.5	14.175	5.486	5.486	4.310	4.270	354	1.176	1.216	0.701	0.030	43%	PE	120	B
	SE-H1.1	SE-H1	SE-H2	normal	S											0.00	0	0	0.00	0	6.000	0.000	800	680	60	46.500	6.000	5.500	-1.400	-1.611	220	7.400	7.111	1.754	0.637	0%	PE	120	B
	SE-H2.1	SE-H2	SE-H3	normal	S											0.00	0	0	0.00	0	6.000	0.000	800	680	60	15.880	5.500	5.500	-1.611	-1.684	220	7.111	7.184	1.754	0.637	0%	PE	120	B
	SE-H3.1	SE-H3	SE-H4	normal	S											0.00	0	0	0.00	0	6.000	0.000	800	680	60	22.870	5.500	5.000	-1.684	-1.788	220	7.184	6.788	1.754	0.637	0%	PE	120	B
	SE-H4.1	SE-H4	SE-H4A	normal	S											0.00	0	0	0.00	0	6.000	0.000	800	680	60	30.140	5.000	5.500	-3.312	-3.449	220	8.312	8.949	1.754	0.637	0%	PE	120	B
	SE-H4A.1	SE-H4A	SE-H5	normal	S											0.00	0	0	0.00	0	6.000	0.000	800	680	60	45.760	5.000	5.500	-3.449	-3.657	220	8.449	9.157	1.754	0.637	0%	PE	120	B
	SE-H5.1	SE-H5	SPS001	normal	S											0.00	0	0	0.00	0	6.000	0.000	800	680	60	9.460	5.500	5.500	-3.657	-3.700	220	9.157	9.200	1.754	0.637	0%	PE	120	B
					S																																	
	SPS001.1	SPS001	SE-J1	normal	G1											0.00	0	0	0.00	0	6.000	0.000	1000	850	75	7.810	5.500	5.500	3.700	3.658	187	1.800	1.842	2.191	1.244	0%	PE	120	B
	SE-J1.1	SE-J1	SE-J1A	normal	G1											0.00	0	0	0.00	0	6.000	0.000	1000	850	75	40.560	5.500	5.500	3.658	3.445	190	1.842	2.055	2.174	1.234	0%	PE	120	B
	SE-J1A.1	SE-J1A	SE-J2	normal	G1											0.00	0	0	0.00	0	6.000	0.000	1000	850	75	35.840	5.500	5.100	3.445	3.256	190	2.055	1.844	2.174	1.234	0%	PE	120	B
	SE-J2.1	SE-J2	BC4	normal	H											0.00	0	0	0.00	0	6.000	0.000	1000	850	75	25.000	5.100	5.000	2.131	2.000	191	2.969	3.000	2.169	1.231	0%	PE	120	B
MTR	PLUG-TMFH02.1	PLUG-TMFH02	SE-A9	normal	L											37.70	0	0	37.70	140	6.000	0.003	250	210	20	5.000	6.600	6.500	2.550	2.500	100	4.050	4.000	1.230	0.043	6%	PE	120	B
	PLUG SE-A9.1	PLUG SE-A9	SE-A9A	normal	L											1023.00	0	0	1023.00	3789	1.900	0.023	400	335	32.5	8.000	6.500	6.600	2.690	2.610	100	3.810	3.990	1.672	0.147	15%	PE	120	B
Area 122 (E1-5)	PLUG E1.5A.1	PLUG E1.5A	SE-E11a	normal	L	5097	483	0	180	0	0	0	25			1150.84	5785	5785	1150.84	4262	5.000	0.067	355	300	27.5	21.000	6.000	5.985	2.000	1.790	100	4.000	4.195	1.547	0.109	61%	PE	120	B
Area 125 (E1-4)	PLUG E1.4.1	PLUG E1.4	SE-E11a	BD3	E1	0	140	0	0	0	1052	0	0	14		345.36	1206	1206	345.36	1279	5.000	0.020	280	235	22.5	25.954	6.000	5.985	3.800	3.605	133	2.200	2.380	1.148	0.050	40%	PE	120	B
Area 124 (E0-4)	PLUG E0.4.1	PLUG E0.4	SE-E11a	BD3	E1	0	98	0	0	1200	0	0	0	0		123.44	1298	1298	123.44	457	6.000	0.009	280	235	22.5	17.339	6.000	5.985	4.300	4.102	88	1.700	1.883	1.416	0.061	14%	PE	120	B
Area 119 (E1-1)	PLUG E1.1.1	PLUG E1.1	SE-E1H	normal	L	5145	549	0	0	0	0	0	0	29		1176.62	5723	5723	1176.62	4358	5.000	0.068	355	300	27.5	17.000	6.000	5.500	1.500	1.330	100	4.500	4.170	1.547	0.109	62%	PE	120	B
Area 119 (E1-1)	PLUG E1.1A.1	PLUG E1.1A	SE-E1I	normal	L	5145	549	0	0	0	0	0	0	29		1176.62	5723	5723	1176.62	4358	5.000	0.068	355	300	27.5	19.500	6.000	6.000	2.000	1.700	65	4.000	4.300	1.920	0.136	50%	PE	120	B
Area 120 (E0-1)	PLUG E0.1.1	PLUG E0.1	SE-E3	BD3	E1	0	0	0	0	0	0	0	0	0		0.00	0	0	0.00	0	6.000	0.000	280	235	22.5	16.299	6.000	5.827	4.300	4.060	68	1.700	1.767	1.609	0.070	0%	PE	120	B
Area 126 (E3-1)	PLUG E3.1.1	PLUG E3.1	SE-E5	BD3	E1	0	152	0	0	0	1592	0	0	15		496.42	1759	1759	496.42	1839	5.000	0.029	355	300	27.5	12.618	6.000	5.979	4.300	4.116	69	1.700	1.863	1.869	0.132	22%	PE	120	B
Area 120 (E0-2)	PLUG E0.2.1	PLUG E0.2	SE-E6	BD3	E1	0	154	0	765	0	0	0	0	0		73.72	919	919	73.72	273	6.000	0.005	280	235	22.5	15.059	6.000	6.298	4.300	4.234	228	1.700	2.064	0.875	0.038	13%	PE	120	B
Area 120 (E0-3)	PLUG E0.3.1	PLUG E0.3	SE-E7	BD3	D1	0	54	0	765	0	0	0	0	0		45.72	819	819	45.72	169	6.000	0.003	280	235	22.5	15.657	6.000	6.988	4.600	4.537	249	1.400	2.451	0.838	0.036	9%	PE	120	B
Area 121 (E1-2)	PLUG E1.2.1	PLUG E1.2	SE-E8	normal	E1	0	92	0	0	0	1031	0	0	9		318.67	1132	1132	318.67	1180	5.000	0.018	315	265	25	13.888	6.000	7.651	4.300	4.239	228	1.700	3.412	0.946	0.052	35%	PE	120	B
Area 127 (E3-2)	PLUG E3.2.1	PLUG E3.2	SE-E8	normal	E1	0	181		0	0	1222	0	0	18		409.22	1421	1421	409.22	1516	5.000	0.024	315	265	25	9.392	6.000	7.651	4.300	4.116	51	1.700	3.535	2.005	0.111	21%	PE	120	B
Area 123(E1-3)	PLUG E1.3.1	PLUG E1.3	SE-E9	normal	E1	0	92	0	0	0	1030	0	0	9		318.40	1131	1131	318.40	1179	5.000	0.018	250	210	20	6.264	6.000	7.550	4.300	4.274	241	1.700	3.276	0.790	0.027	67%	PE	120	B
Area 128 (Com-4)	PLUG COM.4.1	PLUG COM.4	SE-E13	BD2	E1	0	0	0	0	0	0	0	0	2429		3837.82	2429	2429	3837.82	14214	3.000	0.133	560	475	42.5	12.642	6.000	5.900	4.305	4.274	402	1.695	1.626	1.032	0.183	73%	PE	120	B
Area 140 (F0-1)	PLUG F0.1.1	PLUG F0.1	SE-E15	BD3	F1	0	317	0	0	0	0	0	0	0		88.76	317	317	88.76	329	6.000	0.006	315	265	25	14.676	6.000	5.697	2.900	2.750	98	3.100	2.947	1.447	0.080	8%	PE	120	B
Area 129 (Com-2)	PLUG COM.2.1	PLUG COM.2	SE-E24	BD3	S1	0	736	0	0	7250	0	0	0	74		902.37	8060	8060	902.37	3342	5.000	0.052	355	300	27.5	12.542	6.000	5.750	3.500	3.407	135	2.500	2.343	1.331	0.094	55%	PE	120	B
Area 130 (Com-3)	PLUG COM.3.1	PLUG COM.3	SE-E27	BD3	E1	0	739	0	0	6900	0	0	0	74		875.68	7713	7713	875.68	3243	5.000	0.051	355	300	27.5	15.678	6.000	5.785	3.900	3.800	157	2.100	1.985	1.234	0.087	58%	PE	120	B
Area 139 (F1-1)	PLUG F1.1.1	PLUG F1.1	SE-F1	normal	E1	0	257	0	180	0	2018	0	0	24		661.47	2479	2479	661.47	2450	5.000	0.038	315	265	25	26.100	6.000	5.650	4.300	4.039	100	1.700	1.611	1.431	0.079	48%	PE	120	B
Area 141B (F1-2)	PLUG F4.1.1	PLUG F4.1	SE-F4	BD3	E1	0	98	0	1200	0	0	0	0	0		75.44	1298	1298	75.44	279	6.000	0.005	315	265	25	12.600	6.000	5.950	4.300	4.174	100	1.700	1.776	1.431	0.079	7%	PE	120	B
Area 140 (F0-4)	PLUG F0.4.1	PLUG F0.4	SE-F4	BD3	E1	0	98	0	1200	0	0	0	0	0		75.44	1298	1298	75.44	279	6.000	0.005	280	235	22.5	12.200	6.000	6.250	4.300	4.178	100	1.700	2.072	1.325	0.057	9%	PE	120	B
Area 141A (F2-2)	PLUG F2.2.1	PLUG F2.2	SE-F5	BD3	E1	0	0	0	0	0	2009	0	0	0		542.43	2009	2009	542.43	2009	5.000	0.031	315	265	25	14.800	6.000	6.100	4.300	4.152	100	1.700	1.948	1.431	0.079	40%	PE	120	B

case 2

AECOM

Tung Chung East Development
Additonal Service CASE 2
Sewerage Design of East Catchment of TCNTE(East).

Reference to the SDR report Submitted to PM Team on 15/02/2022

PROJECT NO.60507694
DATE 24/1/2025

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19.00	20	22	23	24	25	26	27.000	28.000	29.000	**30.000**	**22.000**	23	24.000	25.000	26.000	27.000	28
Parameters																										29.602			**Roughness:**		Ks=	1.500	mm for PE		1.500	mm for VC	BY	hxy	CHKD
	Pipe	Manhole				Population (Persons)										Flow		Accumulation		EPD						Pipe Parameter												
		UP_MH	DN_MH	Back-drop	UP_MH	Pravite R1/Public Rental	J11 Community Social &	Pravite R3	School Student	Commercial employee	Pravite R2	J2 Electricity Gas & Water	Sports Ground	J10	Other	Inflow	DWF	CON_POP	ACC_POP	ACC_DWF	Contribute People	PEAK FACTOR	PEAK FLOW	DIA	Inner Diameter	thickness	LEN	UP_GL	DN_GL	UP_INV	DN_INV	GRAD.	UP_COV to Invert(m)	DN_COV to Invert(m)	VEL.	CAP[1]	PF/CAP	PIPE MAT.	PIPE CLASS	BEDDING TYPE
Source	NO.	NO.	NO.		TYPE	0.190	0.280	0.370	0.040	0.080	0.270	0.330	0.032	1.580	0.0100	(m^3/d)	(m^3/d)	(person)	(person)	(m^3/d)	(person)		(m^3/s)	(mm)	mm	mm	(m)	(mPD)	(mPD)	(mPD)	(mPD)	(mPD)	(1 IN)			(m/s)	(m^3/s)				
Area 140 (F0-3)	PLUG F0.3.1	PLUG F0.3	SE-F6	BD3	E1	0	54	0	765	0	0	0	0	0			45.72	819	819	45.72	169	6.000	0.003	280	235	22.5	9.000	6.000	5.900	4.300	4.210	100	1.700	1.690	1.325	0.057	6%	PE	120	B
Area 140 (F0-2)	PLUG F0.2.1	PLUG F0.2	SE-F7	BD3	E1	0	54	0	765	0	0	0	0	0			45.72	819	819	45.72	169	6.000	0.003	280	235	22.5	4.300	6.000	5.600	4.300	4.257	100	1.700	1.343	1.325	0.057	6%	PE	120	B
Area 142 (F2-1)	PLUG F2.1.1	PLUG F2.1	SE-F8	BD3	E1	0	166	0	180	0	1335	0	0	15			437.20	1696	1696	437.20	1619	5.000	0.025	315	265	25	16.500	6.000	6.200	4.300	4.135	100	1.700	2.065	1.431	0.079	32%	PE	120	B
Area 143 (Com-5)	PLUG COM.5.1.1	PLUG COM.5.1	SE-F10	normal	D1	0	2096	0	0	0	0	0	0	0			586.88	2096	2096	586.88	2174	5.000	0.034	315	265	25	25.200	5.500	5.730	4.300	2.000	100	1.200	3.730	1.431	0.079	43%	PE	120	B
Area 113 (A1-2)	PLUG A1.2.1	PLUG A1.2	SE-A20	BD2	E1	0	10617	0	180	3150	0	0	0	153			3445.86	14000	14000	3445.86	12762	3.000	0.120	500	420	40	17.589	6.000	5.543	4.300	4.137	108	1.700	1.406	1.858	0.257	46%	PE	120	B
MTR	PLUG TMFH03.1	PLUG TMFH03	SE-A11	normal	L												37.70		0	37.70	140	6.000	0.003	250	210	20	1.000	6.600	6.900	1.862	1.812	20	4.738	5.088	2.757	0.096	3%	PE	120	B
Area 116 (A2-3)	PLUG A2.3.1	PLUG A2.3	SE-A20	BD3	E1	3578	0	0	0	0	0	0	0	0			679.82	3578	3578	679.82	2518	5.000	0.039	315	265	25	19.646	6.000	5.543	3.800	3.690	179	2.200	1.853	1.069	0.059	67%	PE	120	B
Area 117 (A2-4)	PLUG E2.4A.1	PLUG E2.4A	SE-E18	BD3	L	8293	513		180					30			1774.07	9016	9016	1774.07	6571	4.000	0.082	400	335	32.5	6.862	5.500	5.670	1.050	0.904	47	4.450	4.766	2.441	0.215	38%	PE	120	B
Area 117 (A2-4)	PLUG A2.4.1	PLUG A2.4	SE-A21	BD2	E1	8293	513	0	180	0	0	0	0	30			1774.07	9016	9016	1774.07	6571	4.000	0.082	560	475	42.5	16.891	5.500	5.500	3.450	3.323	133	2.050	2.177	1.799	0.319	26%	PE	120	B
Area 113 (A1-1)	PLUG A1.1.1	PLUG A1.1	SE-A1	BD3	E1	0	11885	0	180	2350	0	0	0	253			3922.11	14668	14668	3922.11	14526	3.000	0.136	500	420	40	16.422	6.000	5.800	4.300	4.139	102	1.700	1.661	1.911	0.265	51%	PE	120	B
Area 118 (E3)	PLUG A2.2.1	PLUG A2.2	SE-A1	BD3	E1		45	0	0	0	0	0	0	0			12.60	45	45	12.60	47	6.000	0.001	250	210	20	14.768	6.000	5.800	3.918	3.776	104	2.082	2.024	1.206	0.042	2%	PE	120	B
Area 114 (A2-1)	PLUG A2.1A.1	PLUG A2.1A	SE-A1B	normal	L	7886	488	0	180		0	0	0	29			1687.21	8583	8583	1687.21	6249	4.000	0.078	400	335	32.5	29.000	5.500	5.827	1.400	1.150	116	4.100	4.677	1.552	0.137	57%	PE	120	B
Area 115 (A2-2)	PLUG A2.2A.1	PLUG A2.2A	SE-A1B	normal	E1	3578											679.82	3578	3578	679.82	2518	5.000	0.039	315	265	25	17.200	6.000	5.827	4.300	4.128	1.040 100	1.700	1.699	1.431	0.079	50%	PE	120	B
Area 114 (A2-1)	PLUG A2.1.1	PLUG A2.1	SE-E1F	BD3	L	7886	488	0	180		0	0	0	29			1687.21	8583	8583	1687.21	6249	4.000	0.078	400	335	32.5	6.156	5.500	5.809	1.300	1.143	Y 39	4.200	4.666	2.673	0.236	33%	PE	120	B
Area 133B (C2-2)	PLUG C2.2A.1	PLUG C2.2A	SE-C1I	normal	L		234	0	240	0	0	0	0	3			79.86	477	477	79.86	296	6.000	0.006	250	210	20	10.000	6.000	5.800	2.300	2.200	100	3.700	3.600	1.230	0.043	13%	PE	120	B
Area 133B (C2-2)	PLUG C2.2.1	PLUG C2.2	SE-C1	normal	L	8084	234	0	240	0	0	0	0	3			1615.82	8561	8561	1615.82	5985	4.000	0.075	400	335	32.5	20.000	6.000	6.000	1.800	1.600	100	4.200	4.400	1.672	0.147	51%	PE	120	B
Area 133B (C2-2)	PLUG C2.2C.1	PLUG C2.2C	SE-C1F	normal	F1		234	0	240	0	0	0	0	3			79.86	477	477	79.86	296	6.000	0.006	250	210	20	70.000	6.000	5.600	2.900	2.200	100	3.100	3.400	1.230	0.043	13%	PE	120	B
Area 133B (C2-2)	PLUG C2.2B.1	PLUG C2.2B	SE-C1H	normal	F1		234	0	240	0	0	0	0	3			79.86	477	477	79.86	296	6.000	0.006	250	210	20	10.000	6.000	5.600	2.300	2.200	100	3.700	3.400	1.230	0.043	13%	PE	120	B
Area 133A (C1-1)	PLUG C1.1A.1	PLUG C1.1A	SE-C1G	normal	L	18406	1014	0	452	0	0	0	0	489			4572.23	20361	20361	4572.23	16934	3.000	0.159	450	380	35	22.000	6.000	5.993	2.100	1.880	100	3.900	4.113	1.804	0.205	78%	PE	120	B
Area 133A (C1-1)	PLUG C1.1.1	PLUG C1.1	SE-C3A	BD3	L	18406	1014	0	452	0	0	0	0	489			4572.23	20361	20361	4572.23	16934	3.000	0.159	450	380	35	5.300	6.000	5.807	2.100	2.047	100	3.900	3.760	1.804	0.205	78%	PE	120	B
Area 133C (C2-1)	PLUG G2.1A.1	PLUG G2.1A	SE-C5	BD3	L	8562	245	0	233	0	0	0	0	3			1708.65	9043	9043	1708.65	6328	4.000	0.079	400	335	32.5	7.100	6.000	5.632	2.100	2.029	100	3.900	3.603	1.672	0.147	54%	PE	120	B
Area 133C (C2-1)	PLUG G2.1.1	PLUG G2.1	SE-C4	BD3	L	8562	245	0	233	0	0	0	0	3			1708.65	9043	9043	1708.65	6328	4.000	0.079	400	335	32.5	4.700	6.000	5.889	2.290	2.243	100	3.710	3.646	1.672	0.147	54%	PE	120	B
Area 135 (C0-1)	PLUG C0.1.1	PLUG C0.1	SE-C10	normal	E1	0	254	0	1200	0	810	0	0	0			337.82	2264	2264	337.82	1251	5.000	0.020	280	235	22.5	21.124	6.000	5.506	3.900	3.620	75	2.100	1.886	1.526	0.066	30%	PE	120	B
Area 138 (G0-1)	PLUG G0.1.1	PLUG G0.1	SE-C11	normal	E1	0	15	0	0	0	0	0	2500	0			84.20	2515	2515	84.20	312	6.000	0.006	315	265	25	18.861	6.000	5.785	4.000	3.590	46	2.000	2.195	2.113	0.117	5%	PE	120	B
Area 131 (G0-2)	PLUG G0.2.1	PLUG G0.2	SE-C12	normal	F1	0	233	0	0	0	0	0	0	0			65.24	233	233	65.24	242	6.000	0.005	280	235	22.5	25.140	6.000	5.500	2.500	2.299	125	3.500	3.201	1.184	0.051	9%	PE	120	B
Area 136 (G0-3)	PLUG G0.3.1	PLUG G0.3	SE-C20	normal	D1	0	0	0	0	0	0	0	0	0			0.00	0	0	0.00	0	6.000	0.000	280	235	22.5	1.456	5.486	5.486	4.320	4.300	73	1.166	1.186	1.554	0.067	0%	PE	120	B
Area 134 (C0-2)	PLUG C0.2.1	PLUG C0.2	SE-C13	BD3	D1	0	0	0	0	0	1166	0	0	0			314.82	1166	1166	314.82	1166	5.000	0.018	280	235	22.5	6.550	5.500	5.233	4.300	4.000	22	1.200	1.233	2.842	0.123	15%	PE	120	B
Area 137 (C0-3)	PLUG C0.3.1	PLUG C0.3	SE-C21	normal	D1	0	345	0	4000	0	0	0	0	0			256.60	4345	4345	256.60	950	6.000	0.018	280	235	22.5	1.936	5.500	5.486	4.300	4.212	22	1.200	1.274	2.832	0.123	15%	PE	120	B
Area 133A (C1-1)	PLUG E1.6.1	PLUG E1.6	SE-E23A	BD3	S1	18406	1014	0	452	0	0	0	0	489			4572.23	20361	20361	4572.23	16934	3.000	0.159	450	380	35	15.800	6.000	5.900	1.800	1.600	79	4.200	4.300	2.030	0.230	69%	PE	120	B
Area 133A (C1-1)	PLUG E1.7.1	PLUG E1.7	SE-E23B	BD3	S1	18406	1014	0	452	0	0	0	0	489			4572.23	20361	20361	4572.23	16934	3.000	0.159	400	335	32.5	15.000	6.000	5.719	1.320	1.020	50	4.680	4.699	2.366	0.209	76%	PE	120	B
Area 52 (E6)	PLUG 52 E6.1	PLUG 52 E6	SE-C0	normal	C1		14								3000		33.92	3014	3014	33.92	126	6.000	0.002	200	165	17.5	17.000	6.000	5.719	5.000	4.850	113	1.000	0.869	0.996	0.021	11%	PE	120	B
Area 52(E5)	PLUG COM.5.1	PLUG COM.5	SE-F10	normal	L		32								3000		38.96			38.96	144	6.000	0.003	315	265	25	24.000	6.000	5.719	2.250	2.000	100	3.750	3.719	1.431	0.079	3%	PE	120	B
Area 118 (E2)	PLUG O.118E2.1	PLUG O.118E2	SE-E1N	BD2	C1										5000		50.00	5000	5000	50.00	185	6.000	0.003	250	210	20	27.000	6.000	6.000	5.000	4.850	180	1.000	1.150	0.915	0.032	11%	PE	120	B
Area 118 (E4)	PLUG A1.3.1	PLUG A1.3	SE-A20	normal	E1										5000		50.00	5000	5000	50.00	185	6.000	0.003	315	265	25	27.000	6.000	5.543	3.643	3.430	127	2.357	2.113	1.270	0.070	5%	PE	120	B
Area 52 (E1)	PLUG O.52E1.1	PLUG O.52E1	FMH-E3C	normal	D1										2000		20.00	2000	2000	20.00	74	6.000	0.001	250	210	20	11.000	5.500	5.500	4.000	3.923	143	1.500	1.577	1.028	0.036	4%	PE	120	B

Note 1 The pipe capacity is the multiplication of sectional area of pipe and estimated velocity

Colebrook-White Equation

$$V = -\sqrt{(32\,gRs)}\,\log\left(\frac{ks}{14.8R} + \frac{1.255\,v}{R\sqrt{(32\,gRs)}}\right)$$

where
V = mean velocity (m/s)
g = gravitational acceleration (m/s2)
R = hydraulic radius (m)
D = internal pipe diameter (m)
ks = hydraulic pipeline roughness (m)
v = kinematic viscosity of fluid (m2/s)
s = hydraulic gradient (energy loss per unit length due to friction)

Capacity Capacity

$$Q = A\,x\,V$$

where where
Q = capaci Q = capacity of Pipe
A = sectior A = sectional Area of Pipe
V = mean ' V = mean velocity

Appendix C

Sewerage Plan of the Project Site

SEWERAGE MANHOLE SCHEDULE FOR SE-H1 TO SPS001

U/S M.H.	D/S M.H.	U/S G.L. (mPD)	D/S G.L. (mPD)	GRADIENT 1 IN	U/S I.L. (mPD)	D/S I.L. (mPD)	PIPE SIZE (mm) (DN/OD)	MH TYPE U/S	MH TYPE D/S	BACKDROP TO D/S MH	PIPE MATERIAL	BEDDING	SDR NO.
SE-H1	SE-H2	6.000	5.500	220	-1.400	-1.611	800	S1	S1	-	PE	B	17
SE-H2	SE-H3	5.500	5.500	220	-1.611	-1.684	800	S1	S1	-	PE	B	17
SE-H3	SE-H4	5.500	5.000	220	-1.684	-1.788	800	S1	S1	BD2	PE	B	17
SE-H4	SE-H4A	5.000	5.500	220	-3.312	-3.449	800	S1	S1	-	PE	B	17
SE-H4A	SE-H5	5.000	5.500	220	-3.449	-3.657	800	S1	S1	-	PE	B	17
SE-H5	SPS001	5.500	5.500	220	-3.657	-3.700	800	S1	TO SPS	-	PE	B	17

SEWERAGE MANHOLE SCHEDULE FOR SPS001 TO BOX CULVERT NO. 4

U/S M.H.	D/S M.H.	U/S G.L. (mPD)	D/S G.L. (mPD)	GRADIENT 1 IN	U/S I.L. (mPD)	D/S I.L. (mPD)	PIPE SIZE (mm) (OD)	MH TYPE U/S	MH TYPE D/S	BACKDROP TO D/S MH	PIPE MATERIAL	BEDDING	SDR NO.
SPS001	SE-J1	5.500	5.500	187	3.700	3.658	1000	G1	G1	-	PE	B	17
SE-J1	SE-J1A	5.500	5.500	190	3.658	3.445	1000	G1	G1	-	PE	B	17
SE-J1A	SE-J2	5.500	5.100	190	3.445	3.256	1000	G1	H/D	BD2	PE	B	17
SE-J2	BC4	5.100	5.000	190	2.131	2.000	1000	H/D	TO BC4	-	PE	B	

PE pipe

OD 420mm
ID 500mm
Length: 19.201m

UP_INV : 1.59mPD
DN_INV : 1.24mPD

Gradient: 1/55

PE pipe

OD 280mm
ID 235mm
Length: 6.55m

UP_INV : 5.233mPD
DN_INV : 4.3mPD

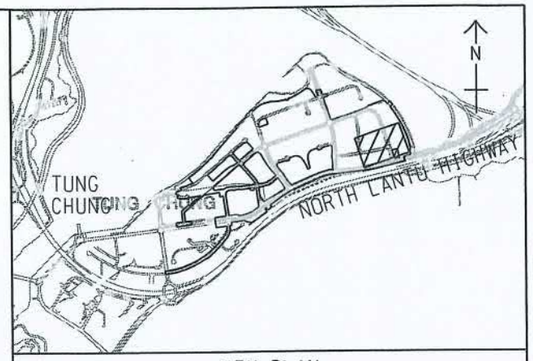
Gradient: 1/22

PE pipe

OD 1400mm
ID 1190mm
Length: 105m

UP_INV : -2.339mPD
DN_INV : -2.401mPD

Gradient: 1/480



KEY PLAN
SCALE 1:50000 (A3)

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60507694/C3/1350.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60507694/C3/SSK1017B TO SSK1018A.
3. THE LEAD-IN LOCATION IS SHOWN FOR INDICATION AND SHALL BE CONFIRMED WITH CORRESPONDING INTERFACING CONTRACTORS.

CONNECTED TO THE CO-USED BOX CULVERT AT I.L. -1.400mPD

CO-USE BOX CULVERT

CONNECTED TO THE CO-USE BOX CULVERT AT I.L. +2.000mPD
CONNECTION DETAILS REFER TO 60507694/C3/5008

ROAD L7

ROAD D2

CUT LINE A-A
SEE DRAWING NO. 60507694/C3/SSK1017B

817900 N

817400 E

817300 E

EXTRACTED FROM DRG. NO. 60507694/C3/1368B & 1370A

PREPARED BY MA

$USER$
$TIME$
$DATE$
$FILE$

AECOM

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

SEWERAGE LAYOUT PLAN AT ROAD L7

SHEET 2 OF 2

SCALE	1:1000 (A3)	DATE	22-MAY-2024
CHECK	TP	DRAWN	KYY
CONTRACT No.	NL/2020/03	DRAWING No.	60507694/C3/SSK1018
		REV	A

Appendix D

Estimation of Sewage Discharge from the Site

1 Proposed Development

JPOMQ Residential Block			
Site Area	4876	m^2	
Flat unit	432	units	
Average housedhold size [1]	2.7	person/unit	Refer to Average Domestic Household Size of Islands District Council in 2021 Population Census: Summary Result, published by Census and Statistics Department
Total Number of Persons	1167	persons	
Unit Flow Factor [2]	0.27	m^3/person/day	Referred to the planning unit flow for Domestic (housing type specific) - R2 in Table T-1 of GESF
Average Sewage Discharge	315.1	m^3/day	
JPOMQ G/F			
Management Office			
GFA	58.64	m2	Provided by project team
Worker Density per GFA (in 100m2)	3.4	person/100 m2	Refer to worker density of All Economic Activities (All Type) in Table 8 of CIFSUS
Total number of employee	2	persons	
Unit Flow Factor [2]	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
Average Sewage Discharge	0.6	m^3/day	
Total			
Total Sewage Generation Rate (DWF)	**315.7**	**m^3/day**	
Catchment Inflow Factor (North Lantau)	1.0		Reference from Table T-4 of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning
Revised Dry Weather Flow	**315.7**	**m^3/day**	
Contributing Population	1169		
Peaking Factor	6		Refer to Table T-5 of GESF
Peak Flow	**0.022**	**m^3/s**	

Notes:
[1] The average household size is made reference to "*2021 Population Census Summary Results* ", published by C&SD.
[2] The unit flow factor is made reference to "*Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (Version 1.0)* ", published by EPD.

Appendix E

Estimation of Sewage Discharge from Catchment Areas

Table 2 - Population Estimation for Catchment Area （data based on CEDD report)

Area No.	Catchment ID	Description	Magnitude	Unit	Remark
135	A	**Other School Use**			
		Total no. of student	1200	persons	based on CEDD SIA report
		Unit flow	0.04	m^3/person/day	Referred to the planning unit flow for School Student in Table T-2 of GESF.
		Total no. of teacher	104	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**77.1**	m^3/day	
		Fire Station			
		FSD quarters			
		Total no. of residents	810	persons	based on CEDD SIA report
		Unit flow	0.27	m^3/person/day	based on Table T-1: Private residential R2 type
		Average dry weather flow	**218.7**	m^3/day	
		Sub-divisional fire Station sum ambulance depot			
		Total no. of employee	150	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**42.0**	m^3/day	
		Total ADWF for Area 135	**337.8**	m^3/day	
137	C	**Post Secondary Institution**			
		Total no. of student	4000	persons	based on CEDD SIA report
		Unit flow	0.04	m^3/person/day	Referred to the planning unit flow for School Student in Table T-2 of GESF.
		Total no. of employee	345	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Total ADWF for Area 137	**256.6**	m^3/day	CEDD SIA report = 256.6m3/d OK
138	D	**Sports Ground**			
		Total no. of spectator	2500	persons	based on CEDD SIA report
		Unit flow	0.032	m^3/person/day	Estimated by HAB in 2015, based on the employment figures of Tseung Kwan O Sports Ground. According to 2015 employment figures of Tseung Kwan O Sports Ground with 5,000 spectatators, the permanent employees are 30. The UFF of 0.032 is estimated by making reference to the deviation under Section 7.4 of the EIA report of Kai Tak Multi-Sports Complex.
		Total no. of employee	15	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Total ADWF for Area 138	**84.2**	m^3/day	
131	E	**Police Station**			
		Total number of person	233	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Total ADWF for Area 131	**65.2**	m^3/day	
		Total ADWF connected to SE-C13	**743.9**	m^3/day	Sum of Catchement A to Catchment E
129	F	**Retail**			
		Total number of employee	736	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Wholesale & Retail J4 in Table T-2 of GESF.
		Average dry weather flow	**206.1**	m^3/day	
		Office			
		Total number of employee	7250	persons	based on CEDD SIA report
		Unit flow	0.08	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Business Services J6 in Table T-2 of GESF.
		Average dry weather flow	**580.0**	m^3/day	
		F&B trade			
		Population of possible F&B trade	73.6	persons	Population of possible F&B trade in TCE is assumed to be 10% of retail employee
		Unit flow	1.58	m^3/person/day	Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
		Average dry weather flow	**116.3**	m^3/day	
		Total ADWF for Area 129	**902.4**	m^3/day	

Table 2 - Population Estimation for Catchment Area （data based on CEDD report)

Area No.	Catchment ID	Description	Magnitude	Unit	Remark
133A	**G**	**Kindergarten**			
		Total no. of student	452	persons	based on CEDD SIA report
		Unit flow	0.04	m^3/person/day	Referred to the planning unit flow for School Student in Table T-2 of GESF.
		Total no. of teacher	51	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**32.4**	m^3/day	
		Management Office			
		Total number of employee	50	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**14.0**	m^3/day	
		Commercial			
		Total number of employee	913	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Wholesale & Retail J4 in Table T-2 of GESF.
		Average dry weather flow	**255.6**	m^3/day	
		F&B trade			
		Total number of employee	393	persons	based on CEDD SIA report
		Unit flow	1.58	m^3/person/day	Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
		Average dry weather flow	**620.9**	m^3/day	
		F&B trade			
		Population of possible F&B trade	96	persons	Population of possible F&B trade in TCE is assumed to be 10% of commercial+management office employee
		Unit flow	1.58	m^3/person/day	Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
		Average dry weather flow	**152.2**	m^3/day	
		Special Residential			
		Total number of residents	18406	persons	based on CEDD SIA report
		Unit flow	0.19	m^3/person/day	based on Table T-1: Private residential R1 type
		Average dry weather flow	**3497.1**	m^3/day	
		Total ADWF for Area 133A	**4572.2**	m^3/day	

Table 2 - Population Estimation for Catchment Area （data based on CEDD report)

Area No.	Catchment ID	Description	Magnitude	Unit	Remark
133B	**H**	**Welfare facilities**			
		Total number of employee	182	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Total number of residents	100	persons	based on CEDD SIA report
		Unit flow	0.19	m^3/person/day	based on Table T-1: Private residential R1 type
		Average dry weather flow	**70.0**	m^3/day	
		Special Residential			
		Total number of residents	7984	persons	based on CEDD SIA report
		Unit flow	0.19	m^3/person/day	based on Table T-1: Private residential R1 type
		Average dry weather flow	**1517.0**	m^3/day	
		Kindergarten			
		Total no. of student	239	persons	
		Unit flow	0.04	m^3/person/day	Referred to the planning unit flow for School Student in Table T-2 of GESF.
		Total no. of teacher	26	persons	
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**16.8**	m^3/day	
		Management Office			
		Total number of employee	25	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**7.0**	m^3/day	
		F&B trade			
		Total number of employee	3	persons	Population of possible F&B trade in TCE is assumed to be 10% of retail employee
		Unit flow	1.58	m^3/person/day	Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
		Average dry weather flow	**4.0**	m^3/day	
		Total ADWF for Area 133B	**1614.7**	m^3/day	
133C	**I**	**Welfare facilities**			
		Total number of employee	194	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Total number of residents	180	persons	based on CEDD SIA report
		Unit flow	0.19	m^3/person/day	based on Table T-1: Private residential R1 type
		Average dry weather flow	**88.5**	m^3/day	
		Special Residential			
		Total number of residents	8382	persons	based on CEDD SIA report
		Unit flow	0.19	m^3/person/day	based on Table T-1: Private residential R1 type
		Average dry weather flow	**1592.6**	m^3/day	
		Kindergarten			
		Total no. of student	233	persons	based on CEDD SIA report
		Unit flow	0.04	m^3/person/day	Referred to the planning unit flow for School Student in Table T-2 of GESF.
		Total no. of teacher	26	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**16.6**	m^3/day	
		Management Office			
		Total number of employee	25	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**7.0**	m^3/day	
		F&B trade			
		Total number of employee	3	persons	Population of possible F&B trade in TCE is assumed to be 10% of management office
		Unit flow	1.58	m^3/person/day	Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
		Average dry weather flow	**4.0**	m^3/day	
		Total ADWF for Area 133C	**1708.7**	m^3/day	

Table 2 - Population Estimation for Catchment Area （data based on CEDD report)

Area No.	Catchment ID	Description	Magnitude	Unit	Remark
130	**J**	**Office**			
		Total number of employee	6900	persons	based on CEDD SIA report
		Unit flow	0.08	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Business Services J6 in Table T-2 of GESF.
		Average dry weather flow	**552.0**	m^3/day	
		Retail			
		Total number of person	739	person	based on CEDD SIA report
		Unit flow	0.28	m3/person/day	Referred to the planning unit flow for Commercial Employee + Wholesale & Retail J4 in Table T-2 of GESF.
		Average dry weather flow	**207.0**	m^3/day	
		F&B trade			
		Total number of employee	74	person	Population of possible F&B trade in TCE is assumed to be 10% of retail employee
		Unit flow	1.58	m3/person/day	Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
		Average dry weather flow	**116.8**	m^3/day	
		Total ADWF for Area 130	**875.8**	m^3/day	
52 (E6)	**K**	**Open Space**			
		Total number of employee	14	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**3.9**	m^3/day	
		Open Space (No shower room)			
		Total number of person	10	person	based on CEDD SIA report
		Unit flow	10.8	m3/person/day	Calculation of ADWF in open space retrieved from agreed SIA for Open Space Development in Tung Chung New Town Extension (East) in Agreement No. 9AJ126.
		Average dry weather flow	**108.0**	m^3/day	
		Open Space (Visitor)			
		Total number of person	3000	person	based on CEDD SIA report
		Unit flow	0.01	m3/person/day	Calculation of ADWF in open space retrieved from agreed SIA for Open Space Development in Tung Chung New Town Extension (East) in Agreement No. 9AJ126.
		Average dry weather flow	**30.0**	m^3/day	
		Total ADWF for Area 52	**141.9**	m^3/day	
132	**L**	**Sewage Pumping Station**			
		Total number of employee	10	persons	based on CEDD SIA report
		Unit flow	0.33	m^3/person/day	based on CEDD SIA report
		Total ADWF for Area 132	**3.3**	m^3/day	
	M	**Total ADWF for Catchement M**	**24661.2**	m^3/day	based on CEDD SIA report, the accumulated ADWF connecting manhole SE-A15 to SE-E23A is 24,661.2m3/day
		Total ADWF connected to SE-E28	**35224.0**	m^3/day	Catchment A to Catchment M

Appendix F

Calculation of Flow Capacity of Proposed Development

Calculation of Flow Capacity of Proposed Development

Sewer No.				Material	Outer Diameter (m)	Internal Diameter (m) [a]	Cross-section Area (m^2)	Length (m)	Inlet mPD (m) [a]	Outlet mPD (m) [a]	Hydraulic pipeline roughness (m) [b]	Hydraulic Gradient	Mean Velocity (m/s) [c]	Max Capacity of Sewer (m^3/s)	Total Average Dry Weather Flow	Catchment Inflow Factor	Revised Total Average Dry Weather Flow [g]	Contributing Population	Peaking Factor	Peak Discharge from Project Site m^3/day	Peak Discharge through Manhole m^3/s	Percentage of capacity after Development	Proposed Development Contribution	Remark
ID	From	ID	To		d	D	A	l				s	V		m^3/day	[f]	m^3/day	[d]	[e]			[h]		
S1	PLUG C0.2	S2	SE-C13	PE	0.28	0.235	0.043	6.550	4.300	4.000	0.0015	0.04580	2.841	0.123	315.7	1.0	315.7	1169	6.0	1893.9	0.022	18%	18%	The Site
S2	SE-C13	S3	SE-E28	PE	0.50	0.420	0.139	19.201	1.590	1.240	0.0015	0.01823	2.607	0.361	1059.5	1.0	1059.5	3924	6.0	6357.1	0.074	20%	6%	The Site + Catchment A-E
S3	SE-E28	S4	SPS001 Sewage pumping Station (TCE East)	PE	1.40	1.190	1.112	29.735	-2.339	-2.401	0.0015	0.00209	1.686	1.876	35539.7	1.0	35539.7	131628	3.5	124776.8	1.444	77%	1%	The Site + Catchment A-M

[a] Reference from CEDD Design Report

[b] Reference from CEDD Design Report,
Pipe is made up of polyethylene, roughness coefficient = 0.0015m

[c] The velocity is calculated using the Colebrook-White Formula:

$$V = -2(2gDS)^{0.5} \log\left(\frac{k}{3.7D} + \frac{2.5v}{D(2gDS)^{0.5}}\right)$$

where
k = Colebrook-White roughness coefficient, in meter
V = mean velocity (m/s)
D = circular cross-section pipe, inside diameter (m)
S = slope, in meters per meter
v = kinematic viscosity of water, in meter per second (0.000001306 m/s)
g = gravitational acceleration (m/s2) (9.807m/s2)

[d] The Contributing Population is defined as:

$$\text{Contributing Population} = \frac{\text{Calculated total average flow } (m^3/\text{day})}{0.27\ (m^3/\text{person/day})}$$

[e] Reference from Table T-5 of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning
[f] Reference from Table T-4 of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning
[h] Revised Total Average Dry Weather Flow = Total Average Dry Weather Flow x Catchment Inflow Factor
[i] Pipe segment that exceeded 100% used capacity are bolded and underlined

TOWNLAND CONSULTANTS LTD.
URBAN AND REGIONAL PLANNING, DEVELOPMENT CONSULTANCY, MASTER PLANNING, URBAN DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, PROJECT MANAGEMENT AND SOCIAL DEVELOPMENT

Reference ASD/TCNTE/KELVINHC/03
Date 23 October 2025

By HAND and EMAIL

The Secretary, Town Planning Board
c/o Planning Department
15/F North Point Government Offices,
333 Java Road, North Point, HONG KONG

Dear Sir / Madam,

SECTION 16 PLANNING APPLICATION
THE TOWN PLANNING ORDINANCE (CHAPTER 131)

PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND (TPB REF: A/I-TCE/6)

We refer to the captioned Planning Application submitted to the Town Planning Board ("**TPB**") on 12 September 2025. Further to comments received from the Environmental Protection Department ("**EPD**"), Food and Environmental Hygiene Department ("**FEHD**"), Housing Department ("**HD**"), Transport Department ("**TD**"), Civil Aviation Department ("**CAD**"), Urban Design and Landscape Unit ("**UD&L**") and Sai Kung & Islands District Planning Office ("**SKIDPO**") of Planning Department ("**PlanD**") and the Public, we hereby submit the Responses-to-Comments ("**R-to-C**") table at ***Attachment 1*** and relevant supporting documents at ***Attachments 2 to 9***, which have fully addressed the comments from the above-mentioned Government departments and the Public.

Please note that these responses are clarifications only and there is no material change to the S16 Planning Application. Should there be any queries, please do not hesitate to contact the undersigned, Mr Vincent Lau or Mr Kelvin Chung.

Yours faithfully,
FOR AND ON BEHALF OF
TOWNLAND CONSULTANTS LIMITED

Eric Chan
Principal Town Planner
ERIC/KELVINHC/yv

Enc Attachment 1: R-to-C table
Attachment 2: Replacement Pages of SPS
Attachment 3: Replacement Pages of PER
Attachment 4: Correspondence on the Latest EAS
Attachment 5: Replacement Pages of SIA
Attachment 6: Replacement Pages of LMP
Attachment 7: Email Confirmation from HKPF on Parking Provision
Attachment 8: Replacement Pages of TIA
Attachment 9: Replacement Pages of VIA

cc Client / Team

城市規劃顧問

MAIN HONG KONG OFFICE
2801, 28th Floor, 148 Electric Road, North Point, Hong Kong
Telephone : (852) 2521 2911 Facsimile : (852) 2521 6631
E-mail address : tcltd@townland.com Website : www.townland.com

CHINA OFFICE
Room 1111, Building 1, Yagang Industry and Trade Building, No.18 Fuan Avenue, Hehua Community, Pinghu Street, Longgang District, Shenzhen, PRC. Postal Code 518111
Telephone : (86) 181 2417 9366
E-mail address : tcltd@townland.com

INDIA OFFICE
Coworking Space Ministry of New, 3rd Floor, Kitab Mahal, 192 Dr Dadabhai Naoroji Road, Azad Maidan, Fort, Mumbai, India
Telephone : (91) 9819919804
E-mail address : tcpl@townland.com

INDONESIA OFFICE
Gedung Menara Anugrah, Lantai 21
Kantor Taman E.3.3, Jl. DR. Ide Anak Agung Gde Agung Lot 8.6-8.7
Kawasan Mega Kuningan, Jakarta Selatan 12950, Indonesia
Telephone : (62 21) 2941 0621
E-mail address : tcljkt@townland.com

ASSOCIATED COMPANIES :
TOWNLAND CONSULTANTS (INTERNATIONAL) LIMITED (International)
TOWNLAND CONSULTANTS (SHENZHEN) LIMITED (China)
TOWNLAND CONSULTANTS PVT. LIMITED (India)
PT TOWNLAND INTERNATIONAL (Indonesia)
HOWARD & SEDDON PARTNERSHIP (United Kingdom)

ISO 9001: 2015
Certificate No.: CC844

Attachment 1

RESPONSES-TO-COMMENTS TABLE

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 And 135, Tung Chung, Lantau Island [TPB Ref: A/I-TCE/6]

Responses to Comments Table

	Comments/ Suggestions	**Applicant's Responses**
A.	**Comments from Environmental Protection Department received from Planning Department on 14.10.2025:** ***(Contact person: Mr. WONG Wing Hong, Andy, Tel no.: 2835 1127)***	
	Please find our comments below for your follow up. **<u>Planning Statement</u>**	
1.	Section 5.4.1 – Please include land contamination assessment.	Please note that Section 5.4.1 of the Supplementary Planning Statement ("**SPS**") is revised accordingly and please refer to ***Attachment 2*** for the replacement page.
	<u>Preliminary Environmental Review</u> **<u>General</u>**	
2.	Please check the typo in the report header: ... MINOR RELAXATION OF BUILDING **<u>HEIGH</u>** …	Please note that the Header is revised accordingly.
	<u>Air Quality</u>	
3.	Table 5-3 – Please confirm if 10th peak 24-hr and annual PM10 in 2019 exceeded AQO.	Please note that the 10th peak 24-hr and annual PM10 in 2019 exceeded AQO and please refer to ***Attachment 3*** for the replacement pages of the Preliminary Environmental Review ("**PER**") for revised Table 5-3.
4.	Table 5-4 – Please supplement PATH background for grids (19,32) and (18,31), which are also covered by the 500m assessment area.	Please note that Table 5-4 of PER is revised and supplemented with PATH background with grids (19,32) and (18,31) (***Attachment 3*** refers).
5.	Section 5.4 – Please assign ASR ID and present the data for representative ASRs of the proposed development in a table and indicate in a figure.	Please note that Table 5-5 and Figure 5.1 of the PER are revised accordingly (***Attachment 3*** refers).
6.	Section 5.5.3 – (a) Please supplement FSP and RSP in line 2. (b) Please supplement the number of mechanical equipment to be used per time over the work site. (c) Please clarify the meaning of "Current operation of PMEs will be avoided".	(a) Please note that FSP and RSP are added in Section 5.5.3 of PER (***Attachment 3*** refers). (b) Please note that the number of mechanical equipment to be used per time over the work site will be kept to minimum and subject to the selection of the Contractor and future construction management. (c) Please note that Line 4 of Section 5.5.3 of PER is revised as "Concurrent operation of PMEs will be avoided" (***Attachment 3*** refers).

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 And 135, Tung Chung, Lantau Island [TPB Ref: A/I-TCE/6]

Responses to Comments Table

Comments/ Suggestions		Applicant's Responses
7.	Table 5-6 – For Note [3], please check if there is update in the EAS version.	Please be informed that the requested information for the latest EAS versions of HKHA Public Housing Developments at Areas 133A, 133B, and 133C has been sent out as shown in ***Attachment 4***. Please note that no further information was received and EAS (April 2024) is the latest version obtained.
8.	Section 5.5.5 – Please state the dates of the EM&A Reports reviewed.	Please note that Section 5.5.5 of the PER is revised as "Review of EM&A reports from Aug 2020 to Aug 2025 …." (***Attachment 3*** refers).
9.	Section 5.5.7 – Please review whether the measures in DEVB's TC No.13/2020, Timely Application of Temporary Electricity and Water Supply for Public Works Contracts and Wider Use of Electric Vehicles in Public Works Contracts and DEVB's TC No.1/2015, Emissions Control of NRMM in Capital Works Contracts of Public Works are also applicable to this Project.	Please note that Sections 5.5.9 and 5.5.10 of the PER is added with reference to the mentioned technical circulars (***Attachment 3*** refers).
10.	Section 5.5.8 – (a) Line 2 should read "Regulations". (b) Please revise to "0.001%" in line 8.	Noted and revised accordingly (***Attachment 3*** refers).
11.	Section 5.6.2 and Table 5-7 - CEDD's Roadworks and Noise Mitigation Measures Design Report mentioned that the road configuration was at a preliminary design stage. Please be reminded that if TD have advised other road type for the concerned roads, the buffer distance will need to be reviewed again.	Noted.
12.	Section 5.6.5 – Please move header to the same page.	Noted and revised accordingly (***Attachment 3*** refers).
13.	Section 5.6.6 – Please revise to "adverse air quality impact" in line 3.	Noted and revised accordingly (***Attachment 3*** refers).
14.	Section 5.6.8 – Please supplement the separation distance according to deliverable PI49.	Noted and revised accordingly (***Attachment 3*** refers).
15.	Section 5.6.10 – Please revise to "no adverse air quality impact" in line 4.	Noted and revised accordingly (***Attachment 3*** refers).

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 And 135, Tung Chung, Lantau Island [TPB Ref: A/I-TCE/6]

Responses to Comments Table

	Comments/ Suggestions	Applicant's Responses
16.	Section 5.6.11 – (a) Please supplement if ProPECC PN 2/96 will be followed. (b) Please indicate the locations of exhaust vent and fresh air intakes on a figure.	(a) Please note that Section 5.6.11 of the PER is supplemented with reference to ProPECC PN 2/96 Control of Air Pollution in Car Parks. (b) The location of exhaust outlet and fresh air intake of mechanical ventilation will be proposed at the detailed design stage. In any event, it is proposed that the mechanical ventilation to be designed facing away from nearby air sensitive use and not approaching the buffer zone of nearby roads to ensure no to cause nuisance to occupants of air sensitive use.
17.	Section 5.7.6 – Line 2 should read "ASRs".	Noted and revised accordingly (***Attachment 3*** refers).
18.	Figure 5.1 – Please indicate PATH grids (19,32) and (18,31). Please check the scale of the map and confirm the 500m assessment area is presented correctly.	Noted and revised accordingly (***Attachment 3*** refers).
19.	Appendix 5.1 – The fonts are corrupted. Please rectify.	Noted and revised accordingly (***Attachment 3*** refers).
	<u>Noise</u>	
20.	Since helicopter noise and aircraft noise are covered, please describe these noise sources in the "Introduction" for completeness.	Noted and Section 6.1.1 is revised to include helicopter noise and aircraft noise (***Attachment 3*** refers).
21.	Please confirm and supplement the thickness of the window pane by adding the wording "**the openable window is well-gasketted with at least 6mm thick window panel**" where appropriate.	Please be confirmed the openable window will be well-gasketed with at least 6mm thick window panel and Section 6.3.22 in the PER accordingly (***Attachment 3*** refers).
22.	The current presentation of railway noise impact assessment is unclear to conclude that adverse railway noise impact is not anticipated. Please review and make reference to the approved TCLE EIA report as well.	Please note that Figure 5.2 and Sections 6.5.7 - 6.5.11 and 6.5.13 of the PER are revised (***Attachment 3*** refers).
23.	Section 6.3.9 - It seems that there is no Appendix A about management office. Please review.	Please refer to the Appendix 1 of the SPS (i.e. Architectural Drawings) for the indicative location of the management office at G/F.
24.	Section 6.4.13 and Section 6.4.18, please review if "Figure 6.4" should read as "Figure 6.5".	Please note that Sections 6.4.6 and 6.4.13 of the PER are revised and Section 6.4.18 of the PER remains unchanged (***Attachment 3*** refers).

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 And 135, Tung Chung, Lantau Island [TPB Ref: A/I-TCE/6]

Responses to Comments Table

	Comments/ Suggestions	Applicant's Responses
25.	Section 6.6.1 - ".....With reference to the TCNTE **EIA** Report (AEIAR-196/2016), potential helicopter noise impacts are anticipated due to **Government Flying Services** (GFS) and business helicopter operations."	Noted and revised accordingly (***Attachment 3*** refers).
26.	Section 6.6.3 and Section 6.6.7, please replace "EIA report" with "TCNTE EIA report".	Noted and revised accordingly (***Attachment 3*** refers).
27.	Section 6.6.4 - (a) Please state clearly what "HKBAC" refers to.	(a) Please note that HKBAC refers to Hong Kong Business Aviation Centre. Section 6.6.4 of the PER is revised accordingly (***Attachment 3*** refers).
	(b) Please clarify if the last sentence should read as "According to the TCNTE EIA report, there had only been 2 flight events.....".	(b) Noted and Section 6.6.4 of the PER is revised accordingly (***Attachment 3*** refers).
28.	Section 6.6.5 - Please describe the distance between the subject site and GFS & HKBAC.	Please note that the separation distances from the GFS and HKBAC to the nearest NSR (T1-O03) are 5.5km and 5.2km respectively as shown in Figure 6.7 of the PER (***Attachment 3*** refers).
29.	Section 6.6.6 - "The flight paths extracted from the TCNTE EIA report are given in Appendix 6.7 and Figure 6.6."	Noted and revised accordingly (***Attachment 3*** refers).
30.	Section 6.7.3 - (a) Please correct the typo in the heading to "Evaluation of Potential Helicopter Aircraft Noise Impact". (b) Please revise ".....the predicted NEF 25 contours of the 3 Runway System (3RS) for year 2030 and year 2032 would be away from the boundary of TCE...". (c) The sentence "...upon the full commissioning of the 3RS, currently planned for 2023..." is not updated. Please review. (d) (d) Please revise ".....The boundary of the application site will be away from the predicted NEF 25 contours ~~**for all the operation modes for airport including the existing two runway system and the**~~ **under the operation of** 3RS....."	Noted and revised accordingly (***Attachment 3*** refers).
31.	The figures in Table 6-2 and Table 6-7 regarding the base scheme scenario is inconsistent. Please review.	Noted and revised accordingly (***Attachment 3*** refers).

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 And 135, Tung Chung, Lantau Island [TPB Ref: A/I-TCE/6]

Responses to Comments Table

	Comments/ Suggestions	Applicant's Responses
32.	Table 6-4 - It seems that the maximum relative noise reduction required for proposed living room is not 3.4 dB(A). Please review.	Please note that the maximum relative noise reduction required for proposed living room is 2.8dB(A) and Table 6-4 of the PER is revised accordingly (***Attachment 3*** refers).
33.	Table 6-15, last row - Please correct the typo from NEF "85" to NEF "25".	Noted and revised accordingly (***Attachment 3*** refers).
34.	Appendix 6.3 - Some NAPs are highlighted in yellow. Please clarify the meaning of highlighted NAPs.	Noted and revised accordingly (***Attachment 3*** refers).
35.	Figure 6.5 and Appendix 6.5 -	
	(a) Please indicate the location of spectators for the calculation.	(a) Since the detailed information of the Sports Ground is not available at this stage, it is assumed Spectators are located in NW and SE of the Sports Ground in this assessment. The x- and y- coordinates of the NSRs and noise sources will be added in Appendix 6.5. The assessment locations of the NSRs and noise sources will be plotted in Figures 6.5a to 6.5e.The proposed development of Sports Ground is committed to complete a EIA, the noise impact of the sports ground will be further assessed under the EIA requirement.
	(b) Please review all distances between the NSRs and the fixed noise source, which seem to be incorrect.	(b) Please note that distances between NSRs and fixed noise sources are reviewed in Figure 6.5 and Appendix 6.5 of the PER respectively.
36.	Appendix 6.8 - To avoid confusion, please remove Figures about NEF contour for year 2011 and year 2021.	Please note that NEF contour for year 2011 and year 2021 are removed in Appendix 6.8 of the PER accordingly (***Attachment 3*** refers).
37.	Other specific comments on noise model are appended in **Annex I**:	
	(a) Please check the heights of some segments of Roads L6 and P1 which do not match to those in Figure 3.1 "Location of application site and its environ".	(a) Please note that the Height of segments are revised accordingly.
	(b) A segment of Shun Long Road is not set as "pervious". Please check.	(b) Noted.
	(c) Please draw the parapets of Shun Long Road.	(c) Please note that Shun Long Road is added with parapet.
	(d) Please check the barrier height of the parapets of North Lantau Highway, which is *unreasonably* high.	(d) Please note that barrier height of parapets of North Lantau Highway is revised accordingly.
	(e) The height of common flat roof should be 23.3mPD according to Master Layout Plan in Appendix 1 "Architectural Drawings". Please review.	(e) Noted. Please note that the height of common flat roof is revised accordingly.

	Comments/ Suggestions	Applicant's Responses
	(f) The lengths of the fins for T2-O29 and T2-O32 in the model are 1.06m and 1.12m respectively. They should be 1.0m according to Table 6-3 "Proposed vertical architectural fins". Please review.	(f) Please note that the lengths of the fins for T2-O29 and T2-O32 are revised accordingly.
	<u>Waste Management</u>	
38.	Table 9-1 -	
	(a) 1st row - The waste indices of 0.238 m^3/m^2 GFA and 0.498 m^3/m^2 GFA appear not to be available in the Guide. Please review the data source and provide the relevant extracted pages to facilitate the vetting.	(a-b, d) Please note that the waste index of inert C&D materials and non-inert C&D materials are made reference to "A Guide for Managing and Minimizing Building and Demolition Waste" published by the Hong Kong Polytechnic University in May 2001. The construction waste generation rate for Housing Projects in Hong Kong is 0.250m3/m^2 GFA.
	(b) 1st and 3rd row - Please clarify why the waste index of 0.498 m^3/m^2 GFA is used for calculating inert C&D material, while the waste index of 0.250 m^3/m^2 GFA is applied for non-inert C&D material for Housing Projects. Given that 90% of C&D materials are inert, the remaining 10% would consist of non-inert material. Please explain the rationale for adopting these two different indices for the calculations.	
	(c) 1st row - Please note the different between the terms "public fill" and "public fill reception facilities". The Remark should be revised as "According to Hong Kong Waste Statistics for 2023, a total of 90% of construction waste generated will be used as **<u>public fill</u>**."	(c) Noted and revised accordingly (***Attachment 3*** refers).
	(d) 3rd row - Please specify that the figure of 0.250 m^3/m^2 GFA is the generate rate of construction waste.	
	(e) 1st and 2nd rows - It is unclear whether 14,205m^3 or 17,046m^3 (i.e. 14,205m^3 + 2,841m^3) of inert C&D materials will be generated. Moreover, for the 2nd row, it is confusing to mention "recycled as much as practicable" for reused inert C&D materials. Therefore, it is suggested to combine these two rows as a single row named "**<u>Inert C&D Materials</u>**", specifying the quantity in the 2nd column and the on-site reuse quantity in the 3rd column.	(e) Noted and revised accordingly (***Attachment 3*** refers).
	<u>Sewerage Impact Assessment</u>	
39.	Table 2-2 -	
	(a) According to PI49-03, the proposed FSD quarters and fire station at Area 136 has been relocated to Area 135. Please revise as appropriate.	Noted and please refer to ***Attachment 5*** for the replacement pages of the Sewerage Impact Assessment ("**SIA**") for revised Table 2-2.
	(b) Please revise the term "Area 52" as "Area 52 (E6)" for clarity.	
40.	Table 4-2 and Appendix D - Please adopt UFF 0.28m^3/day for the staff of management office and revise the assessment accordingly.	Noted and revised accordingly (***Attachment 5*** refers).

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 And 135, Tung Chung, Lantau Island [TPB Ref: A/I-TCE/6]

Responses to Comments Table

	Comments/ Suggestions	**Applicant's Responses**
41.	Table 6-2 - The results of the Table do not tally with Appendix F. Please check.	Noted and revised accordingly (***Attachment 5*** refers).
42.	Appendix C - Please also include the as-built details of the related manholes in Appendix F for checking (e.g. invert levels, gradients, length, inner pipe diameter, etc.).	Noted and revised accordingly (***Attachment 5*** refers).
43.	Appendix F - Please check that the pipe capacity, lengths and percentage capacity used of pipes are at variance to PI49-03.	Noted and reviewed accordingly (***Attachment 5*** refers).
B.	**Comments from Food and Environmental Hygiene Department received from Planning Department on 14.10.2025:** ***(Contact person: Ms. TO Man Yim, Mandy, Tel no.: 3141 1223)***	
1.	According to the G/F Plan of Appendix 1, an area for RS & MRC with 1 no. of RCV is noted. Please remind the applicant that if domestic waste collection service in the development is required from FEHD in future, prior comment from FEHD on the detailed waste collection plan (including swept path analysis), collection mode and design of the refuse collection point should be sought. Provision of service may not be possible if there is restriction(s) or safety consideration(s) on manoeuvre of refuse collection vehicles to the designated collection point(s) for domestic refuse in the development.	Noted.
C.	**Comments from Landscape Unit of Planning Department received from Planning Department on 14.10.2025:** ***(Contact person: Ms. TSUI Hiu Wai, Isabella, Tel no.: 3565 3951)***	
	Please refer to our following comments from landscape planning perspective: **<u>Advisory Comments</u>**	
1.	Landscape Master Plan - G/F (Dwg. No. LP_001) a) It is noted that the spacing of the trees along northern boundary is 7m. Please review if spacing can be reduced to 5m to accommodate more tree planting.	a) Noted. The proposed 7m tree spacing is in consideration from its mature size of proposed tree species. However, your advisory comment is well noted and new tree with min. 5m spacing along the northern boundary is provided to accommodate more tree planting. Please refer to ***Attachment 6*** for the revised G/F Landscape Master Plan and ***Attachment 2*** for the revised Para. 4.4.1 of the SPS.

	Comments/ Suggestions	Applicant's Responses
	b) The width of the planters on the inner side of the fence along the southern boundary and near the guard booth is around 3m (i.e. similar width as the width of the planter along the northern boundary) and should be sufficient for at-grade tree planting. Please review if new trees of suitable form and size can be introduced at those planters.	b) With reference to the sections in drawing no. LP_006 in Appendix 1 of SPS, please note that insufficient space for the tree crown is allowed along the southern boundary due to the limited headroom. If tree is planted in this southern boundary planter, it is a high risk for the conflict between the tree crown with the building structure. With reference to the elevation in drawing (Appendix 1 of SPS - Boundary Fence Wall refers), tall shrubs are already proposed and we opine that it can be designed in the detailed design stage.
	<u>Advisory Remarks to the Applicant</u>	
2.	The Applicant is reminded that approval of the S.16 application under Town Planning Ordinance does not imply approval of the site coverage of greenery requirements under DEVB TC(W) No. 3/2012. The site coverage of greenery calculation should be submitted separately to relevant authorities for approval.	Noted.
D.	**Comments from Housing Department received from Planning Department on 14.10.2025:** ***(Contact person: Mr. LAU Kar Kay, Alan, Tel no.: 2761 5310)***	
1.	Please be reminded that the planned fixed noise sources at the proposed PMQ shall not affect the public housing developments at TC 133 A, B and C.	Noted. Please be confirmed that the design of fixed plant will comply with HKPSG requirement and will take Public Housing development at TC133A, B and C into consideration. Acoustic treatment will be incorporated in design as appropriate.

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 And 135, Tung Chung, Lantau Island [TPB Ref: A/I-TCE/6]

Responses to Comments Table

	Comments/ Suggestions	Applicant's Responses
E.	**Comments from Transport Department received from Planning Department on 17.10.2025:** ***(Contact person: Mr. LEE Lap Man, Raymond, Tel no.: 2399 2423)***	
	Please find our comments below regarding the Traffic Impact Assessment. **A. Comments from Transport Operations** **Lack of Assessment on Public Transport Services**	**Re. Items F1-6**
1.	The TIA does not include an assessment of the increase in population and its impact on public transport services in the vicinity.	Reference is made to (i) **Section 2.4 – Development Parameters** and (ii) **Chapter 4 – Public Transport Demand and Services Proposals** of the Traffic Impact Assessment study for the increase in population within Tung Chung New Town Extension ("**TCNTE**") under Agreement no. CE69/2015 (CE) commissioned by Civil Engineering Development Department ("TIA of CE69/2015(CE)").
2.	There is no evaluation of the projected demand for public transport services resulting from the development, including buses, shuttle buses, feeder services, taxis, and public light buses.	
3.	The absence of this analysis raises concerns about the adequacy of existing public transport infrastructure to accommodate the additional population and the potential need for enhancements.	**Table 2-5** in **Section 2.4** of the TIA of CE69/2015(CE) indicated that the assumption for the number of flat at the Application Site is **the same** as the current Planning Application (A/I-TCE/6), i.e. 432 nos.
	Need for a Comprehensive Review of Public Transport Facilities	According to **Chapter 4** of TIA of CE69/2015(CE), it was concluded that the public transport demand arising from the latest population in TCNTE (including the latest proposal at the Application Site) could generally be accommodated by the public transport provision. Therefore, the Proposed JPOMQ is not anticipated to induce adverse impact on public transport services.
4.	The applicant should conduct a comprehensive review to determine the necessity of providing public transport facilities within or near the development.	
5.	This review should include an analysis of pedestrian connectivity, footpath networks, and access to nearby public transport nodes, such as MTR stations and bus stops.	
6.	If the review identifies gaps or inadequacies, the applicant should propose mitigation measures, such as the provision of shuttle bus services, dedicated pick-up/drop-off zones, or improvements to pedestrian infrastructure.	
	B. Comments from Traffic Engineering	
7.	Re. R-to-C Item L.1 – Please provide the record of agreement from the target residents, i.e. HKPF, on the number of car parking spaces.	Please refer to ***Attachment 7*** for the record of agreement from HKPF on 87 car parking spaces.

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 And 135, Tung Chung, Lantau Island [TPB Ref: A/I-TCE/6]

Responses to Comments Table

<table>
<tr><th colspan="2">Comments/ Suggestions</th><th>Applicant's Responses</th></tr>
<tr><td>8.</td><td>Re. R-to-C Item L.2 – Please provide advice from the relevant authority, i.e. Buildings Department, about the disabled private car parking spaces.</td><td>Reference is made to the Paragraph 8 of Division 3 Design Manual: Barrier Free Access 2008 (2025 Edition) published by Buildings Department (extracted below).

8. Ratio of Accessible Parking Spaces

(1) Adequate numbers of accessible car parking spaces shall be provided with proper access, proper designation and directional signage in the carparks.

Obligatory Design Requirements

(2)
<table>
<tr><th>Total No. of Car Parking Space in Lot</th><th>Required No. of Accessible Car Parking Spaces</th></tr>
<tr><td>1-50</td><td>1</td></tr>
<tr><td>51-150</td><td>2</td></tr>
<tr><td>151-250</td><td>3</td></tr>
<tr><td>251-350</td><td>4</td></tr>
<tr><td>351-450</td><td>5</td></tr>
<tr><td>Above 450</td><td>6</td></tr>
</table>

With the provision of 87 car parking spaces in the Proposed JPOMQ, 2 (two) accessible parking spaces are required.</td></tr>
<tr><td>9.</td><td>Re. R-to-C Item L.3 – Please provide the record of agreement from the target residents, i.e. HKPF, on the number of bicycle parking spaces.</td><td>Please refer to ***Attachment 6*** for the record of agreement from HKPF on 22 bicycle parking spaces.</td></tr>
<tr><td>10.</td><td>Re. R-to-C Item L.3 – The relevant responses have not been reflected in the TIA report. The study/assessment of bicycle parking spaces is not presented in the report and the whole topic about cycle parking is not presented in the TIA report. Please review.</td><td>Noted and please refer to ***Attachment 8*** for the replacement pages of the Traffic Impact Assessment ("**TIA**") for revised Table 2.2.</td></tr>
</table>

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 And 135, Tung Chung, Lantau Island [TPB Ref: A/I-TCE/6]

Responses to Comments Table

	Comments/ Suggestions	**Applicant's Responses**
F.	**Comments from Civil Aviation Department received from Planning Department on 17.10.2025:** ***(Contact person: Mr. LI Man Lung, Luke, Tel no.: 2910 6906)***	
1.	Aircraft/helicopter noise is expected be audible to the future residents due to the close proximity of the subject site to the flight paths/helicopter routes of Hong Kong International Airport (HKIA), though it is mentioned in the updated Section 6.6 and 6.7 in the Preliminary Environmental Review that the relevant noise criteria could be met, based on the 3RS EIA study results. In fact, we are aware of aircraft noise complaints from the residents in Tung Chung from time to time. As a good practice to minimize the potential aircraft/helicopter noise nuisance to future residents, we maintain our views that appropriate noise mitigation measures (e.g. use of acoustic insulation) should be considered, and future residents should be duly alerted of the potential noise caused by aircraft and helicopter operations into and out of the HKIA.	Noted.
G.	**Comments from Planning Department received from Planning Department on 17.10.2025:** ***(Contact person: Ms. WAN Wai Yan, Vivian, Tel no.: 2158 6173)***	
1.	To supplement the justifications to relax the BH restriction from 70 mPD to 105 mPD (i.e. an increase of 35 m), the applicant should provide: a) detailed assumptions (e.g., which assumptions are being used, such as floor-to-floor height, site coverage, development constraints, etc.) for the indicative scheme of 15 domestic storeys under the 70 mPD BH restriction as mentioned in para. 5.1.1 of the Planning Statement and elaborations on why the domestic block of 15 domestic storeys (above 1-storey transfer plate and 3-storey podium) could be achievable under the 70 mPD restriction; b) comparisons amongst the proposed scheme of 27 domestic storeys with a BH of 105 mPD (MiC), BH of 100mPD (non-MiC) and the 15 domestic storey scheme with a BH of 70 mPD; and c) sites constraints and considerations restricting layout design for a more transparent layout design or stepped building height profile.	(a, b) The proposed site coverage of residential tower of the Proposed JPOMQ has already maximised to 37.5%, the permissible site coverage for domestic buildings situated at Class B over 61m under the Building (Planning) Regulation ("**B(P)R**"). The Proposed JPOMQ also optimised the architectural layout to fulfil requirements for prescribed window and Sustainable Building Design Guideline ("**SBDG**"). Under the BH restriction of 70mPD, as the BH will still exceed 61m, the permissible domestic site coverage remains at 37.5% and could not be further increased. Thus, the same architectural layout of 105mPD scheme would still apply. In this regard, the flat production will be reduced to 240 units under the BH restriction of 70mPD as the number storeys will be correspondingly reduced by 12 storeys. For ease of reference, please refer to the table below for the general assumptions under the BH of 70mPD and 105mPD.

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 And 135, Tung Chung, Lantau Island [TPB Ref: A/I-TCE/6]

Responses to Comments Table

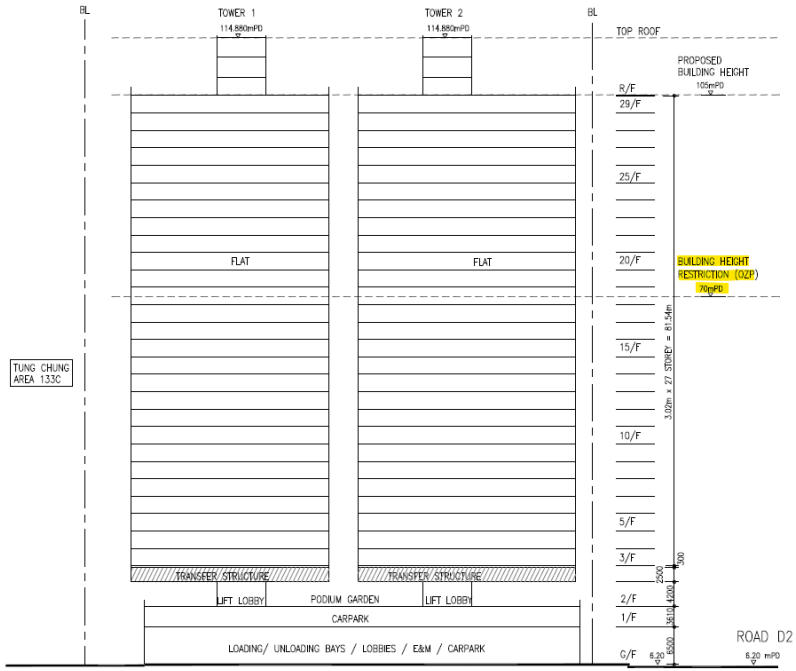
Comments/ Suggestions	Applicant's Responses

BH	No. of domestic Storeys	GFA (m^2)	PR	No. of Units	F-t-f-h (m)	Site Coverage (above 15m)
<70mPD	15#	18,025	3.7	240	3.02	Approx. 37.5%
105mPD (w/ MiC)*	27	31,694	6.5	432	3.02	Approx. 37.5%
98.61mPD (w/o MiC)*	27	31,694	6.5	432	2.8	Approx. 37.5%

* Apart from the difference in f-t-f-h, the use of MiC will lead to thicker transfer plate (additional 0.3m) and roof slab (additional 0.15m).

Please refer to the Section Plans of Appendix 1 of SPS (extracted below for ease of reference) which demonstrated only 15 domestic storeys could be accommodated under the BH restriction of 70mPD.

Schematic Section A – Appendix 1 of SPS



<table>
<tr><th colspan="2">Comments/ Suggestions</th><th>Applicant's Responses</th></tr>
<tr><td></td><td></td><td>c) As indicated in Section 4.1 and Figure 4.1 of the SPS, the building footprint is largely confined by various design and site constraints (including the traffic noise mitigation measures, adoption of MiC method and aboveground carpark). Given the limited site area for development (i.e. site area of 4,876m^2), the permissible site coverage ("SC") under Building (Planning) Regulation of up to 37.5% is already maximised which restricts the allowable floor space per floor for the residential towers. Therefore, the Proposed BH of 105mPD is the minimum BH required to meet the target flat production and domestic PR.</td></tr>
<tr><td>2.</td><td>To justify the scale of the proposed staff quarters, please supplement development information of existing police married quarters in Hong Kong to ascertain that the current proposed scheme is of a similar development scale and it is not excessive when compare with existing police married quarter developments (i.e. no. of flats, average flat size, floor-to-floor height, building bulk etc.)</td><td>Please find the table below for the broad information of three (3) other police married quarters ("PMQs") in Hong Kong. It can be seen that the development intensity of the Proposed JPOMQ is on par with other PMQs and the Proposed BH is also similar to Fan Garden and Western Police Married Quarters. It is the Government's intention to continue improve the living environment of Government staff by providing more spacious (in terms of flat size and ceiling height) units in the Government staff quarters. In recent departmental quarter project such as Fire Station-cum-ambulance Depot with Departmental Quarters and Facilities in Area 72, Tseung Kwan O (under construction), the f-t-f-h of department quarters has been increased to around 2.95m. Therefore, adjustment to the average unit size and f-t-f-h have been continuously under review.
<table>
<tr><th>Police Married Quarters (Completion Year)</th><th>Site Area (m^2) (Approx)</th><th>Plot Ratio</th><th>No. of Units</th><th>Average Unit Size (m^2)*</th><th>No. of Storeys</th><th>BH (mPD)</th><th>F-t-f-h (m)</th></tr>
<tr><td>Tuen Mun Wu Hong Police Quarters (2010)</td><td>3,600</td><td>5</td><td>336</td><td>58.8</td><td>22</td><td>71</td><td>2.8</td></tr>
<tr><td>Fan Garden (2021)</td><td>13,850</td><td>6</td><td>1,184</td><td>57.3</td><td>29-31</td><td>108.4</td><td>2.8</td></tr>
<tr><td>Western Police Married Quarters (Under Construction)</td><td>3,672</td><td>12.821</td><td>540</td><td>57.3</td><td>31-32</td><td>104</td><td>2.8</td></tr>
<tr><td>Fire Station-cum-ambulance Depot with Departmental Quarters and Facilities in Area 72, Tseung Kwan O (Under Construction)</td><td>3,015</td><td>4.93</td><td>132</td><td>50</td><td>12 (domestic)</td><td>61.6</td><td>2.95</td></tr>
<tr><td>Proposed JPOMQ (Under Planning)</td><td>4,876</td><td>6.5</td><td>432</td><td>60.6</td><td>30</td><td>105</td><td>3.02</td></tr>
</table>
* In Saleable Floor Area</td></tr>
</table>

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 And 135, Tung Chung, Lantau Island [TPB Ref: A/I-TCE/6]

Responses to Comments Table

	Comments/ Suggestions	**Applicant's Responses**
3.	To justify the necessity of increasing the development density of the site, please supplement if there is any planned and identified sites for police married quarters in Hong Kong, particularly in Northern Metropolis (NM).	Please note that currently there are three (3) planned sites reserved for PMQs and they are located in Northern Metropolis ("**NM**"). However, the development programme for these sites have yet to be determined.
4.	Please clarify whether the proposed development parameters excludes the 10% GFA and SC concessions for floors adopting Modular Integrated Construction (MiC) method permissible under Joint Practice Note (JPN) No. 8 and Section 42 of the Buildings Ordinance (BO).	Please be confirmed that the proposed development parameter and GFA calculation does not include the 10% concession of GFA for MIC floor area by adopting MIC for construction under JPN No.8 on "Enhanced Facilitation Measures for Buildings Adopting MiC", which is subject to approval of the Building Authority.
5.	The Applicant is required to take note of JPN No. 8 and provide details of the propose BH of JPOMQ without the use of MiC construction method for reference. Please also clarify whether the use of MiC construction method would result an increase of BH exceeding 4% (supplement on the requirements of paras. 10 to 13 of JPN 8).	The Applicant noted the JPN No. 8 in regard to the support for minor relaxation of BH restriction up to 4% of the total storey height of MiC floors , irrespective of the actual additional vertical space taken up arising from the adoption of MiC. In comparison with the typical staff quarters units and under the same assumption for ceiling height, the use of MiC method would result in an additional f-t-f-h of about 0.22m (equivalent to about 7.3% of the storey height) to accommodate the thickened double slabs between the MiC modules.
6.	For para 3.2.4 of the planning statement, please clarify whether the "8 DQs mentioned in the 2014 Policy Address" include the application site or not.	Please be clarified that the eight (8) department quarters ("**DQs**") mentioned in the 2014 Policy Address does not include the Application Site.
7.	We note that the VIA has concluded that the proposed development would incur slightly adverse visual impact to the surrounding developments in TCE. Please consider to indicate the suggested/identified mitigation measures on the photomontages which, as mentioned, are for illustration purpose.	Noted and please refer to ***Attachment 9*** for the replacement pages of the Visual Impact Assessment ("**VIA**") for revised Figures 6.1, 6.2 and 6.3 and Section 6.5 which have further elaborated on the mitigation measures.
H.	**Comments from Urban Design Unit of Planning Department received from Planning Department on 17.10.2025:** ***(Contact person: Mr. LAM Sau Yin, Timothy, Tel no.: 3565 3940)***	
	Visual Impact Assessment	
1.	Para. 6.2.4 – Given more of the open sky view and open sea view would be blocked by the Junior PMQ with the proposed minor relaxation of building height, it is suggested to revise the rating of "Effects on Visual Resources" from "negligible" to "slightly adverse".	Noted and Para. 6.2.4 and Table 5.1 of the VIA is revised accordingly (***Attachment 9*** refers).

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 And 135, Tung Chung, Lantau Island [TPB Ref: A/I-TCE/6]

Responses to Comments Table

	Comments/ Suggestions	Applicant's Responses
2.	Regarding the design consideration listed in Section 4.3, please see our comments below:	Noted.
3.	The Consultant may wish to clarify whether the design considerations listed in Section 4.3 are also regarded as mitigation measures. If affirmative, please beef up the Section 6 to demonstrate how these measures could effectively reduce the visual impact due to the minor relaxation of BHR. It is also suggested to include a new Section before the Conclusion to state clearly the mitigation measures.	Noted and please refer to Section 6.5 of the VIA for the elaboration of the mitigation measures (***Attachment 9*** refers).
4.	The Consultant may wish to discuss how the design of the building enables the development to conform to the overall visual context and the intended stepped building height concept of Tung Chung Extension (TCE) as a mitigation measure.	Noted and please refer to Para. 6.5.2 and revised Figure 6.1 of the VIA for the discussion on how the Proposed JPOMQ conform with the overall visual context and stepped building height concept of TCE (***Attachment 9*** refers).
5.	It is noted that the development would provide set back from the northern boundary, so that structures of the proposed development would not encroach into the planned breezeway in Area 133. However, this design feature is absence from this VIA. The Consultant may wish to discuss this as a mitigation measure in the VIA as well.	Noted and please refer to Section 6.5 of the VIA (***Attachment 9*** refers).
6.	The Consultant may also consider to show the mitigation measures on a plan, similar to Figure 4.1 of the Supplementary Planning Statement for easy reference.	Noted and please refer to Section 6.5 and revised Figures 6.1, 6.2 and 6.3 of the VIA for the elaboration of the mitigation measures (***Attachment 9*** refers).
7.	The photomontages do not reflect the design considerations, such as landscape treatment, the large shrubs and green hedge. Please update the photomontages accordingly.	Noted and Figures 6.1, 6.2 and 6.3 are revised accordingly (***Attachment 9*** refers).
8.	The Consultant please check whether the model of the proposed development encroached the planned breezeway in Figure 6.2.	Noted and please be clarified the area falling within the "G/IC" zone is proposed as at-grade landscaped area to respect the planned breezeway.

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 And 135, Tung Chung, Lantau Island [TPB Ref: A/I-TCE/6]

Responses to Comments Table

Comments/ Suggestions		**Applicant's Responses**
I.	**Public Comment**	
	During the formal publication period of the S16 Planning Application, two (2) public comments were received with one (1) comment in objection and one (1) providing comments by MTR Corporation Limited ("**MTRCL**"). The comments are summarised below: <u>Opposing Views</u>	
1.	Government staff quarters should be phased out to encourage home ownership.	It is the Government's policy to provide departmental quarters for married disciplined services staff to not only retain and attract talents, but also boost morale, subject to availability of resources. The Application Site has been reserved for development of a police married quarters and this S16 Planning Application seeks to fully utilise the development potential of the Application Site.
2.	Concerned with the privacy of the users of nearby educational and sports facilities as extensive surveillance equipment will be installed at the Proposed JPOMQ.	Please note that the CCTVs installed at the Application Site are for the purpose of deterrence and prevention of crime and ensuring the safety of the residents of the Proposed JPOMQ. No CCTVs will be installed towards the surroundings of the Site (i.e. educational and sports facilities) as the main purposed of the CCTVs are for security and safety of the residents and not for surveillance purposes. The installation and usage of CCTVs would be in accordance with the codes of practice as stipulated under the Hong Kong Law. Please find the Guidance on CCTV Surveillance Practices from Office of the Privacy Commissioner for Personal Data in the link below: https://www.pcpd.org.hk/english/publications/files/CCTVpractices_e.pdf
3.	The stepped building height profile of the Tung Chung East will be jeopardised.	With consideration of the approved BHs (125mPD to 135mPD) under Application No. A/I-TCE/4 at Area 133 (i.e. to the west of the Site), the proposed BH of 105mPD for the Proposed JPOMQ will preserve a distinct height variation and descending BH profile towards the waterfront (Figure 5.1 of the SPS refers).

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 And 135, Tung Chung, Lantau Island [TPB Ref: A/I-TCE/6]

Responses to Comments Table

	Comments/ Suggestions	**Applicant's Responses**
4.	The Application Site is not in line with the planning intention of the "G/IC" zone and should be developed for community facilities.	As mentioned in the response to Item J1 above, the Application Site has been reserved for development of a police married quarters and is in line with the planning intention of the "G/IC" zone, which is intended "*primarily for the provision of Government, institution or community facilities serving the needs of the local residents and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments*".
	<u>Other Comments</u>	
5.	MTRCL raised concerns regarding the potential noise impact of train operations on future residents of the Proposed JPOMQ and suggested the Applicant to conduct a quantitative noise assessment based on the latest layout. MTRCL also commented on the designation of the area sensitivity rating for the southeast façade of Tower 1 and the east and south facades of Tower 2. Moreover, MTRCL indicated that if there is a programme mismatch between Proposed JPOMQ and surrounding developments, further noise assessments should be carried out.	No objection to this S16 Planning Application is noted. Figure 5.2 and Sections 6.5.7 - 6.5.8 and 6.5.11 of the PER are revised (***Attachment 3*** refers) to further elaborate on the potential railway noise impact. According to the railway noise impact assessment result from TCLE EIA report (AEIAR-235/2022) and Tung Chung New Town Extension EIA Report (AEIAR-196/2016), the Proposed JPOMQ would unlikely subject to significant adverse railway noise impact. The railway noise impact will be reviewed again in the detailed design stage, if necessary.

Date: October 2025
File Ref: ASD/TCNTE

Attachment 2

REPLACEMENT PAGES OF
SUPPLEMENTARY PLANNING STATEMENT

Table 4.1 Technical and Accommodation Schedule

TECHNICAL SCHEDULE	
Application Site Area	Approx. 4,876m^2
Proposed Total PR	6.5
Proposed Total GFA	Approx. 31,694m^2
Proposed SC	
Below 15m	Approx. 80%
Above 15m	Approx. 37.5%
Proposed Total No. of Units	About 432
Average Unit Size (in Saleable Floor Area)	Approx. 60.63m^2
Estimated Total Population[*1]	About 1,167
Proposed No. of Blocks	2
Proposed No. of Storeys	30
Proposed BH (Main Roof Level)	105mPD
ACCOMMODATION SCHEDULE	
G/F	Lobbies/ Carpark/ L/UL Bays/ E&M Facilities
1/F	Carpark
2/F	Podium Garden
3/F – 29/F	Flat

[*1] *2.7 persons per flat are assumed with reference to 2021 Population Census for Island District.*

4.2.6 As the building footprint is largely confined by various site and design constraints outlined at ***Section 4.1*** and considering the design requirement (i.e. adoption of MiC method and aboveground carpark), the attainable development intensity will be limited under the existing BH restriction of 70mPD. As illustrated with Section Plan in Appendix 1, only 15 domestic storeys can be constructed under the BH restriction of 70mPD. The flat production will be correspondingly reduced to 240 units (i.e. reduction of 192 units).

4.3 Internal Transport Arrangement

4.3.1 Vehicular access to the Application Site will be provided at Road L7 (***Appendix 1*** refers).

4.3.2 The Proposed JPOMQ will provide adequate internal transport provisions in accordance with HKPF user requirements with reference to the HKPSG recommendations (***Table 4.2*** below refers).

Table 4.2 Internal Transport Provision

Type	Proposed Provision
Parking Spaces	
Private Car	87 (included 10 for visitors and 2 for disabled)
Motorcycle	13
L/UL Bays	
Heavy Goods Vehicle	2
Refuse Collection Vehicle	1

4.4 Conceptual Landscape Design

4.4.1 The Application Site is located on newly reclaimed land without any existing vegetation. To improve the landscape amenity of the Application Site, 13 nos. of trees will be introduced within the Site at G/F and 2/F for amenity purposes. The greenery requirements under the SBDG and DevB TC(W) No. 3/2012 will be met.

5.4 No Adverse Environmental Impact

5.4.1 A Preliminary Environmental Review ("**PER**") has been prepared to assess the potential environmental impacts on air quality, noise, water quality, land contamination and waste management arising from the Proposed JPOMQ. The results of the PER indicate that no insurmountable environment impact is anticipated with the proposed mitigation measures (***Appendix 2*** refers).

5.5 No Adverse Visual Impact

5.5.1 A Visual Impact Assessment ("**VIA**") has been conducted for the Proposed JPOMQ (***Appendix 3*** refers). A total of three (3) Viewpoints ("**VPs**") were identified and selected for assessment which best represents the key visual receivers looking towards the Proposed JPOMQ. The VIA concludes that the Proposed JPOMQ will incur slightly adverse impacts on the identified VPs. Mitigation measures such as landscape treatment at ground and podium level and light tone façade treatment will be explored at detailed design stage to soften the building edge and reduce the contrast with the open sky backdrop. The Proposed Minor Relaxation of BH Restriction is considered not incompatible with the surrounding context in terms of massing, scale and height.

5.6 No Adverse Traffic Impact

5.6.1 A Traffic Impact Assessment ("**TIA**") has been prepared to assess the traffic impact resulting from the implementation of the Proposed JPOMQ (***Appendix 4*** refers). The TIA concludes that no adverse traffic impact is anticipated on the surrounding road network and junctions with additional traffic generated by the Proposed JPOMQ.

5.7 No Adverse Infrastructural Impact

5.7.1 A Sewerage Impact Assessment ("**SIA**") was undertaken for the Proposed JPOMQ and is provided *in* ***Appendix 5***. The results of the SIA indicate that no insurmountable sewerage impact is anticipated as a result of the Proposed JPOMQ.

5.7.2 A Drainage Impact Assessment ("**DIA**") has also been conducted for the Proposed JPOMQ and is provided in ***Appendix 6***. The DIA concluded that there will be a reduction in the volume of runoff from the Site due to the introduction of greenery. No adverse drainage impact is anticipated with the proposed drainage arrangement.

5.8 No Undesirable Precedent

5.8.1 The Application Site will be occupied by a Government Staff Quarters and the minor relaxation of BH Restriction is to make better use of G/IC sites to allow for more flat production to satisfy the urgent housing need. Given the nature of the Application and its negligible impacts, approval of the Application is not likely to set an undesirable precedent.

Attachment 3

REPLACEMENT PAGES FOR PRELIMINARY ENVIRONMENTAL REVIEW

List of Figures

Figure 3.1 Location of Application Site and its Environ
Figure 5.1 Location of Air Sensitive Receivers (ASRs)
Figure 5.2 Location of Concurrent Projects
Figure 5.3 Buffer distance from nearby roads
Figure 5.4 Location of Public Transport Interchange (PTI)
Figure 6.1 Existing Low Noise Road Surfacing (LNRS) at North Lantau Highway and Shun Long Road
Figure 6.2 Location of Noise Assessment Points
Figure 6.3 Locations of Vertical Architectural Fins and BAW
Figure 6.4 ASR Ratings of Proposed Development for Tower 1 and Tower 2
Figure 6.5 Location of Planned Fixed Noise Sources
Figure 6.6 Location of Nearest NSR to Helicopter Flight Paths
Figure 6.7 Location of Nearest NSR to Hong Kong International Airport, Hong Kong Business Aviation Centre (HKBAC) and Government Flying Services (GFS)
Figure 7.1 Location of Water Sensitive Receivers (WSRs) and Coastal Protection Area

List of Appendices

Appendix 3.1 Layout Design Scheme of the Proposed Development
Appendix 5.1 Extract of Proposed Marina & Existing Local Vessels from TCNTE EIA Report (AEIAR-196/2016)
Appendix 5.2 Endorsement from Transport Department
Appendix 6.1 Traffic Forecast of Year 2046
Appendix 6.2 Predicted Traffic Noise Levels for Residential Blocks (Base Scheme Scenario)
Appendix 6.3 Predicted Traffic Noise Levels for Residential Blocks (Mitigated Scenario)
Appendix 6.4 Indicative Design of Proposed Acoustic Window (Baffle Type)
Appendix 6.5 Fixed Noise Calculation
Appendix 6.6 Extract of Railway Noise Contour from TCLE EIA Report (AEIAR-235/2022)
Appendix 6.7 Extract of Helicopter Flight Path and Holding Area from TCNTE EIA Report (AEIAR-196/2016)
Appendix 6.8 Extract of NEF Contours from TCNTE EIA Report (AEIAR-196/2016)
Appendix 8.1 Historical Aerial Photographs
Appendix 8.2 Copy of Letter Replies from Various Government Departments

Table 5-3 Background Air Quality at Tung Chung Air Quality Monitoring Station

Pollutant	Averaging time	Concentration 2019-2023 (µg/m³)[1][2]					AQO (µg/m³)
		2019	2020	2021	2022	2023	
SO_2	4th peak 10-min	57	24	19	26	22	500
	4th peak 24-hr	18	8	9	11	11	40
PM_{10}	10th peak 24-hr	**75**	66	63	57	51	75
	Annual Average	**30**	25	26	23	22	30
$PM_{2.5}$	19th peak 24-hr	**43**	34	**38**	36	28	37.5
	Annual Average	**19**	14	**17**	14	14	15
NO_2	19th peak 1-hr	149	113	115	94	118	200
	10th peak 24-hr	80	64	61	51	58	120
	Annual Average	33	28	28	25	26	40
O_3	10th peak 8-hr	**208**	**168**	158	**171**	156	160
	Peak season	**104**	90	82	89	79	100
CO	1st peak 1-hr	2260	1530	1240	1170	1280	30,000
	1st peak 8-hr	1874	1388	1073	1151	1095	10,000
	1st peak 24-hr	1644	1157	865	1011	1007	4,000

Notes:

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

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

5.3.2. Exceedance of concentration of $PM_{2.5}$, PM_{10} and O_3 in the AQO has been recorded at Tung Chung Air Quality Monitoring Station. The exceedance of $PM_{2.5}$ and PM_{10} are likely due to the influence from exhaust emission from traffic on the busy networks (e.g. North Lantau Highway) in Tung Chung Area, whereas the exceedance of O_3 is mainly caused by regional air pollution and is not directly emitted from man-made sources. In general, the results show a decreasing trend in the concentration of most pollutants in these 5 years.

Future Background Air Quality Condition

5.3.3. In view of the tentative completion year of the proposed development will be in Q4 2031, it is noted that the PATH v3.0 dataset only provides the nearest projected nearest background air quality concentrations for Year 2030. Therefore, the Year 2030 projections at Grid (19, 31), Grid (19,32) and Grid (18,31) have been adopted as the best available representation of the future background air quality for the Application Site. A summary of the Year 2030 background air quality concentrations is presented in **Table 5-4**.

Table 5-4 Background Air Quality Concentration of Pollutants

Pollutant	Averaging time	AQOs Concentration limit (μg/m³) (number of exceedances to be allowed)	Background (19,31)	Background (19,32)	Background (18,31)
SO_2	4th peak 10-min	500 (3)	31.35	32.42	29.87
	4th peak 24-hr	40 (3)	6.9	6.96	7.08
PM_{10}	10th peak 24-hr	75 (9)	51.06	51.25	51.18
	Annual Average	30	18.66	18.86	18.78
$PM_{2.5}$	19th peak 24-hr	37.5 (18)	27.43	27.66	27.91
	Annual Average	15	11.31	11.48	11.40
NO_2	19th peak 1-hr	200 (18)	88.29	96.73	94.32
	10th peak 24-hr	120 (9)	39.88	46.27	44.99
	Annual Average	40	16.77	20.32	17.74
O_3	10th peak 8-hr	160 (9)	**180.48**	**181.35**	**183.59**
	Peak season	100	**113.13**	**112.35**	**113.77**
CO	1st peak 1-hr	30,000 (0)	532.14	529.74	536.52
	1st peak 8-hr	10,000 (0)	500.48	502.89	502.84
	1st peak 24-hr	4,000 (0)	469.55	473.84	471.01

Notes:

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

[2] Future background air quality is represented using PATH data at Level 1.

5.3.4. These data have demonstrated that the concentrations of pollutants are below the AQOs, except for O_3. O_3 is not directly emitted from an emission source. It is formed by the chemical reactions of NOx and VOCs under the presence of sunlight and a regional pollution problem. O_3 is therefore not considered as a key parameter in this assessment.

5.4. Assessment Area and Representative Air Quality Sensitive Receivers (ASRs)

5.4.1. In general, the assessment area for an air quality impact assessment (AQIA) is defined by a distance of 500m from the site boundary.

5.4.2. Representative air quality sensitive receivers (ASRs) were identified and the separation distance between ASRs and Application Site are shown in ***Figure 5.1*** and summarized in **Table 5-5**.

5.4.3. The planned ASRs were identified based on best available information from at the time of preparation of this report, including:

- Tung Chung Line Extension (TCLE) EIA report (AEIAR-235/2022);
- Tung Chung New Town Extension (TCNTE) EIA (AEIAR-196/2016); and
- Hong Kong Housing Authority (HKHA) report Public Housing Development at Tung Chung Area 133A, 133B and 133C Environmental Assessment Study Final Report"

Table 5-5 Representative Air Sensitive Receivers (ASRs)

ASR ID	Description	No. of Storey (approx.) [1]	Land Use [2]	Shortest distance from project boundary (m)
ASR01	Proposed Post Secondary Institution	118	E	188
ASR02	Proposed Fire Station	9	GIC	119
ASR03	Proposed Police Station	6	GIC	98
ASR04	Proposed International School	11	E	108
ASR05	Proposed Residential Development (C2-2)	32	R	236
ASR06	Proposed Residential Development (C2-1)	28	R	27
ASR07	Proposed Commercial Development (COM-3)	28	CDA	151
ASR08	Proposed Residential Development (C1-1)	37	R	327
ASR09	Proposed Commercial Development (COM-2)	34	CDA	332
ASR10	Proposed Comprehensive Development (A1-2)	30	CDA	454
ASR11	Proposed Comprehensive Development (A1-2)	30	CDA	381
ASR12	Proposed Residential Development (A2-4)	32	R	435
ASR13	Proposed Residential Development (E1-5)	31	R	489
ASR14	Proposed Residential Development (F1-1)	10	R	338
ASR15	Proposed Residential Development (F1-2)	13	R	309
ASR16	Proposed Residential Development (F1-1)	10	R	443
ASR17	Proposed Secondary School (F1)	8	E	496
ASR18	Proposed Primary School (F)	8	E	467
ASR19	Proposed Primary School (F)	8	E	443
ASR20*	Tower 1 - Master Bedroom	27	R	-
ASR21*	Tower 1 - Master Bedroom	27	R	-
ASR22*	Tower 1 - Master Bedroom	27	R	-

ASR ID	Description	No. of Storey (approx.) [1]	Land Use [2]	Shortest distance from project boundary (m)
ASR23*	Tower 1 - Master Bedroom	27	R	-
ASR24*	Tower 2 - Master Bedroom	27	R	-
ASR25*	Tower 2 - Master Bedroom	27	R	-
ASR26*	Tower 2 - Master Bedroom	27	R	-
ASR27*	Tower 1 - Master Bedroom	27	R	-
ASR28*	Management Office	1	R	-

Remark:

[1] Reference from (TCNTE) EIA (AEIAR-196/2016) and HKHA report.

[2] E = Education; R = Residential Development; CDA = Comprehensive Development Area; GIC = Government Institution or Community; C = Commercial

*[3] * = ASRs within Proposed Development*

5.4.4. Openable windows will be provided at habitable rooms at residential units at Tower 1 and Tower for ventilation. Management office at podium will be provided with air-conditioning. These rooms are considered as ASRs within the project site.

5.5. Potential Air Quality Impact - Construction Phase

Emissions Sources from the Project

5.5.1. Foundation and superstructure works during the construction period would be anticipated in construction phase, dust emission in terms of Total suspended particulates (TSP), respirable suspended particulates (RSP) and fine suspended particulates (FSP) are the key air pollutants during construction. No demolition works will be carried out as there is no existing structure to demolished. MiC construction method will be adopted. No basement will be provided and thus deep excavation is not expected. In view of the project nature and scale, the construction activities will be limited to localised at-grade construction works.

5.5.2. The construction activities are expected to generate about 7,131m^3 of inert C&D waste as shown in **Table 9-1**. The construction will last for 4 years, assuming a capacity of 7m^3 per truck, bulk factor of 1.2, 25 working days a month and the works will not be conducted simultaneously, it is estimated that a maximum of 1 truck trip per day would be required for the delivery of excavated material. In view of the estimated number of dump trucks arising from the transportation of inert C&D materials is low, the impacts from transportation off-site are expected to be limited.

5.5.3. Diesel-fueled machinery operating on-site, including construction trucks and powered mechanical equipment (PMEs) may be potential source of PM_{10}, $PM_{2.5}$, NO_2, SO_2, and CO during construction stage. Number of PME to be used per time over the work site shall be kept to minimum and subject to selection of Contractor and future construction management. Concurrent operation of PMEs will be avoided and PMEs are to be placed away from the ASRs as far as practicable to avoid adverse impact to the nearby ASRs.

Emissions from Concurrent Projects

5.5.4. All potential concurrent projects within 500m assessment area during construction phase of the proposed development have been identified and tabulated in table below and shown in **Figure 5.2**.

Concurrent Projects		Construction Programme	Potential Cumulative Impacts		Approximate Distance from the Application Site
			Construction Phase	Operational Phase	
	and Public Transport Interchange (PTI) in Area 113 [2]				
14.	Residential Development at Area 122 [2]	2024 till 2030	Yes	No	461m
15.	Residential Development at Area 140 [2]	2024 till 2030	Yes	No	376m
16.	Residential Development at Area 141 [2]	2024 till 2030	Yes	No	299m
17.	Sports Centre at Area 140 [2]	2024 till 2030	Yes	No	435m

Note:
[1] reference to Tung Chung Line Extension (TCLE) EIA report (AEIAR-235/2022)
[2] reference to Tung Chung New Town Extension (TCNTE) EIA (AEIAR-196/2016)
[3] reference to Hong Kong Housing Authority (HKHA) report Public Housing Development at Tung Chung Area 133A, 133B and 133C Environmental Assessment Study Final Report" (April 2024)
[4] reference to "Section 16 Planning Application for Proposed Minor Relaxation of Building Height Restrictions for Permitted Public Housing Development at Tung Chung Area 114 and Tung Chung Area 117, Lantau Island" (August 2024)

5.5.5. With reference to findings in TCNTE EIA report (AEIAR-196/2016), it is anticipated that appropriate mitigation measures for air quality impact stipulated in Air Pollution Control (Construction Dust) Regulation will be implemented by the contractors of the concurrent project. In addition, careful programme management liaison will be arranged to ensure that construction activities near ASRs are efficiently scheduled to prevent concurrent works at the same interfacing locations. Review of the Environmental Monitoring and Audit (EM&A) Reports of the TCNTE EIA (AEIAR-196/2016) from August 2020 to August 2025 indicates that the dust monitoring data recorded no exceedance of Action and Limit Levels for construction air quality monitoring during the reporting period. As a result, adverse cumulative air quality impact during the construction phase of the proposed development is not expected.

- The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcore.
- Vehicles within the site are restricted to a maximum speed of 10 kph.
- Vehicles are inspected regularly and well maintained to ensure that they are operating efficiently and that exhaust emissions are not causing nuisance.
- Vehicle engines are turned off when they are not in use.
- Haul road of the subject site is located as far as possible from nearby ASRs.

5.5.7. Due to small in development scale, the construction works to be involved the Application Site would be very limited. Also, requirements set out in the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation to control potential emissions from non-road mobile machinery (NRMM) will need to be fully complied with. Therefore, gaseous emission from diesel-fueled construction equipment would be minor and would not cause any significant adverse air quality impact.

5.5.8. To reduce SO_2 emission from diesel-fueled machinery operating on-site, Air Pollution Control (Fuel Restriction) Regulations was enacted in 1990 to impose legal control on the types of fuel allowed for use and their sulphur contents in commercial and industrial processes. To improve air quality and protect public health, EPD has introduced the Air Pollution control (Non-road Mobile Machinery) (Emission) Regulation since 1 December 2015, under which only approved or exempted NRMMs are allowed to be used in construction sites. In addition, all construction plants are required to use ULSD (defined as diesel fuel containing not more than 0.001% sulphur by weight) as stipulated in Environment, Transport and Works Bureau Technical Circular (ETWB-TC(W)) No.19/2005 on Environmental Management on Construction Sites. Furthermore, given the localized and small scale of the Project, as well as the small number of PMEs involved, adverse air quality impacts due to emissions from the use of PMEs would be unlikely.

5.5.9. Requirements set out in DEVB's TC No.1/2015, Emissions Control of NRMMs in Capital Works Contracts of Public Work need to comply by the Contractor. This Circular promulgates the requirements for the use of NRMMs approved under the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation ("the Regulation") in new capital works contracts of public works including design and build contracts, in addition to the statutory requirements of the Regulation.

5.5.10. The Contractor should also adhere to DEVB's TC No. 13/2020, Timely Application of Temporary Electricity and Water Supply for Public Works Contracts and Wider Use of Electric Vehicles in Public Works Contracts. In response to the carbon emission reduction target as specific in the "Hong Kong Climate Action Plan 2030+", at the detailed design stage, the Project Team should timely apply for the temporary electricity with a target that the necessary cables laying works could be completed before the commencement of the works contract. In addition, timely provision of electricity to construction sites can facilitate the use of Electric Vehicles (EVs) in public works contracts. The Project Team should specify the use of EV(s) as well as the installation of designated medium-speed charger for each EV as a standard provision at the site accommodation in each public works contract.

5.6. Potential Air Quality Impact – Operation Phase

Vehicular Emissions from Open Road Traffic

5.6.1. The major air pollution source in the vicinity of the Subject Site during operational phase would be tailpipe emission generated from road traffic along open road.

5.6.2. The Subject Site is bounded by two roads, namely Road L7 facing to the south and Road D2 along its east. With reference to Roadworks and Noise Mitigation Measures Design Report under TCNTE (East) – Design and Construction and the respective Technical Note on Traffic Forecast for Environmental Impact Assessment for Planning Review for Population Increase and Development Intensity in TCNTE (East), Road L7 is classified as local distributor while Road D2 is classified as district distributor. In accordance with HKPSG, the buffer distance between the proposed residential towers and the nearby roads should be adopted, which are summarised in ***Table 5-7*** and presented in ***Figure 5.3***.

Vehicular Emissions from Public Transport Interchange

5.6.5. For the concurrent project of Planned Public Transport Interchange (PTI) will be located at Area 113 and Area 133B as shown in **Figure 5.4**. With reference to the approved TCNTE EIA (AEIAR-196/2016) and TCLE EIA (AEIAR-235/2022), the PTI would be decked under proposed Area 113 development. The proposed PTI at Area 113 is planned by other parties, any design, maintenance, and operating requirements stipulated in Practice Note for Professional Persons (ProPECC PN) 1/22 "Control of Air Pollution in Semi-Confined Public Transport Interchanges" relevant to any air quality impacts to its neighbouring developments shall be considered and addressed by other parties. The planned PTI at Area 133B will be designed with due consideration to the HKPSG as far as practicable. Besides, ProPECC PN 1/22 be followed as appropriate for designing and operating the PTI to meet the air quality guidelines inside the PTI. With the provision of implementing appropriate mitigation by the future operator, no adverse air quality impacts are anticipated.

Vehicular Emissions from Tunnel Portal and Ventilation Building

5.6.6. Other than vehicular emission along open roads, those emitted from the tunnel portals and ventilation buildings would also cause cumulative air quality impact. They are outside 500m assessment area as shown in ***Appendix 5.1*** and thus adverse air quality impact from these facilities are not anticipated.

Industrial Chimney Emissions

5.6.7. Based on desktop study and and site survey conducted on 29 Aug 2025, no existing chimney were found within 500m of the subject site. According to the Air Quality Impact Assessments Review for Population Increase and Development Intensity - CASE 2: Scenario 2A (Final) under TCNTE (East) – Design and Construction conducted in May 2021, no chimney is also planned within 500m of the subject site. Given the proposed development is for residential use, which is not environmental polluting in nature and does not have provision of chimney. Hence, no chimney emission will arise from the proposed development and no adverse air quality due to chimney emission is anticipated.

Odour Emission from the proposed Sewage Pumping Station

5.6.8. With reference to deliverable PI49 (Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – Case 2) of CEDD, the latest design of proposed Sewage Pumping Station (SPS) is located to the south of Application Site, with a separation distance of 27m from the building façade of the current development scheme. Given the mitigation measures stipulated in TCNTE EIA Report (AEIAR-196/2016) will be incorporated, including installation of de-odourisation system within the pump house, design exhaust outlets further away from sensitive receivers, and full enclosure of pumps within building. It is anticipated that with the implementation of appropriate mitigation measures, potential odour impact from the SPS to the proposed development could be properly controlled.

Marine Emission from the proposed Marina at TCE

5.6.9. According to TCNTE EIA report (AEIAR-196/2016), the proposed Marina is located outside 500m assessment of the proposed site as shown in ***Appendix 5.1***. No marine routing is identified within 500m assessment area. In view of large separation distance, no adverse air quality impacts are anticipated.

Marine Emission from Existing Local Vessels

5.6.10. Apart from proposed Marina at TCE, gaseous emission from the existing local vessels operating at the Tung Chung Pier for the transportation between Tuen Mun, Tung Chung, Sha Lo Wan and Tai O are observed to the west of project as shown in ***Appendix 5.1***. As these vessels are located outside 500m assessment area and thus no adverse air quality impact from existing local vessels is anticipated.

Air Quality Impact arising from the Proposed Development

5.6.11. The nature of the proposed development is not environmental polluting and it is primarily for residential use. Car parks will be provided at G/F and 1/F. The air quality inside the car park shall comply with the air pollutant standards as recommended by the ProPECC PN 2/96 Control of Air Pollution in Car Parks. Therefore, the mechanical ventilation system of car park shall be properly designed away not to encroach buffer zone of nearby roads. Furthermore, the exhaust outlet of the mechanical ventilation system of the carpark shall also be designed by facing away from the air sensitive uses to ensure not to cause a nuisance to the occupants/ residents of the air sensitive uses including the surrounding developments and the Proposed Development. The location of the exhaust outlet and fresh air intake of the mechanical

ventilation system is not available yet and will be provided at the detailed design stage. Impact from proposed car park shall be reviewed again during the later stage to ensure no adverse air quality impact to the nearby air sensitive uses.

5.7. Conclusions

5.7.1. With the implementation of dust suppression measures of the Proposed development and provision of good site practice as stipulated under the Air Pollution Control (Construction Dust) Regulation, Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation and Air Pollution Control (Fuel Restriction) Regulations, fugitive dust impacts and gaseous emission from diesel-fueled construction equipment and machinery to the nearby air sensitive receivers due to construction works are expected to be insignificant.

5.7.2. For vehicular emission, a sufficient horizontal buffer distance between Road L7 and Road D2 to the Application Site is proposed in accordance with the requirements set out in the HKPSG. No significant adverse air quality impact due to vehicular emission on the proposed development is anticipated.

5.7.3. In view of no chimney was identified within the assessment area, no air quality impact with respect to industrial chimney emission on the future domestic users in the proposed development is anticipated. The proposed development does not include any chimney provision, no adverse air quality impact from chimney emissions is expected on nearby sensitive receivers.

5.7.4. For odour emission, with the adoption of appropriate odour control measures as outlined in the TCNTE EIA report (AEIAR-196/2016) and commonly implemented in other sewage pumping stations in Hong Kong, no adverse air quality impact due to odour emission is anticipated from the proposed SPS at Area 132 on the Application Site.

5.7.5. For marine emission, given the proposed marina at TCE and the existing local vessels are located outside the 500m assessment area, no adverse air quality impact due to marine emissions is anticipated.

5.7.6. Given that the exhaust outlet of mechanical ventilation system of car parks will be carefully designed and located away from fresh air intakes of proposed development and nearby ASRs, no adverse air quality impact during operation phase is expected.

6. Noise Impact Assessment

6.1. Introduction

6.1.1. As observed, potential traffic noise, fixed noise, railway noise, helicopter noise and aircraft noise impact are identified upon the proposed development.

6.1.2. The potential traffic noise impact is mainly dominated by Road P1, Road D2, Road L7, North Lantau Highway, Cheung Tung Road and Shun Long Road within the assessment area, road traffic noise impact assessment is conducted to evaluate potential adverse noise impact arising from the carriageways in the vicinity of the Application Site (detailed in ***Section 6.3***).

6.1.3. Since the Application Site is surrounded by numerous residential and commercial buildings in its vicinity, potential fixed noise impact on the proposed development is envisaged. Therefore, fixed noise impact assessment has been conducted (detailed in ***Section 6.3.25***).

6.1.4. The following reports have been made reference for analysing the traffic noise, railway noise fixed noise, helicopter noise and aircraft noise impact within 300m assessment area of proposed development.

- Tung Chung Line Extension (TCLE) EIA report (AEIAR-235/2022)

- Tung Chung New Town Extension (TCNTE) EIA (AEIAR-196/2016).

- Hong Kong Housing Authority (HKHA) report "Public Housing Development at Tung Chung Area 133A, 133B and 133C Environmental Assessment Study Final Report"

- Deliverable PI49 (Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – Case 2) of CEDD

6.2. Design Strategy for Noise Consideration

6.2.1. General guidance is provided in the HKPSG and EPD's website on Innovative Noise Mitigation Designs and Measures to reduce noise exposure. These guidelines have been duly considered in the design layout of the Proposed development. **Table 6-1** below summarizes the design strategies adopted in the Proposed development.

6.3.4. This approach considers the worst-case scenario of 15 years from the tentative completion date (Year 2031) of the proposed development. For worst case scenario evaluation, the assessment year has been chosen to be Year 2046, which has the maximum forecasted traffic flow within the 15-year period, per the advice by the traffic engineer.

6.3.5. ***Appendix 6.1*** presents the predicted peak hour traffic flows and percentage of heavy vehicle of road carriageways within 300m assessment area from the Application Site for Year 2046, with Transport Department's no objection on such traffic forecast data supplemented as shown in ***Appendix 5.2***.

6.3.6. The procedure of "*Calculation of Road Traffic Noise*" adopted by U.K.'s Department of Transport was used to predict the hourly $L_{10(1\text{-hour})}$ noise levels generated from road traffic at selected representative NSRs. The predicted noise levels were compared to the noise standard set out in the HKPSG (i.e. $L_{10(1\text{-hour})}$ 70dB(A) for domestic use. Practicable noise mitigation measures have been recommended where necessary.

6.3.7. Low noise road surfacing (LNRS) is currently in place on North Lantau Highway and Shun Long Road and the extent of LNRS is shown in ***Figure 6.1***. It is considered in the assessment in both Base Scheme Scenario and Mitigated Scenario.

Noise Sensitive Receivers

6.3.8. Noise Sensitive Receivers (NSR) within the Proposed development have been selected to assess the road traffic noise impact to the noise sensitive uses. Assessment points for the residential blocks have been assigned to all openable windows for ventilation at all habitable rooms. All noise assessment points (NAPs) were taken at 1.2m above the floor level and 1m away from the façade of openable windows in rooms of sensitive uses.

6.3.9. Based on ***Appendix 3.1***, the management office is located on the G/F and will be provided with air conditioning without relying on openable window for ventilation. Therefore, the management office is not considered as NSR for assessment.

6.3.10. ***Figure 6.2*** shows the location of the selected NSRs for traffic noise impact assessment.

Assessment Result Under Based Scheme Scenario (Scenario 1)

6.3.11. The road traffic noise prediction results indicate that the residential units are likely to be exposed to traffic noise levels exceeding the HKPSG traffic noise criterion of 70 dB(A). The predicted noise levels at all the NAPS at different levels under this "Base Scheme Scenario" (Scenario 1) are shown in ***Appendix 6.2***. Summary of traffic noise prediction results is shown in **Table 6-2.** Residential flats facing Road L7 are anticipated to be the worst-affected locations.

6.3.12. Under the "Base Scheme Scenario" (Scenario 1), 52% of residential flats of the proposed development will be subjected to noise levels within the stipulated noise limit of 70 dB (A). The remaining flats will be subjected to noise levels higher than 70 dB (A), in the range of 71-74dB(A). The results of the assessment have indicated that the highest predicted noise level is 72 dB(A) for Tower 1 and 74 dB(A) for Tower 2.

6.3.13. **Table 6-2** summarizes the results of the traffic noise assessment under "Base Scheme Scenario" (Scenario 1). Predicted noise levels at the representative NSRs are presented in ***Appendix 6.2***.

Table 6-2 Traffic Noise Prediction Results, Base Scheme Scenario

	Residential Towers		
	Tower 1	**Tower 2**	**Overall**
Maximum Predicted Traffic Noise Level, $L_{10,peak\ hr}$ in dB(A)	72	74	74
Noise Criteria $L_{10,1\ hr}$ in dB(A)	70	70	NA
Total No. of Units	216	216	432
Total No. of Units Exceed Traffic Noise Criteria	74	135	209
Percentage of Compliance	66%	38%	52%

6.3.19. Each BAW comprises of two layers of window, i.e. typical window at outer layer and sliding glazing at inner layer. While the prescriptive requirements of ventilation openings under Building (Planning) Regulations can be met by an unobstructed opening that allows air flow, noise reduction is achieved when the opening is obstructed by sliding glazing. The noise reduction performance shall be further enhanced by locating the opening of the outer layer of window away from dominant noise sources.

6.3.20. Optimal noise reduction performance of BAW would be considered when location of openable window and fixed glazing at outer layer is arranged in favourable setting. Openable window at outer layer are arranged further apart from dominant noise source, while fixed glazing is closer to the dominant noise source in general. In case there is a noise barrier structure, e.g. architectural fin, screening the openable window from noise source, openable window is arranged adjacent to the barrier structure.

6.3.21. For living rooms, bedrooms and master bedrooms with predicted traffic noise exceedance, BAW are proposed designed in accordance with EPD's "Practice Note on Application of INNOVATIVE NOISE MITIGATION DESIGNS in Planning Private Residential Developments against Road Traffic Noise Impact" as detailed in **Table 6-4** and **Table 6-5**.

6.3.22. To ensure the noise reduction performance of the acoustic window BAW, only one window opening with the acoustic window design will be allowed in each habitable room. This design arrangement is strictly followed. The openable window is well-gasketed with at least 6mm thick window panel.

Table 6-4 BAW (Configuration 1) and Living Room

Parameters	**PN BAW2 w/o SAM**	**Proposed development (Living Room)**
Size of Room [1] (m^2)	18	20
Maximum relative noise reduction required (dB(A))	/	2.8
Noise reduction adopted (dB(A))	7	7
Required Opening Area [2] (m^2)	/	1.11
Opening Area Provided [3], (W) x (H) = Area (m and m^2)	/	Subject to detailed design stage
Acoustic Window Height (m)	1.5	
Gap Width (mm)	100 - 175	
Overlapping Length [4] (mm)	100	
Outer Opening Dimensions (W) x (H) = Area (m and m^2)	0.75 x 1.5 = 1.125	
Inner Opening Dimensions (W) x (H) = Area (m and m^2)	0.75 x 1.5 = 1.125	
Absorption Lining [5]	No	

Notes:
[1] Size of room in terms of Usable Floor Area (UFA) of subject room, excluding area of enclosed kitchens or toilets
[2] Size of opening required to satisfy ventilation requirement under Building Regulations, this area excludes area occupied by window frames.
[3] Opening when inner and outer opening aligned, i.e. the minimum of inner and outer opening area in above acoustic window (baffle type) configurations.
[4] Overlapping length of exterior and interior glazing measured from centres of aluminium frames (standard aluminium frame size of 50mm).
[5] Absorption Lining: on 3 sides of window frame (Top, Left and Right), with 30mm thick acoustic infill, rock wool, wrapped in sound transparent membrane in perforated casing of minimum 23% perforation. NRC 0.7 or above

Table 6-5 BAW (Configuration 2), Master Bedroom and Bedroom

Parameters	PN BAW1 w/o SAM	Proposed development (Master Bedroom)	Proposed development (Bedroom)
Size of Room [1] (m^2)	8	7.1	4.9
Maximum relative noise reduction required (dB(A))	/	3.6	3.1
Noise reduction adopted (dB(A))	6	5.5	3.9
Required Opening Area [2] (m^2)	/	0.45	0.31
Opening Area Provided [3], (W) x (H) = Area (m and m^2)	/	Subject to detailed design stage	Subject to detailed design stage
Acoustic Window Height (m)	0.87		
Gap Width (mm)	100 - 175		
Overlapping Length [4] (mm)	100		
Outer Opening Dimensions (W) x (H) = Area (m and m^2)	0.6 x 0.87 = 0.522		
Inner Opening Dimensions (W) x (H) = Area (m and m^2)	0.58 x 0.87 = 0.5046		
Absorption Lining [5]	No		

Notes:
[1] Size of room in terms of Usable Floor Area (UFA) of subject room, excluding area of enclosed kitchens or toilets
[2] Size of opening required to satisfy ventilation requirement under Building Regulations, this area excludes area occupied by window frames.
[3] Opening when inner and outer opening aligned, i.e. the minimum of inner and outer opening area in above acoustic window (baffle type) configurations.
[4] Overlapping length of exterior and interior glazing measured from centres of aluminium frames (standard aluminium frame size of 50mm).
[5] Absorption Lining: on 3 sides of window frame (Top, Left and Right), with 30mm thick acoustic infill, rock wool, wrapped in sound transparent membrane in perforated casing of minimum 23% perforation. NRC 0.7 or above

Assessment Result under Mitigated Scenario (Scenario 2)

6.3.23. The details of the noise mitigation measures adopted in the scenarios for road traffic noise impact assessment are tabulated in **Table 6-6**. The road traffic noise prediction results for mitigated scenario are shown in **Table 6-7**. The predicted noise levels are provided in **Appendix 6.3**.

Table 6-6 Noise Mitigation Measures Adopted in the Scenarios

	Scenarios	
	Base Scheme (Scenario 1)	Mitigated Scenario (Scenario 2)
Existing Low Noise Surfacing	Adopted	Adopted
Building Layout	Adopted	Adopted
Podium	Adopted	Adopted
Vertical Architectural Fins	-	Adopted
BAW	-	Adopted

Table 6-7 Traffic Noise Prediction Result

	Tower 1	**Tower 2**	**Overall**
Total No. of Units: 432	216	216	432
Scenario 1: Base Scheme			
Max. predicted traffic noise level ($L_{10\,(1hour)}$, dB(A))	72	74	74
Total No. of NSRs exposed to noise level > 70dB(A) $_{L10\,(1hour)}$	74	135	209
Percentage of Compliance	66%	38%	52%
Scenario 2: Mitigated Scenario			
Max. predicted traffic noise level ($L_{10\,(1hour)}$, dB(A))	70	70	70
Total No. of NSRs exposed to noise level > 70dB(A) $_{L10\,(1hour)}$	0	0	0
Percentage of Compliance	100%	100%	100%

Table 6-8 Area Sensitivity Ratings (ASRs) of NSRs

Type of Area Containing NSR	Degree to which NSR is affected by Influencing Factors (IFs)		
	Not affected	Indirectly affected	Directly affected
I. Rural area, including country parks, or village type developments	A	B	B
II. Low density residential area consisting of low-rise or isolated high-rise developments	A	B	C
III. Urban area	B	C	C
IV. Area other than those above	B	B	C

Table 6-9 Acceptable Noise Level for Fixed Noise Sources

Time Period	ANL, dB(A)		
	ASR "A"	ASR "B"	ASR "C"
Day (0700 to 1900 hours)	60	65	70
Evening (1900 to 2300 hours)	60	65	70
Night (2300 to 0700 hours)	50	55	60

6.4.5. The site is planned for high-rise residential development, it is surrounded by planned residential developments in TCNTE (East). The types of area (i) rural area; (ii) low density residential area consisting of low-rise or isolated high-rise developments and (iii) urban area according to IND-TM cannot reflect the future environs of the subject site and are all not applicable. Thus, the whole site shall fall into type (iv) "Area other than those above" according to IND-TM.

6.4.6. Review of the Annual Traffic Census (ATC) for Year 2023, indicated that North Lantau Highway had an AADT of 41,340, which is considered as an Influencing Factor (IF) under the IND-TM. All façades of Tower 1 except the south east façade will not have line of sight to the North Lantau Highway and therefore considered to be not affected by the IF. An ASR of B is assigned. The ANL for "B" should be 65 dB(A) and 55 dB(A) for daytime and night-time respectively. As the south east façade of Tower 1 will be exposed to IF as shown in **Figures 6.4a to 6.4c.** The corresponding ANLs should be 70 dB(A) and 60 dB(A) for daytime and night-time respectively.

Sports Ground

6.4.12. Noise sources of sports ground including the operation of the facility and PA system during daytime and evening time operation. With reference to the approved TCNTE EIA (AEIAR-196/2016), it was recommended to incorporate measures for the PA system and/ or the sound amplification system, if used during the outdoor noise activities. The recommended measures include the adoption of a cluster of small power loudspeakers instead of a few large power loudspeakers, adoption of directional loudspeakers with orientation to point away from the nearby NSRs; and the inclusion of a "Limiter" device in the system to set the upper bound of the output sound level. Besides, as concluded in the TCNTE EIA, the sports ground is a DP under Item O.7 of Schedule 2 of Technical Memorandum on the Environmental Impact Assessment Process, a separate EIA study would be required to be conducted by the future operator to fulfil all the statutory requirements and procedures under the EIAO. Any potential environmental noise impacts caused by the planned sports ground shall be addressed in the respective future EIA and mitigated by appropriate at source mitigation measures where necessary to ensure no noise exceedance at all nearby sensitive receivers including the proposed development.

Representative NAP for Fixed Noise Impact Assessment

6.4.13. Representative NAPs with short separation distance from different potential noise sources are selected within the proposed development and are shown in **Figure 6.4**.

Potential Fixed Noise Impact on the Proposed Development

6.4.14. The summary of the predicted fixed plant noise level is tabulated in **Table 6-11**. Detailed calculation of fixed noise impact assessment is presented in **Appendix 6.5**.

6.4.15. The maximum predicted fixed noise levels for representative NAP at Tower 1 during daytime/ evening time are up to 51dB(A), whilst for the night-time period, it is 47dB(A). Therefore, the assessment criteria for fixed noise levels are 65dB(A) and 55 dB(A) for day/ evening time and night time periods can be complied with.

6.4.16. The maximum predicted fixed noise levels for representative NAPs at Tower 2 during daytime/ evening time are up to 57dB(A), whilst for the night-time period, it is 44dB(A). Therefore, the assessment criteria for fixed noise levels are 70dB(A) and 60dB(A) for day/ evening time and night time periods can be compiled with.

Review of Potential Rail Noise Impact

6.5.4. The TCLE is a Designated Project under the EIAO. An EIA was conducted and approved under the EIAO on 12 July 2022 (AEIAR-235/2022).

6.5.5. The planned TCLE are located at about 170m to the south of the subject site as shown in **Figure 5.2**. The committed commercial development at Area 129 and 130, G/IC developments at Area 131, 132, 136 and 137 are located between the railway and the subject site. Shielding can be provided by these developments.

6.5.6. With reference to the approved TCLE EIA (AEIAR-235/2022), rail noise impact assessment was conducted. The railway noise contours of $L_{eq\ (30min)}$ / L_{max} at 7.2mPD, 15mPD and 30mPD are extracted and reviewed as shown in **Appendix 6.6**.

6.5.7. For daytime criteria, LA_{eq} 65dB and 70dB for ASR of "B" and "C" is adopted for Tower 1 and Tower 2. With reference to the predicted railway noise levels at 7.2mPD, 15mPD and 30mPD from TCLE EIA report in **Appendix 6.6 (daytime)**, the worst affected Southeast façade of Tower 2 is assigned with ASR of "C" and fall into the contour of LA_{eq} 55dB. The corrected noise level of this contour line shall refer LA_{eq} 57.5dB which has taken the 2.5dB façade correction into consideration. It is thus anticipated that the predicted noise levels at all the units at Tower 1 and Tower 2 are below the criteria of LA_{eq} 65dB and 70dB in view of the predicted railway noise level at the worst affected façade in the application site is below 57.5 dB, the rail noise impact during daytime could comply with the noise standard of HKPSG.

6.5.8. The night criterion of ASR "C" in Tower 1 and Tower 2 is LA_{eq} 60dB. With reference to the predicted railway noise levels at 7.2mPD, 15mPD and 30mPD from TCLE EIA report in **Appendix 6.6 (night-time)**, the worst affected Southeast façade of Tower 2 fall into the contour of LA_{eq} 55dB. The corrected noise level of this contour line shall refer to LA_{eq} 57.5dB which has taken the 2.5dB façade correction into consideration. The predicted noise level of the worst affected ASR "C" in the proposed development is below the criterion of LA_{eq} 60dB, the rail noise impact during night-time could comply with the noise standard of HKPSG.

6.5.9. The night criterion of ASR "B" in Tower 1 and Tower 2 is LA_{eq} 55dB. With reference to the railway noise contours given in the TCLE EIA report in **Appendix 6.6 (night-time),** the worst affected façade assigned with ASR "B" would be southwest façade of Tower 1. The contours demonstrated that the said façade is fall beyond the contour for LA_{eq} 55 dB (corrected LA_{eq} 57.5 dB). In order to demonstrate the full compliance of 55 dB(A) for rooms with ASR of "B" for nighttime, further review is conducted by making reference to railway noise impact assessment conducted for Area 133C in the approved EIA Report AEIAR-196/2016 for Tung

Chung New Town Extension which is of similar separation distance and view angle to railway.

6.5.10. Railway noise impact assessment was conducted for Area 133C, which is in the immediate west to the Proposed Development, including the potential railway noise impact on the façade of NAP "C2-1-03". "NAP "C2-1-03" is considered comparable to NAP "T1-O33" and "T2-O19" within the Application Site which are considered as the worst affected NAPs having the most stringent noise criteria for ASR of "B" and shortest separation distance. The NAP "C2-1-03" is assigned with ASR "B", and has no direct angle of view to rail track with a separation distance to the nearest rail track of approximately 180m, the unmitigated predicted noise levels for day and night time are LA_{eq} 49-55 dB for openings up to 33F (100.6mPD) which could comply with the railway noise criteria of HKPSG. The NAPs of ASR "B" in Tower 1 and Tower 2 (NAP T1-O33 and T2-O19) have a minimum separation distance of 176m and the angle of view are either blocked by the buildings in Area 129 and Area 130 or blocked by the façade of Tower 1 or Tower 2. The NAPs of ASR "B" in the proposed development have the tilted vision to the railway tracks and are screened by full height architectural fins in T1-O33 and T2-O19 as noise mitigation measures in **Figure 6.3**. Given the similar angle of view and similar separation distance from the rail track in the Proposed Development and NAP "C2-1-03" of EIA Report AEIAR-196/2016, and the additional architectural fins, the railway noise impact of NAPs of ASR "B" in Tower 1 and Tower 2 shall comply with the night-time criterion of LA_{eq} 55dB.

6.5.11. With reference to the predicted railway noise levels at 7.2mPD, 15mPD and 30mPD from TCLE EIA report in **Appendix 6.6 (L_{max})**, the distance from rail track to the contour line of LA_{max} 85dB is 25m, while the distance between the project site and the rail track is 170m. According to acoustic principles, the sound pressure level will decay by 3dB per doubling the distance of a line source. The sound pressure level is assumed to decay by 8dB from 25m to 170m separation. Thus, the rail noise impact of LA_{max} 85dB could comply with the noise standard of HKPSG.

6.5.12. Therefore, potential rail noise impact is not anticipated on the current scheme.

Conclusions

6.5.13. Potential railway noise impact on the proposed development has been assessed. According to the railway noise impact assessment result from TCLE EIA report (AEIAR-235/2022) and Tung Chung New Town Extension EIA Report (AEIAR-196/2016), the proposed development would not subject to significant adverse railway noise impact on the current scheme. The railway noise impact will be reviewed again in the detailed design stage.

6.6. Review on Helicopter Noise Assessment

Introduction

6.6.1. Helicopter noise assesment is prepared to assess the potential helicopter noise impact on the noise sensitive uses of the proposed development and recommend mitigation measures where practicable to attenuate the noise impact, if any. Helicopter noise will be generated during manoeuvring over the helipad and during lateral (approach/departure) flight. With reference to the TCNTE EIA Report (AEIAR- 196/2016), potential helicopter noise impacts are anticipated due to Government Flying Services (GFS) and business helicopter operations.

Assessment Criteria

6.6.2. In accordance with the HKPSG, a helipad should not be located in such a way that the daytime (07:00- 19:00 hours) maximum noise levels at sensitive uses will be exceeded.

Table 6-13 Daytime Helicopter Noise Assessment Criteria

Uses	Assessment Criteria Lmax, dB(A)
All domestic premises	85
Hotels and Hostels	85
Offices	90
Educational institutions including kindergartens, nurseries and all others where unaided voice communication is required	85
Places of public worship and courts of law	85
Hospitals, clinics, convalescences and homes for the aged, diagnostic rooms, wards	85

Evaluation of Potential Helicopter Noise Impact

6.6.3. For the area in Tung Chung in particular, the helicopters operated by both Government Flying Services (GFS) and commercial company would be using the airspace in the vicinity. GFS has a headquarters within the Hong Kong International Airport (HKIA) and its helicopters serve both routine and emergency services. According to the information given in the TCNTE EIA report, all the routine services (including flying support for all bureau and departments) would be conducted during daytime period only while emergency services (including air ambulance, Search & Rescue (SAR), supporting law enforcement agencies, fire fighting) have to be conducted on an as-required basis to suit actual circumstances.

6.6.4. Hong Kong Business Aviation Centre (HKBAC) is a helicopter landing services company providing a facility for commercial helicopters to use. According to the TCNTE EIA report, there had only been 2 flight events between HKIA and Macau, and another 2 flights between HKIA and Kowloon during daytime period.

6.6.5. GFS and HKBAC are located at the south-western of the Hong Kong International Airport (HKIA). The separation distances from the GFS and HKBAC to the nearest NSR (T1-O03) are 5.5km and 5.2km respectively as shown in **Figure 6.7**. Noise impact generated from helicopter approaching, take-off and manoeuvring are not anticipated.

6.6.6. The helicopter holding areas are identified which may generate helicopter noise by flyover mode as shown in ***Table 6-14*** and ***Appendix 6.7***. The flight paths extracted from TCNTE EIA report are given in ***Appendix 6.7*** and ***Figure 6.6***.

Table 6-14 Location of Helicopter Holding Areas

ID	Location
H5	Pak Mong
H6	Cathay City
H7	Freight Centre
H10	Tung Chung Bay

6.6.7. According to the helicopter noise assessment in the TCNTE EIA report, the first layer of NSRs within 130m horizontal to the helicopter flight path are identified for assessment and results demonstrated that the maximum predicted noise levels at the identified NSRs ranged from 79 - 81 dB(A), which is below the assessment criteria of L_{max} 85dB(A).

6.6.8. For the application site, the shortest separation distance from the flight path is maintained at 290m (i.e. NAP T2-O12). It is anticipated that the application site is not exposed to helicopter noise impact and no mitigation measures are required.

Conclusions

6.6.9. Potential helicopter noise impact on the proposed development has been reviewed. According to the helicopter noise impact assessment result from TCNTE EIA report (AEIAR-196/2016), the proposed development would not subject to significant adverse helicopter noise impact on the current scheme and no mitigation measures are proposed.

6.7. Review on Aircraft Noise Assessment

Introduction

6.7.1. Aircraft noise assessment is prepared to assess the potential aircraft noise impact on the noise sensitive uses of the proposed development and recommend mitigation measures where practicable to attenuate the noise impact, if any. Hong Kong International Airport is located to the northwest of the application site. The minimum separation distance from the southern runway and the nearest NSR is 3,071m (NSR T1-O08) as shown in ***Figure 6.7***.

Assessment Criteria

6.7.2. In accordance with the HKPSG, NSRs relying on opened windows for ventilation should be planned beyond the NEF25 contour, except for offices which should be beyond the NEF30 contour, as shown in ***Table 6-15***.

Table 6-15 Assessment Criteria for Aircraft Noise

Uses	Aircraft Noise (Noise Exposure Forecast : NEF)
All domestic premises	25
Hotels and Hostels	25
Offices	30
Educational institutions including kindergartens, nurseries and all others where unaided voice communication is required	25
Places of public worship and courts of law	25
Hospitals, clinics, convalescences and homes for the aged, diagnostic rooms, wards	25

Evaluation of Potential Aircraft Noise Impact

6.7.3. Based on the NEF results from approved EIA report TCNTE (AEIAR-196/2016), the predicted NEF 25 contours of the 3 Runway System (3RS) for year 2030 and 2032 would be away from the boundary of TCE upon the full commissioning of the 3RS in year 2024. The relevant contours are given in ***Appendix 6.8***. The boundary of the application site will be away from the predicted NEF 25 contours under the operation of 3RS. Adverse aircraft noise impact is therefore not anticipated. No mitigation measures are required.

Conclusion

6.7.4. Potential aircraft noise impact on the proposed development has been reviewed. According to the aircraft noise impact assessment result from TCNTE EIA report (AEIAR-196/2016), the proposed development would not subject to significant adverse aircraft noise impact on the current scheme and no mitigation measures are proposed.

Table 9-1 Summary of Construction Waste Generated

Type of Waste	Total Waste Generation Quantity	On-Site Reused Quantity	Handling Arrangement and Outlets	Remark
Inert C&D Materials [1]	7,131 m^3	1,426m^3 (assume 20% of reusable rate)	Delivered to the public fill reception facilities	With reference to "A Guide for Managing and Minimizing Building and Demolition Waste" published by the Hong Kong Polytechnic University in May 2001, the construction waste generation rate for Housing Projects in Hong Kong is 0.250m^3/m^2 GFA (including non-inert C&D materials (or C&D wastes)). According to Hong Kong Waste Statistics for 2023, a total of 90% of construction waste generated will be used as public fill. (65% of C&D waste was delivered to public fill reception facilities, while 25% of C&D waste was transferred to other projects for direct reuse) Tentative GFA = 31,694 m^2. Inert C&D Waste Generation Index: = 0.9 × 0.250 m^3/m^2 GFA = 0.225m^3/m^2 GFA Total Quantity = Inert C&D waste index × GFA = 0.225 × 31,694
Non-inert C&D Materials (or C&D waste) Generated [2]	713m^3	Recycled and reused as much as practicable	Disposed of at the landfill	With reference to "A Guide for Managing and Minimizing Building and Demolition Waste," published by the Hong Kong Polytechnic University in May 2001, the construction waste generation rate for Housing Projects in Hong Kong is 0.250 m^3/m^2 GFA (including non-inert C&D materials (or C&D wastes)). According to Hong Kong Waste Statistics for 2023, 9% of C&D waste was disposed of at landfill. Tentative GFA: 31,694 m^2 Non-inert C&D Waste Generation Index: = 0.09 × 0.250 m^3/m^2 GFA = 0.0225m^3/m^2 GFA Total Quantity = Non-inert C&D waste index × GFA = 0.0225 × 31,694
Chemical Waste[3]	few cubic metres per month	-	Collected by licensed collector for the disposal of at licensed treatment facilities (e.g. Chemical Waste Treatment Centre (CWTC) at Tsing Yi)	Advised by project team
General Refuse from Workforce[4]	74 kg/day	Recycled as much as Practicable	Disposed of at the landfill	Assumed maximum of 135 workers working simultaneously at the Application Site. According to Hong Kong Waste Statistics for 2023, the generation rate of industrial and commercial waste is 0.55 kg/person/day

Note:
[1] Includes, but not limited to excavated soil, broken concrete, granular materials etc.
[2] Includes, but not limited to, bamboo, timber, paper and plastic, etc.
[3] Includes, but not limited to, scrap batteries or acid/alkali from construction plant maintenance activities; used paints, engine oils, hydraulic fluids and waste fuel, etc.
[4] Includes, but not limited to, food waste, aluminum cans, waste paper, etc.

General Refuse

9.4.8. Recycling bins should also be placed to encourage recycling. Enclosed and covered areas should be provided for general refuse collection to prevent waste materials from being blown around by the wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problem. Also, routine cleaning for these areas should be implemented to keep areas clean, so that intentional or accidental release into the surrounding environment does not occur without proper management.

9.4.9. With the implementation of good waste management practices at the Site, and the abovementioned mitigation measures at the Application Site, adverse environmental impacts are not expected to arise from the storage, handling and transportation of C&D materials, chemical waste and general refuse generated during construction phase.

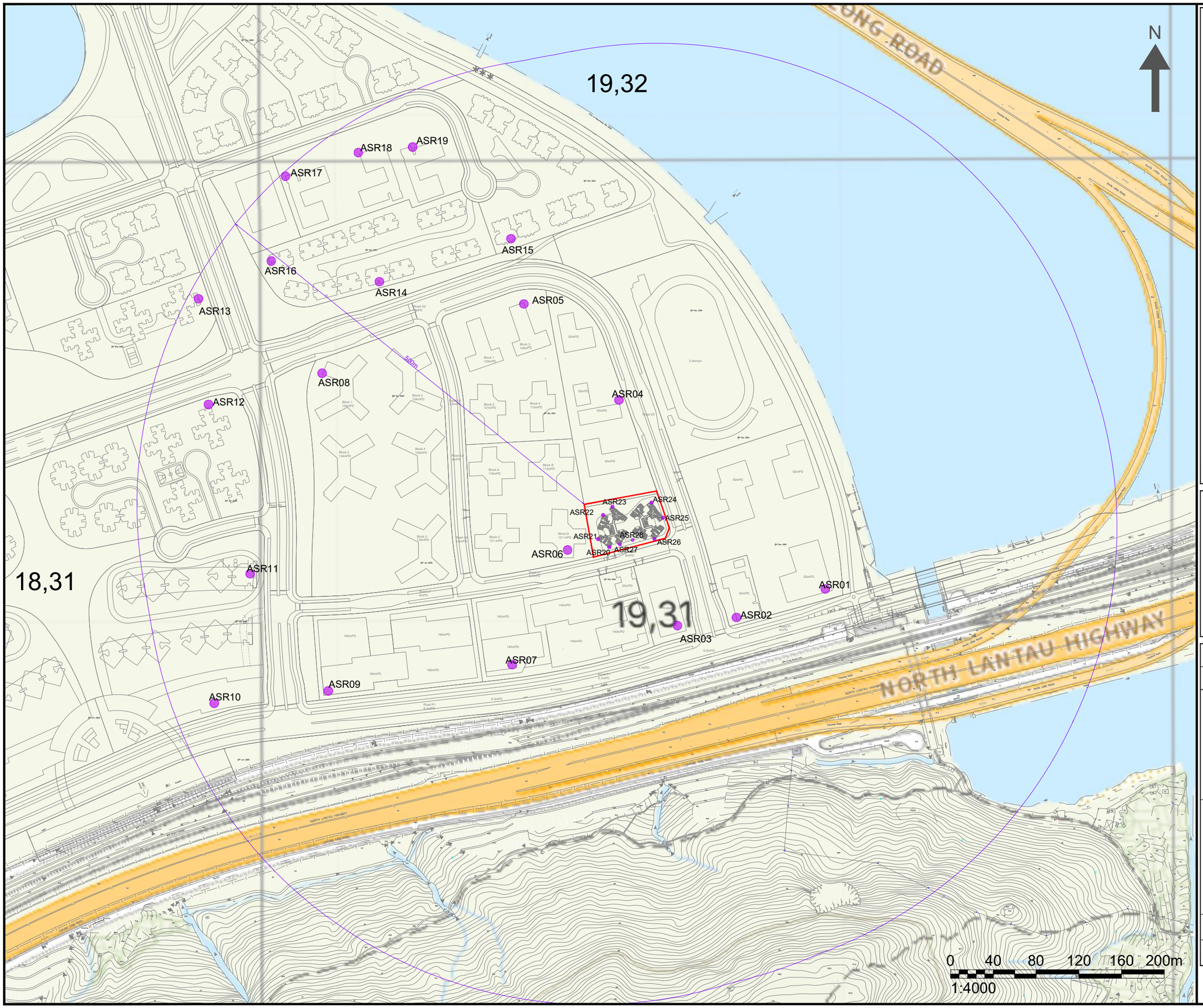
9.5. Potential Impacts and Mitigation Measures during Operation Phase

General Refuse

9.5.1. The major type of waste generated from the operation phase is general refuse. With reference to *Monitoring of Solid Waste in Hong Kong - Waste* Statistics *for 2023* by EPD, the disposal rate of domestic waste was 0.89 kg/person/day. The estimated quantities of general refuse anticipated will be 1,040.4 kg/day (0.89 kg/person/day x 1,169 residents).

9.5.2. General refuse will be removed on regular basis to minimize odour, pest and litter impacts. To promote the recycling of waste paper, aluminium cans and plastic bottles, the 3-coloured waste separation bins for the collection of recyclable municipal waste will be clearly labelled and placed at convenient locations. The recyclable materials will then be collected by reliable waste recycling agents on a regular basis. Waste generated will be disposed of at government waste disposal facilities such as WENT Landfill in Nim Man. Hence, adverse waste management implication is not anticipated during the operation phase.

9.5.3. Food waste is the main source of generating unpleasant odour and causing environmental hygiene concerns during operation phase. The Project Team will explore the feasibility of providing separate recycling bins for food waste to facilitate the recycling of food waste on-site or off-site in a hygienic manner in detailed design stage. The collected food waste will be disposed of at Organic Resources Recovery Centre (ORRC).



NOTES :

Subject Site

500m assessment area

Air Senstive Receiver (ASR)

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF AIR SENSITIVE RECEIVERS (ASRs)

Drawing No : FIGURE 5.1	Revision : 2
Scale : AS SHOWN	Date : OCT 2025

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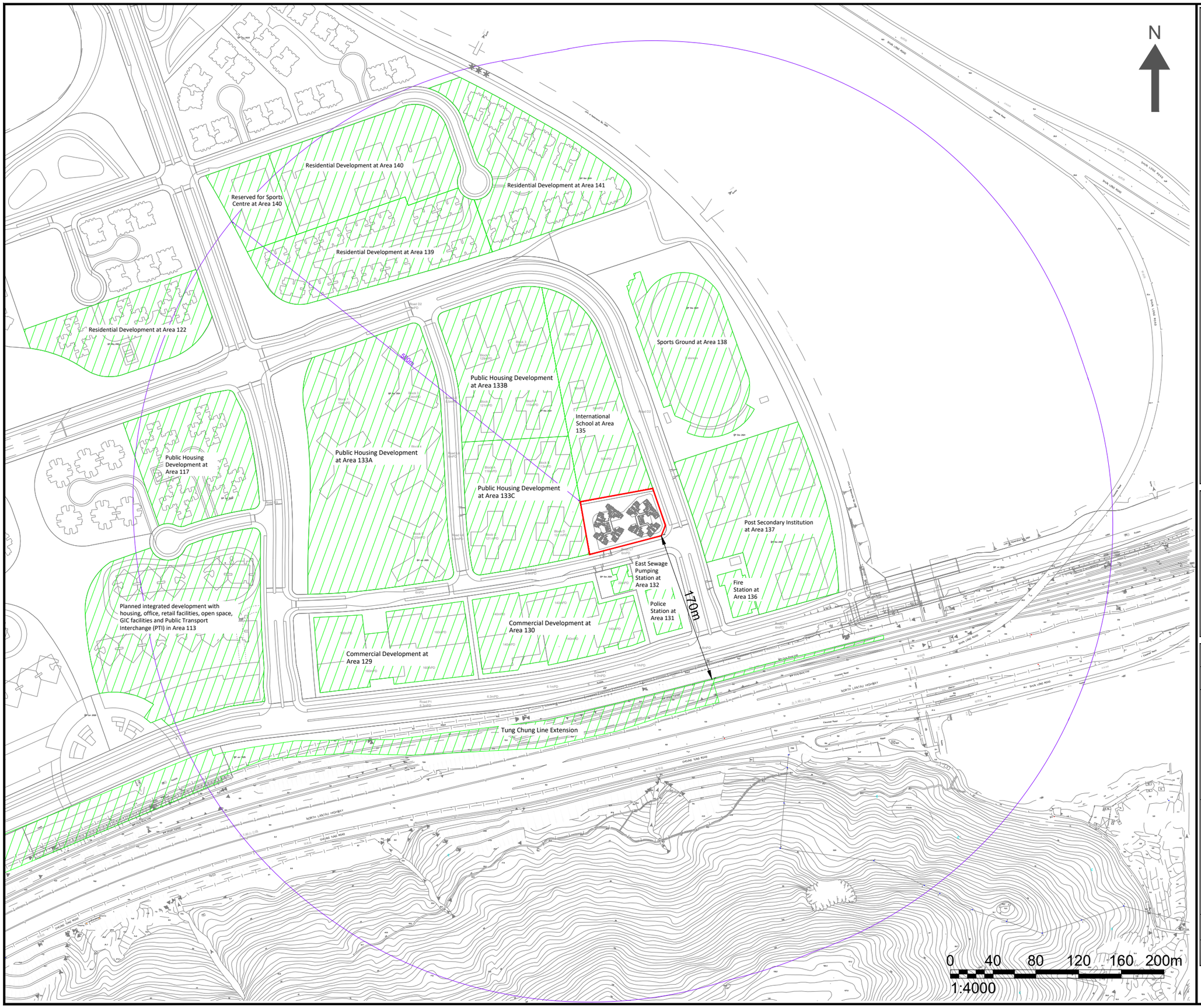

NOTES :

Subject Site

Concurrent Projects

500m assessment area

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :
S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :
LOCATION OF CONCURRENT PROJECTS

Drawing No : FIGURE 5.2	Revision : 1
Scale : AS SHOWN	Date : AUG 2025

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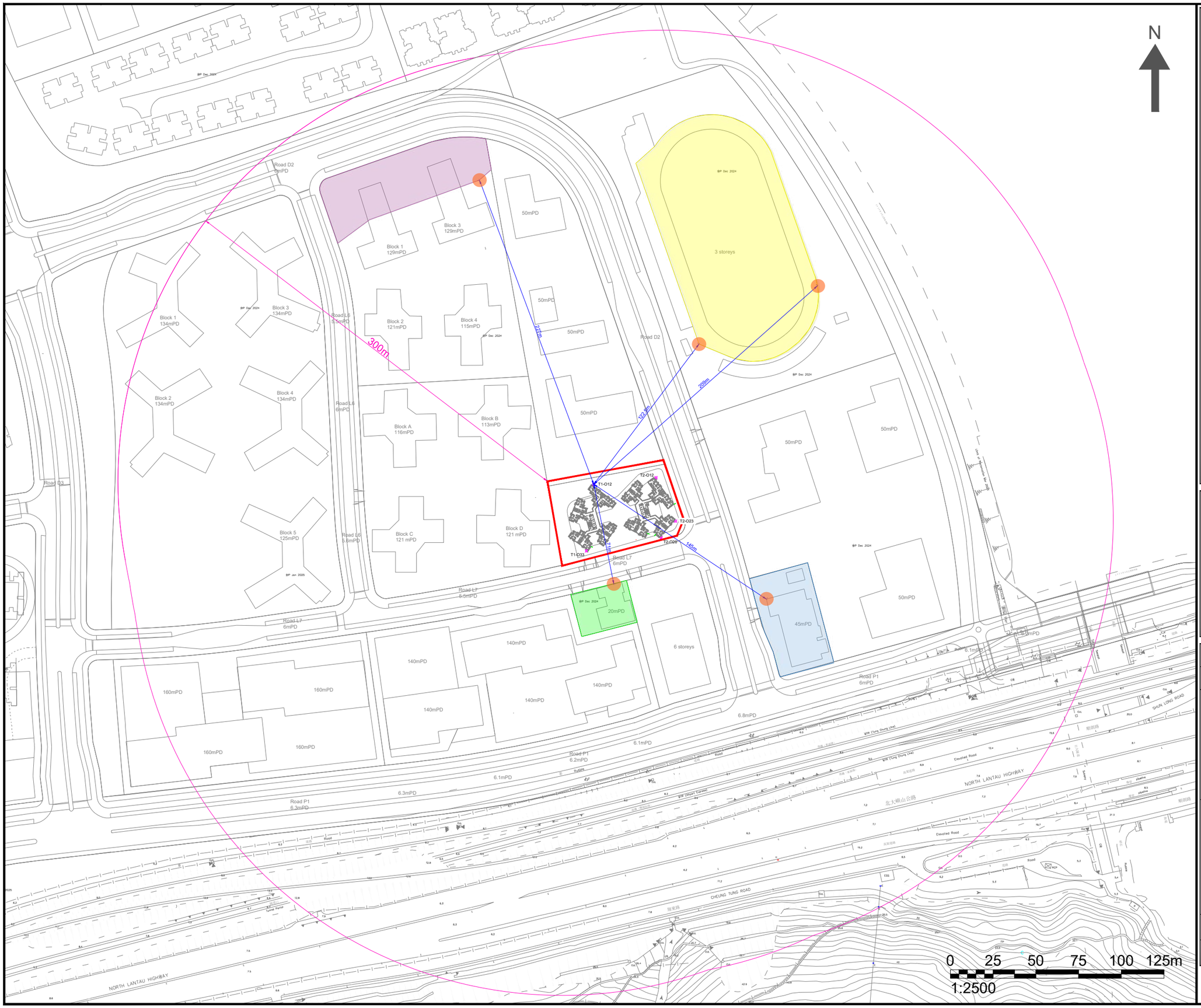

NOTES :

- Subject Site
- 300m asssessment area
- Sports Ground (Area 138)
- Fire Station (Area 136)
- Eastern Sewage Pumping Station (Area 132)
- Public Transport Interchange (PT1) (Area 133B)
- Noise Sensitive Receiver (NSR)
- Architectural fins
- Noise Assessment Point of Fixed Noise sources

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PLANNED FIXED NOISE SOURCES

Drawing No : FIGURE 6.5a	Revision : 1
Scale : AS SHOWN	Date : AUG 2025

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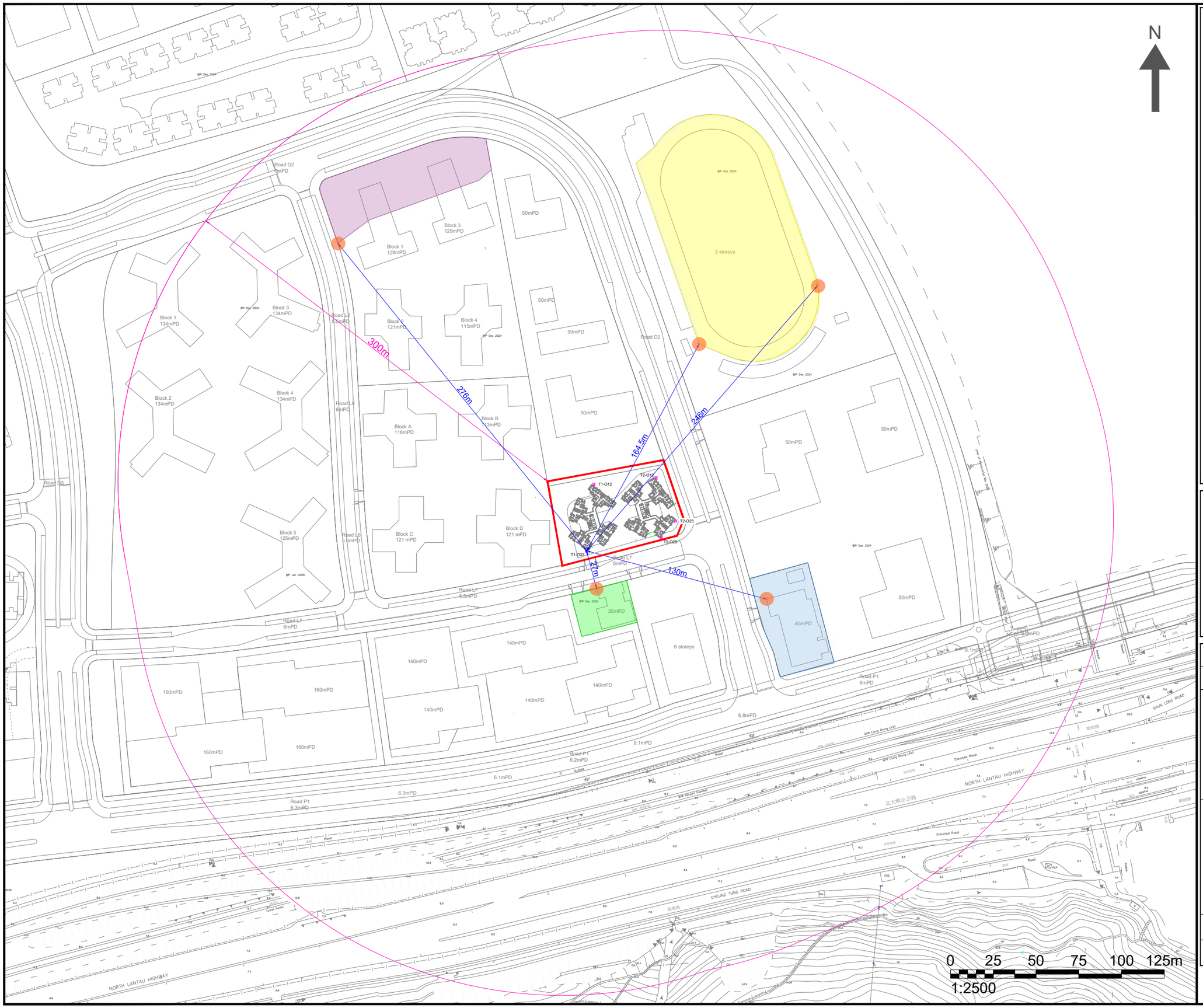

NOTES :

- Subject Site
- 300m asssessment area
- Sports Ground (Area 138)
- Fire Station (Area 136)
- Eastern Sewage Pumping Station (Area 132)
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- Noise Assessment Point of Fixed Noise sources

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Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PLANNED FIXED NOISE SOURCES

Drawing No : FIGURE 6.5b	Revision : 1
Scale : AS SHOWN	Date : AUG 2025

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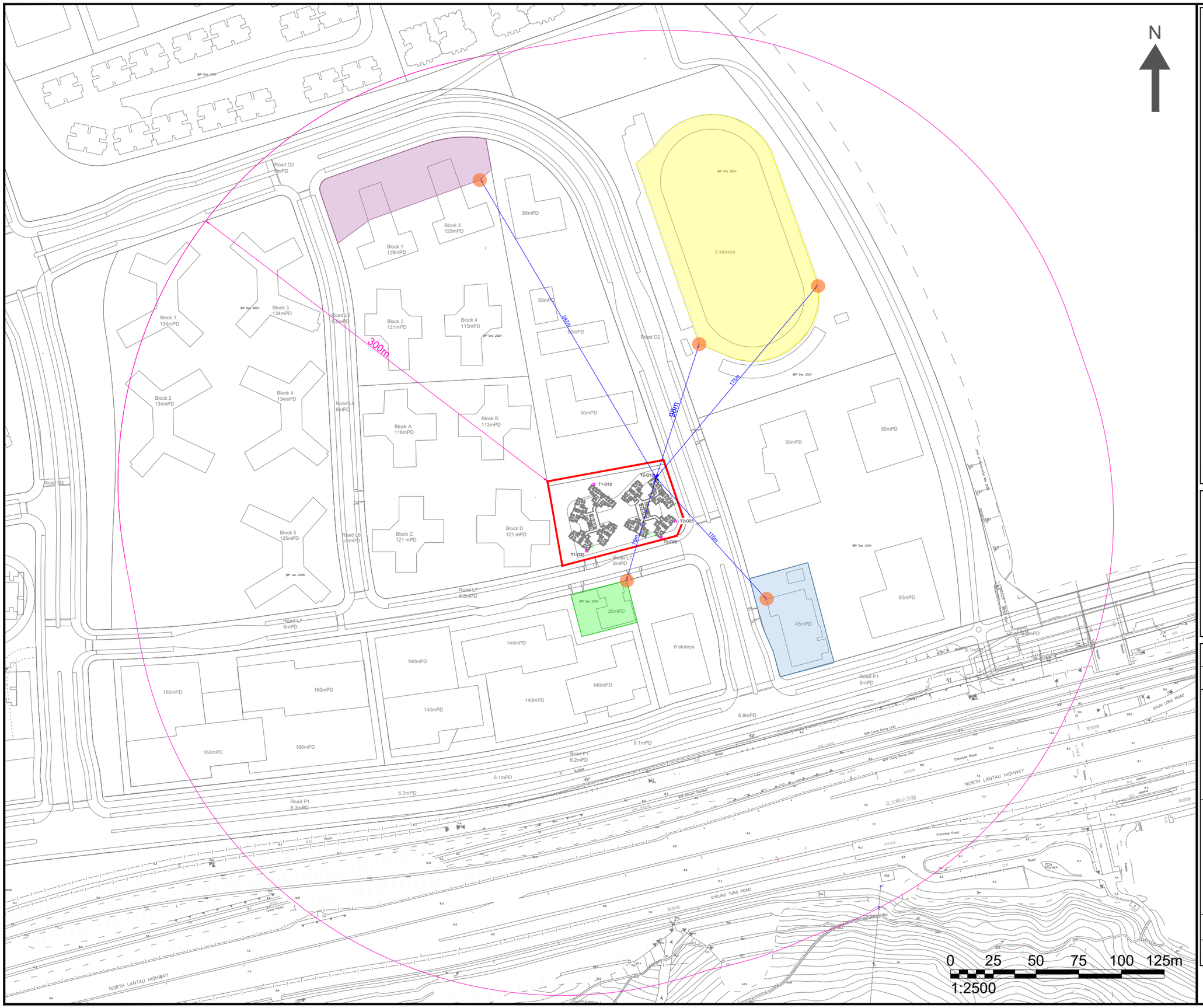

NOTES :

- Subject Site
- 300m asssessment area
- Sports Ground (Area 138)
- Fire Station (Area 136)
- Eastern Sewage Pumping Station (Area 132)
- Public Transport Interchange (PT1) (Area 133B)
- Noise Sensitive Receiver (NSR)
- Architectural fins
- Noise Assessment Point of Fixed Noise sources

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PLANNED FIXED NOISE SOURCES

Drawing No : FIGURE 6.5c	Revision : 1
Scale : AS SHOWN	Date : AUG 2025

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A3 420 x 297

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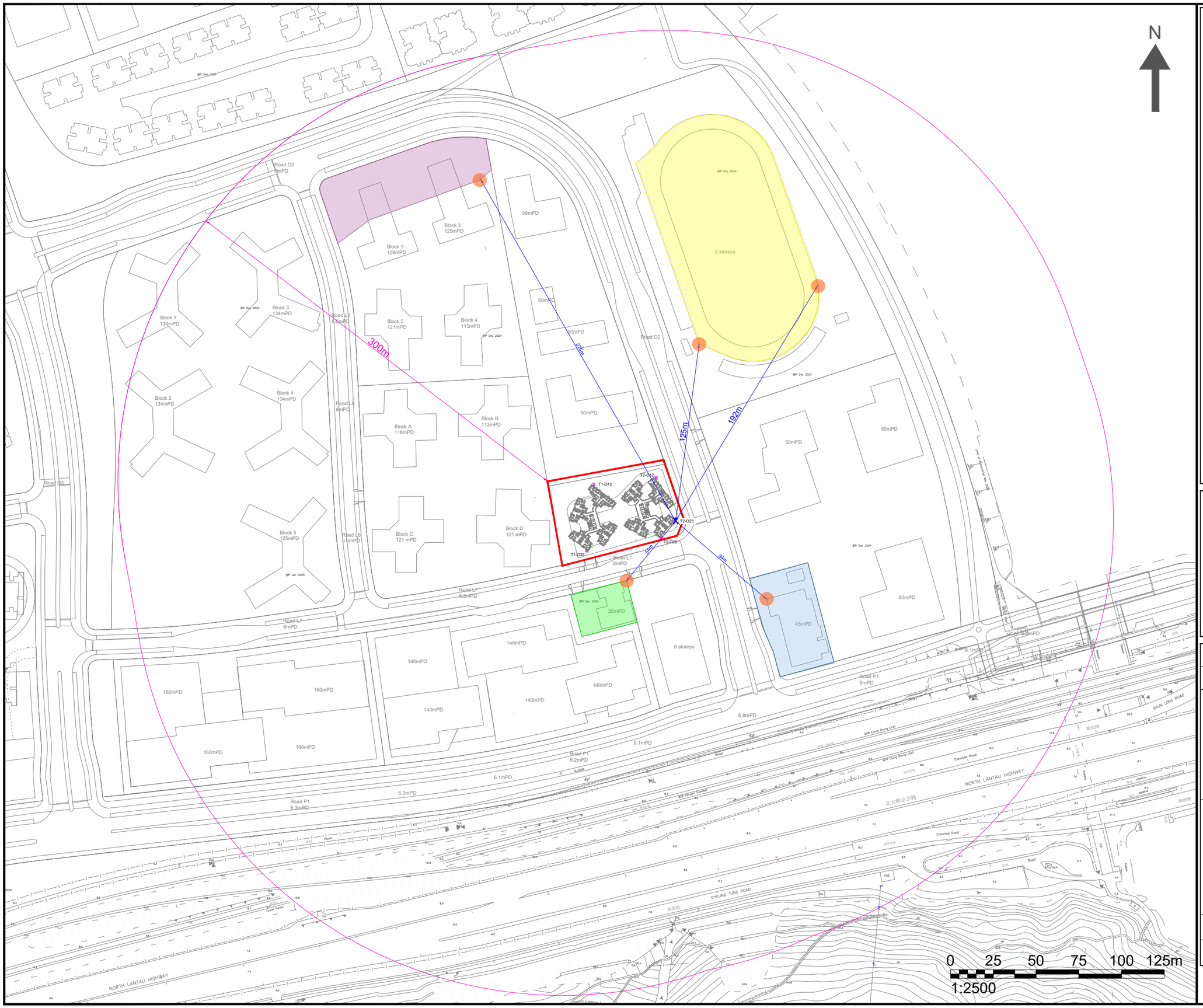

NOTES :

- Subject Site
- 300m asssessment area
- Sports Ground (Area 138)
- Fire Station (Area 136)
- Eastern Sewage Pumping Station (Area 132)
- Public Transport Interchange (PT1) (Area 133B)
- Noise Sensitive Receiver (NSR)
- Architectural fins
- Noise Assessment Point of Fixed Noise sources

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PLANNED FIXED NOISE SOURCES

Drawing No : FIGURE 6.5d	Revision : 1
Scale : AS SHOWN	Date : AUG 2025

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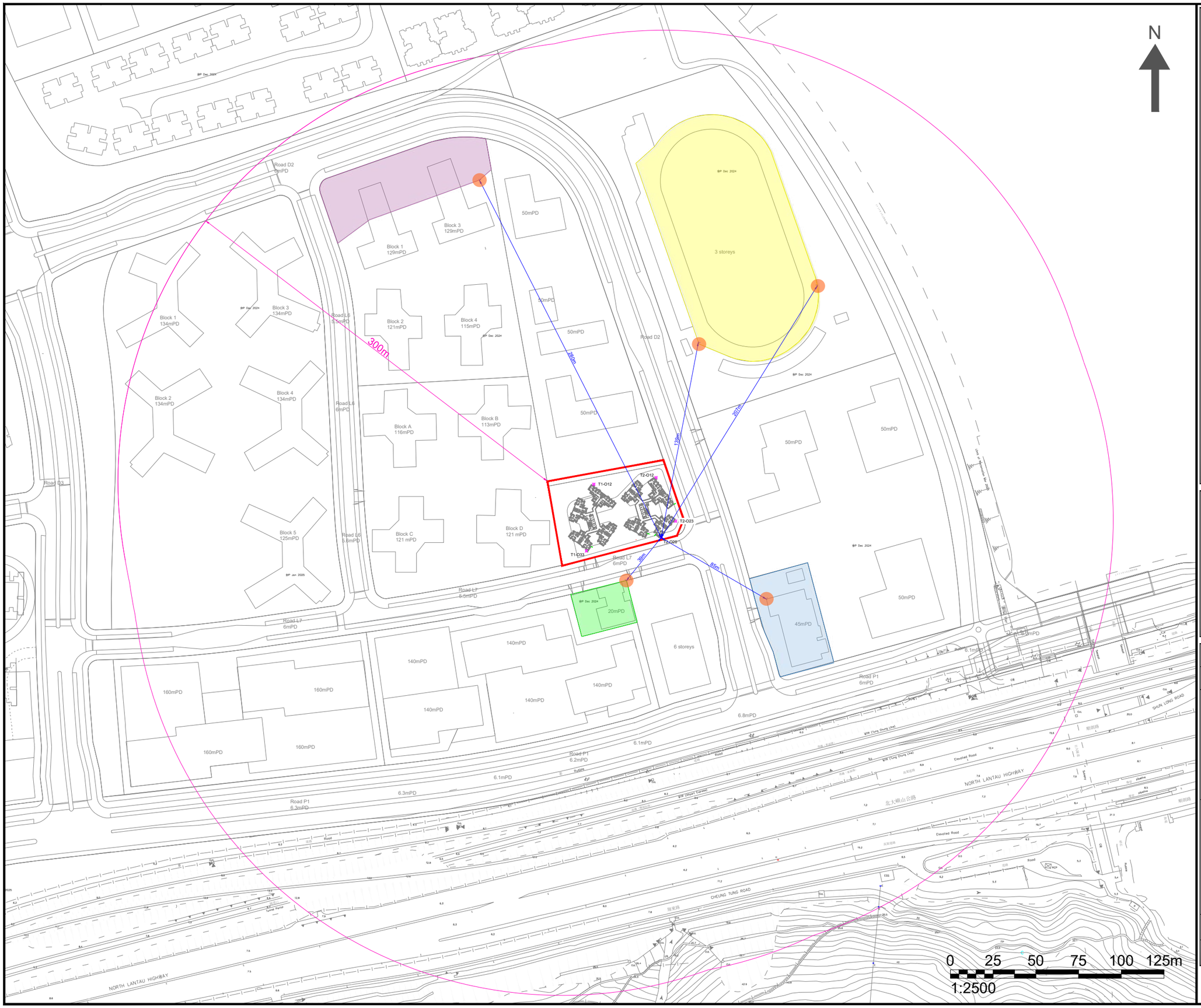

NOTES :

- Subject Site
- 300m asssessment area
- Sports Ground (Area 138)
- Fire Station (Area 136)
- Eastern Sewage Pumping Station (Area 132)
- Public Transport Interchange (PT1) (Area 133B)
- Noise Sensitive Receiver (NSR)
- Architectural fins
- Noise Assessment Point of Fixed Noise sources

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF PLANNED FIXED NOISE SOURCES

Drawing No : FIGURE 6.5e	Revision : 1
Scale : AS SHOWN	Date : AUG 2025

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A3 420 x 297

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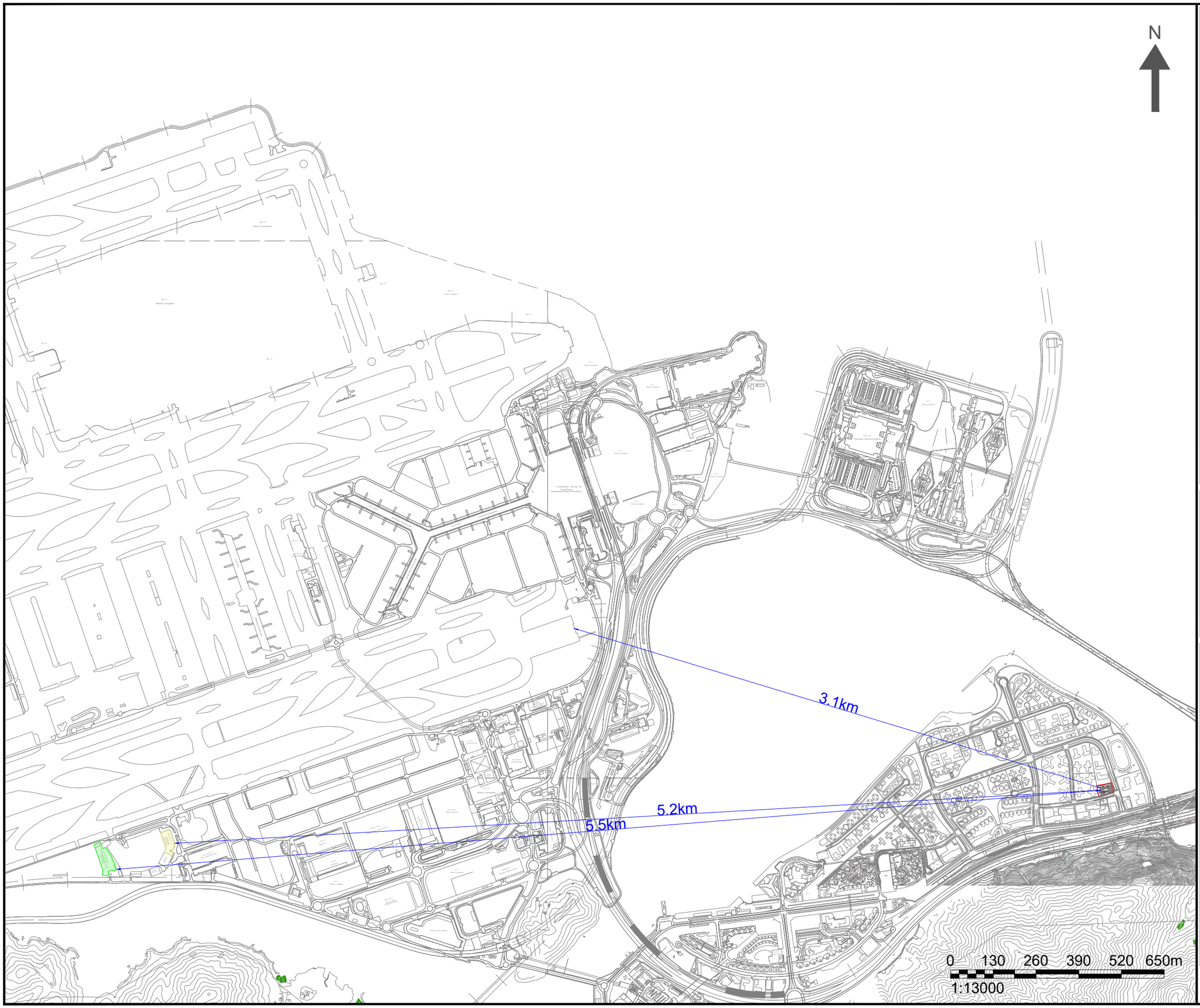

NOTES :

Subject Site

Noise Sensitive Receiver (NSR)

Hong Kong Business Aviation Centre (HKBAC)

Government Flying Services (GFS)

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

LOCATION OF NEAREST NSR TO HONG KONG INTERNATIONAL AIRPORT, HONG KONG BUSINESS AVIATION CENTRE (HKBAC) AND GOVERNMENT FLYING SERVICES (GFS)

Drawing No : FIGURE 6.7	Revision : 1
Scale : AS SHOWN	Date : OCT 2025

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A3 420 x 297

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Appendix 5.1

Extract of Proposed Marina & Existing Local Vessels from TCNTE EIA Report (AEIAR 196/2016)

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.
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PROPOSED EXPANSION OF
HONG KONG INTERNATIONAL AIRPORT
(BY OTHERS)

HONG KONG
INTERNATIONAL AIRPORT

HK BOUNDARY CROSSING
FACILITIES OF HZMB
(BY OTHERS)

TMCLK LINK
(BY OTHERS)

LOCATION OF MARINA

500m assessment area

Subject Site

OWTF(Phase 1)

TAI HO WAN

PROPOSED LANTAU LOGISTICS PARK
(BY OTHERS)
(REF. REVISED CONCEPT PLAN
FOR LANTAU)

HK LINK ROAD OF HZMB
(BY OTHERS)

TUNG CHUNG PIER

N

0 500 1000m

LEGEND

- POSSIBLE DEVELOPMENT AREA
- WORKS AREA FOR ROAD P1 (TUNG CHUNG - TAI HO SECTION)
- 500M ASSESSMENT AREA
- CHIMNEY
- PROPOSED MARINA
- MARINE EMISSION
- MARINE ROUTE
- VENTILATION BUILDING
- TUNNEL PORTAL

Rev	Description	By	Date
B	SECOND ISSUE	GL	08/15
A	FIRST ISSUE	GL	05/15

Consultant
ARUP

Project title
Tung Chung
New Town Extension

Drawing title
Locations of Chimney, Proposed Marina and Existing Local Vessel

Drawing no.	Rev.
Figure 3.15	B

Drawn	Date	Checked	Approved
GL	08/15	LK	FC

Scale: 1:30000 @A3
Status: PRELIMINARY

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

Printed by : 10/30/2015
Filename : G:\env\project\219844-70\13 Drawing Deliverables\24 Environmental Impact Assessment\Figure 3.15 - Locations of Chimney, Proposed Marina and Existing Local Vessel.dgn

Appendix 6.2

Predicted Traffic Noise Levels for Residential Blocks
(Base Scheme Scenario)

Road Traffic Impact Assessment

Project No: 2240 Tung Chung JPOMQ
Scenario: AM base case
Traffic Date: 2046
Scheme: Scheme (rev J)_20250522 , 20250428 Elevation

T1 summary	
Max Noise Level	72
Total no. of unit with exceedance	74
Total no. of units	216
Compliance rate	66

T2 summary	
Max Noise Level	74
Total no. of unit with exceedance	135
Total no. of units	216
Compliance rate	38

Overall summary	
Max Noise Level	74
Total no. of unit with exceedance	209
Total no. of units	432
Compliance rate	52

70 Compliance
71 Non-compliance

| Tower | | Tower 1 | | |

Appendix 6.3

Predicted Traffic Noise Levels for Residential Blocks
(Mitigated Scenario)

Road Traffic Impact Assessment

Project No: 2240 Tung Chung JPOMQ
Scenario: AM mit case (with fin & BAW)
Traffic Date: 2046
Scheme: Scheme (rev J)_20250522 , 20250428 Elevation

T1 summary	
Max Noise Level	70
Total no. of unit with exceedance	0
Total no. of units	216
Compliance rate	100

T2 summary	
Max Noise Level	70
Total no. of unit with exceedance	0
Total no. of units	216
Compliance rate	100

Overall summary	
Max Noise Level	70
Total no. of unit with exceedance	0
Total no. of units	432
Compliance rate	100

70 Compliance
71 Non-compliance

1.0m fin
1.2m fin
BAW Configuration 1
BAW Configuration 2

| Tower | | Tower 1 | | |

Appendix 6.5

Fixed Noise Calculation

Predicted Sound Pressure Level from Sports Ground

Project No.: **2240**

Project: **Junior Police Office Married Head Quarters (JPOMQ)**

Assessment Point	Spectator	SWL, dB(A)	Distance, D (m)	Dimensions		Conformal Area		Correction				
				Length, L (m)	Width, W (m)	Area, A (m2) [4]	Correction, dB(A) [5]	Façade, dB(A) [6]	Directivity, dB(A) [2]	SPL, dB(A) [1]	Daytime Criteria,dB(A) [3]	Compliance
T1-O12	NW	105.0	122.5	150	10	157362	-52	3	0	56		
	SE	101.0	209	87	10	339015	-55	3	0	49		
Predicted Total SPL dB(A)										**57**	**65**	**YES**
T1-O33	NW	105.0	164.5	150	10	254211	-54	3	0	54		
	SE	101.0	246	87	10	456068	-57	3	0	47		
Predicted Total SPL dB(A)										**55**	**65**	**YES**
T2-O12	NW	105.0	98	150	10	111104	-50	3	0	58		
	SE	101.0	175	87	10	246621	-54	3	0	50		
Predicted Total SPL dB(A)										**58**	**70**	**YES**
T2-O23	NW	105.0	125	150	10	162507	-52	3	0	56		
	SE	101.0	192	87	10	291002	-55	3	0	49		
Predicted Total SPL dB(A)										**57**	**70**	**YES**
T2-O28	NW	105.0	139	150	10	192766	-53	3	0	55		
	SE	101.0	207	87	10	333178	-55	3	0	49		
Predicted Total SPL dB(A)										**56**	**70**	**YES**

Remarks:

[1] Noise calculation is made reference to the approved TCNTE EIA (AEIAR-196/2016)

[2] Directivity correction of 5dB(A) is applied when the spectator is at more than 90 degree from the NSR, 10dB(A) is applied when the spectator is completely not facing the NSR.

[3] According to the approved TCNTE EIA (AEIAR-196/2016), Sports Ground are operated during daytime and evening time only

[4] The following formula was used for calculating the conformal area:

$A = (L+W)(2C + \pi\ d) + 2\pi\ d(C+d) + (DL)$

C = measured noise level, assume same height as noise receiver, C = 0m

[5] Correction factor for conformation area (dB(A)) = - 10 log (area)

[6] Façade Correction (dB(A)) = + 3

Fixed Noise Impact Assessment Calculation

Project No.: **2240**

Project: **Junior Police Office Married Head Quarters (JPOMQ)**

NAP ID T1-O12

ASR B

Day-time Criterion: **65 dB(A)**

Fixed Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
Source Location	Source Description	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814365.5	817885.7	24.5	88.0	[1][4]	814351.2	817955.3	24.5	71	0	71	100%	-45	0	3	3	0	0	-10	0	39	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82.0	[1][3]	814351.2	817955.3	24.5	227	0	227	100%	-55	0	3	3	0	0	-10	0	23	
G0-3	Tung Chung East Fire Station	814472.1	817875.1	24.5	97.0	[1] [2]	814351.2	817955.3	24.5	145	0	145	100%	-51	0	3	3	0	0	-10	0	42	
																					Overall	44	YES

Night-time Criterion: **55 dB(A)**

Fixed Plant Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
ID	Name	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814365.5	817885.7	24.5	88	[1][4]	814351.2	817955.3	24.5	71	0	71	100%	-45	0	3	3	0	0	-10	0	39	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82	[1][3]	814351.2	817955.3	24.5	227	0	227	100%	-55	0	3	3	0	0	-10	0	23	
																					Overall	39	YES

Remarks for SWLs:

[1] The following formula was used for calculating the SPLs at NSRs :
SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))
SWL Sound Power Level (dB(A))
QC Correction factor for quantity (dB(A)) = + 10 log (quantity)
DC Distance Attenuation (dB(A)) = SWL - 20 log (distance) - 8
FC Façade Correction (dB(A)) = + 3
BC Barrier Correction (dB(A)): While NSR with no direct line of sight to the source/opening, a -10dB(A) correction would be applied. While NSR is partially screened, a -5dB(A) correction would be applied.
OC Correction for Percentage on-time over 30 minutes (dB(A)) = - 10 log (on-time %)
TC Correction for Tonality (dB(A))
IMC Correction for Impulsiveness (dB(A))
INTC Correction for Intermittency (dB(A))

[2] Based on the information provided by Fire Service Department, the proposed daily activities to be carried out at the fire station will take place during daytime only

[3] With reference to HKHA Report, Planned PTI at Area 133B will be covered under a podium decking with full height double bank louvre, solid boundary wall and hanger louver/fins at vehicular and pedestrian accesses, to avoid line of sights to the planned noise sensitive uses in the proximity as far as practicable.

[4] With reference to deliverable PI49 (Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – Case 2) of CEDD, the latest design of proposed SPS will enclose the pumps within building.

Fixed Noise Impact Assessment Calculation

Project No.: **2240**

Project: **Junior Police Office Married Head Quarters (JPOMQ)**

NAP ID T1-O33

ASR B

Day-time Criterion: **65 dB(A)**

Fixed Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
Source Location	Source Description	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814353.4	817882.5	24.5	88.0	[1][4]	814346.5	817908.8	24.5	27	0	27	100%	-37	0	3	3	0	0	-10	0	47	
C2-2	Tung Chung East Public Transport Interchange	814172.6	818123.6	24.5	82.0	[1][3]	814346.5	817908.8	24.5	276	0	276	100%	-57	0	3	3	0	0	-10	0	21	
G0-3	Tung Chung East Fire Station	814472.1	817875.1	24.5	97.0	[1] [2]	814346.5	817908.8	24.5	130	0	130	100%	-50	0	3	3	0	0	-5	0	48	
																					Overall	**51**	**YES**

Night-time Criterion: **55 dB(A)**

Fixed Plant Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
ID	Name	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814353.4	817882.5	24.5	88	[1][4]	814346.5	817908.8	24.5	27	0	27	100%	-37	0	3	3	0	0	-10	0	47	
C2-2	Tung Chung East Public Transport Interchange	814172.6	818123.6	24.5	82	[1][3]	814346.5	817908.8	24.5	276	0	276	100%	-57	0	3	3	0	0	-10	0	21	
																					Overall	**47**	**YES**

Remarks for SWLs:

[1] The following formula was used for calculating the SPLs at NSRs :
SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))
SWL Sound Power Level (dB(A))
QC Correction factor for quantity (dB(A)) = + 10 log (quantity)
DC Distance Attenuation (dB(A)) = SWL - 20 log (distance) - 8
FC Façade Correction (dB(A)) = + 3
BC Barrier Correction (dB(A)): While NSR with no direct line of sight to the source/opening, a -10dB(A) correction would be applied. While NSR is partially screened, a -5dB(A) correction would be applied.
OC Correction for Percentage on-time over 30 minutes (dB(A)) = - 10 log (on-time %)
TC Correction for Tonality (dB(A))
IMC Correction for Impulsiveness (dB(A))
INTC Correction for Intermittency (dB(A))

[2] Based on the information provided by Fire Service Department, the proposed daily activities to be carried out at the fire station will take place during daytime only

[3] With reference to HKHA Report, Planned PTI at Area 133B will be covered under a podium decking with full height double bank louvre, solid boundary wall and hanger louver/fins at vehicular and pedestrian accesses, to avoid line of sights to the planned noise sensitive uses in the proximity as far as practicable.

[4] With reference to deliverable PI49 (Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – Case 2) of CEDD, the latest design of proposed SPS will enclose the pumps within building.

Fixed Noise Impact Assessment Calculation

Project No.: **2240**

Project: **Junior Police Office Married Head Quarters (JPOMQ)**

NAP ID T2-O12

ASR C

Day-time Criterion: **70 dB(A)**

Fixed Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
Source Location	Source Description	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814374.3	817888.1	24.5	88.0	[1][4]	814395	817959.8	24.5	75	0	75	100%	-46	0	3	3	0	0	-10	0	39	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82.0	[1][3]	814395	817959.8	24.5	242	0	242	100%	-56	0	3	3	0	0	-10	0	22	
G0-3	Tung Chung East Fire Station	814472.1	817875.1	24.5	97.0	[1] [2]	814395	817959.8	24.5	115	0	115	100%	-49	0	3	3	0	0	0	0	54	
																					Overall	54	YES

Night-time Criterion: **60 dB(A)**

Fixed Plant Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
ID	Name	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814374.3	817888.1	24.5	88	[1][4]	814395	817959.8	24.5	75	0	75	100%	-46	0	3	3	0	0	-10	0	39	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82	[1][3]	814395	817959.8	24.5	242	0	242	100%	-56	0	3	3	0	0	-10	0	22	
																					Overall	39	YES

Remarks for SWLs:

[1] The following formula was used for calculating the SPLs at NSRs :
SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))
SWL Sound Power Level (dB(A))
QC Correction factor for quantity (dB(A)) = + 10 log (quantity)
DC Distance Attenuation (dB(A)) = SWL - 20 log (distance) - 8
FC Façade Correction (dB(A)) = + 3
BC Barrier Correction (dB(A)): While NSR with no direct line of sight to the source/opening, a -10dB(A) correction would be applied. While NSR is partially screened, a -5dB(A) correction would be applied.
OC Correction for Percentage on-time over 30 minutes (dB(A)) = - 10 log (on-time %)
TC Correction for Tonality (dB(A))
IMC Correction for Impulsiveness (dB(A))
INTC Correction for Intermittency (dB(A))

[2] Based on the information provided by Fire Service Department, the proposed daily activities to be carried out at the fire station will take place during daytime only

[3] With reference to HKHA Report, Planned PTI at Area 133B will be covered under a podium decking with full height double bank louvre, solid boundary wall and hanger louver/fins at vehicular and pedestrian accesses, to avoid line of sights to the planned noise sensitive uses in the proximity as far as practicable.

[4] With reference to deliverable PI49 (Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – Case 2) of CEDD, the latest design of proposed SPS will enclose the pumps within building.

Fixed Noise Impact Assessment Calculation

Project No.: **2240**

Project: **Junior Police Office Married Head Quarters (JPOMQ)**

NAP ID T2-O23

ASR C

Day-time Criterion: **70 dB(A)**

Fixed Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
Source Location	Source Description	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814374.3	817888.1	24.5	88.0	[1][4]	814408.6	817929.5	24.5	54	0	54	100%	-43	0	3	3	0	0	-10	0	41	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82.0	[1][3]	814408.6	817929.5	24.5	275	0	275	100%	-57	0	3	3	0	0	-10	0	21	
G0-3	Tung Chung East Fire Station	814472.1	817875.1	24.5	97.0	[1] [2]	814408.6	817929.5	24.5	84	0	84	100%	-46	0	3	3	0	0	0	0	57	
																					Overall	57	YES

Night-time Criterion: **60 dB(A)**

Fixed Plant Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
ID	Name	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814374.3	817888.1	24.5	88	[1][4]	814408.6	817929.5	24.5	54	0	54	100%	-43	0	3	3	0	0	-10	0	41	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82	[1][3]	814408.6	817929.5	24.5	275	0	275	100%	-57	0	3	3	0	0	-10	0	21	
																					Overall	41	YES

Remarks for SWLs:

[1] The following formula was used for calculating the SPLs at NSRs :
SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))
SWL Sound Power Level (dB(A))
QC Correction factor for quantity (dB(A)) = + 10 log (quantity)
DC Distance Attenuation (dB(A)) = SWL - 20 log (distance) - 8
FC Façade Correction (dB(A)) = + 3
BC Barrier Correction (dB(A)): While NSR with no direct line of sight to the source/opening, a -10dB(A) correction would be applied. While NSR is partially screened, a -5dB(A) correction would be applied.
OC Correction for Percentage on-time over 30 minutes (dB(A)) = - 10 log (on-time %)
TC Correction for Tonality (dB(A))
IMC Correction for Impulsiveness (dB(A))
INTC Correction for Intermittency (dB(A))

[2] Based on the information provided by Fire Service Department, the proposed daily activities to be carried out at the fire station will take place during daytime only

[3] With reference to HKHA Report, Planned PTI at Area 133B will be covered under a podium decking with full height double bank louvre, solid boundary wall and hanger louver/fins at vehicular and pedestrian accesses, to avoid line of sights to the planned noise sensitive uses in the proximity as far as practicable.

[4] With reference to deliverable PI49 (Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – Case 2) of CEDD, the latest design of proposed SPS will enclose the pumps within building.

Fixed Noise Impact Assessment Calculation

Project No.: **2240**

Project: **Junior Police Office Married Head Quarters (JPOMQ)**

NAP ID T2-O28

ASR C

Day-time Criterion: **70 dB(A)**

Fixed Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
Source Location	Source Description	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814374.3	817888.1	24.5	88.0	[1][4]	814398.6	817918	24.5	39	0	39	100%	-40	0	3	3	0	0	-10	0	44	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82.0	[1][3]	814398.6	817918	24.5	280	0	280	100%	-57	0	3	3	0	0	-10	0	21	
G0-3	Tung Chung East Fire Station	814472.1	817875.1	24.5	97.0	[1] [2]	814398.6	817918	24.5	85	0	85	100%	-47	0	3	3	0	0	0	0	56	
																					Overall	57	YES

Night-time Criterion: **60 dB(A)**

Fixed Plant Noise Source							NSR Location			Horizontal Distance (m)	Vertical Distance (m)	Slant Distance (m)	% on time over 30mins	Correction								Resultant Noise Level dB(A)	Compliance (Yes/No)
ID	Name	X-coordinate	Y-coordinate	Height (mPD)	SWL dB(A)	Remark	X-coordinate	Y-coordinate	Height (mPD)					Distance (dB)	Quantity (dB)	Façade (dB)	Tonality (dB)	Impulsive (dB)	Intermittency (dB)	Barrier (dB)	% on time (dB)		
CO-3	Tung Chung East Sewage Pumping Station	814374.3	817888.1	24.5	88	[1][4]	814398.6	817918	24.5	39	0	39	100%	-40	0	3	3	0	0	-10	0	44	
C2-2	Tung Chung East Public Transport Interchange	814271.6	818167.7	24.5	82	[1][3]	814398.6	817918	24.5	280	0	280	100%	-57	0	3	3	0	0	-10	0	21	
																					Overall	44	YES

Remarks for SWLs:

[1] The following formula was used for calculating the SPLs at NSRs :
SPL = SWL+QC+DC+FC+BC+OC+TC+IMC+INTC

SPL Sound Pressure Level (dB(A))
SWL Sound Power Level (dB(A))
QC Correction factor for quantity (dB(A)) = + 10 log (quantity)
DC Distance Attenuation (dB(A)) = SWL - 20 log (distance) - 8
FC Façade Correction (dB(A)) = + 3
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OC Correction for Percentage on-time over 30 minutes (dB(A)) = - 10 log (on-time %)
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[2] Based on the information provided by Fire Service Department, the proposed daily activities to be carried out at the fire station will take place during daytime only

[3] With reference to HKHA Report, Planned PTI at Area 133B will be covered under a podium decking with full height double bank louvre, solid boundary wall and hanger louver/fins at vehicular and pedestrian accesses, to avoid line of sights to the planned noise sensitive uses in the proximity as far as practicable.

[4] With reference to deliverable PI49 (Sewerage System and Sewage Treatment Implication Review for Population Increase and Development Intensity – Case 2) of CEDD, the latest design of proposed SPS will enclose the pumps within building.

Appendix 6.8

Extract of NEF Contours from TCNTE EIA Report

(AEIAR-196/2016)

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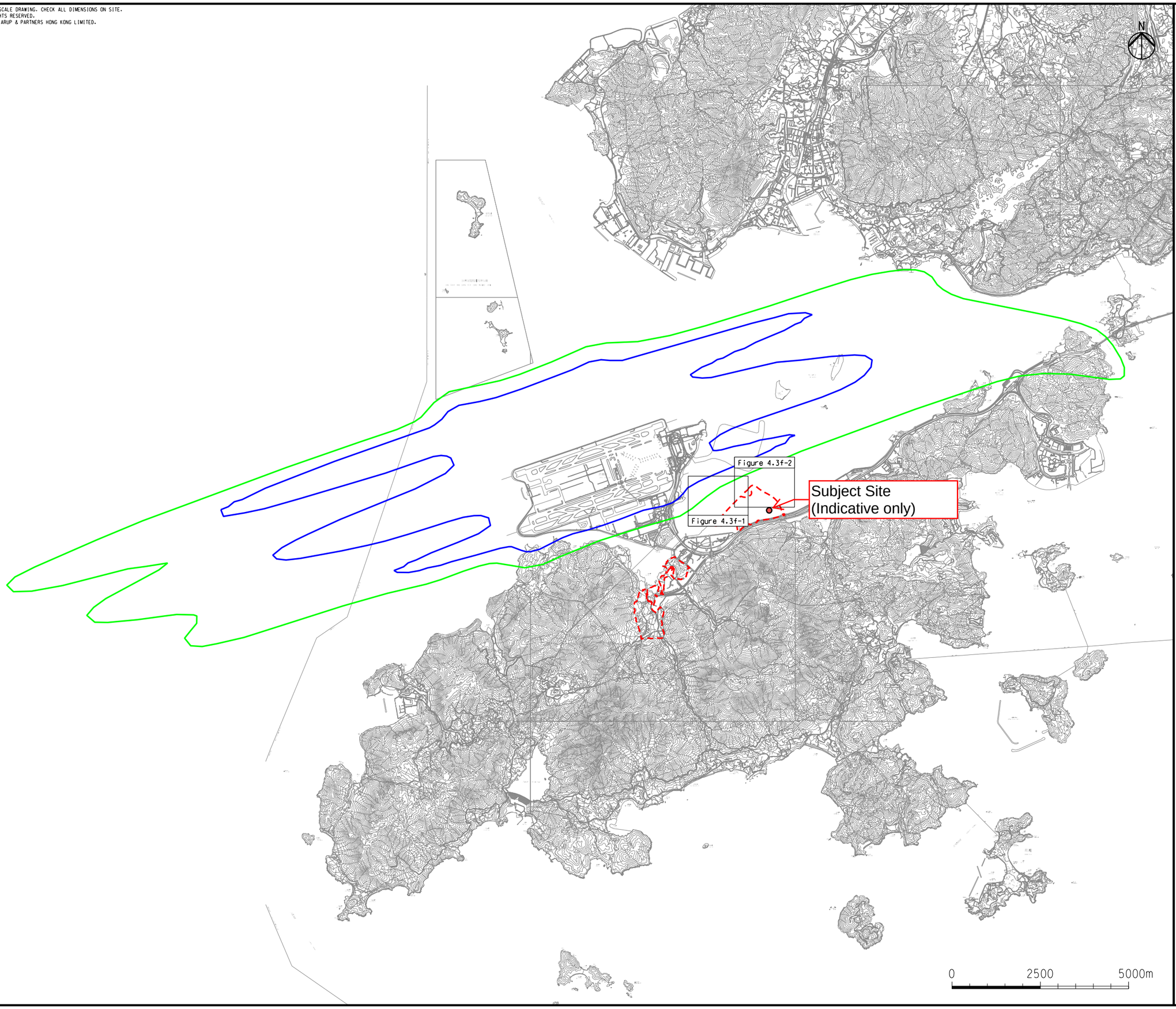

LEGEND

- POSSIBLE DEVELOPMENT AREA
- NEF25 CONTOUR
- NEF30 CONTOUR

EXTRACTED FROM "EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM" EIA REPORT

Rev	Description	By	Date
D	FOURTH ISSUE	GL	10/15
C	THIRD ISSUE	GL	08/15
B	SECOND ISSUE	GL	06/15
A	FIRST ISSUE	GL	04/15

Consultant

ARUP

Project title

Tung Chung
New Town Extension

Drawing title

NEF Contours Against
TCE Phasing
(Year 2030)
(Sheet 1 of 3)

Drawing no.			Rev.
Figure 4.3e			D
Drawn: GL	Date: 10/15	Checked: LK	Approved: FC
Scale: 1:100000 @A3		Status: PRELIMINARY	

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Filename : G:\env\project\219844-70\13 Drawing Deliverables\24 Environmental Impact Assessment\Figure 4.3e - NEF Contours Against TCE Phasing (Year 2030) (Sheet 1 of 3).dgn

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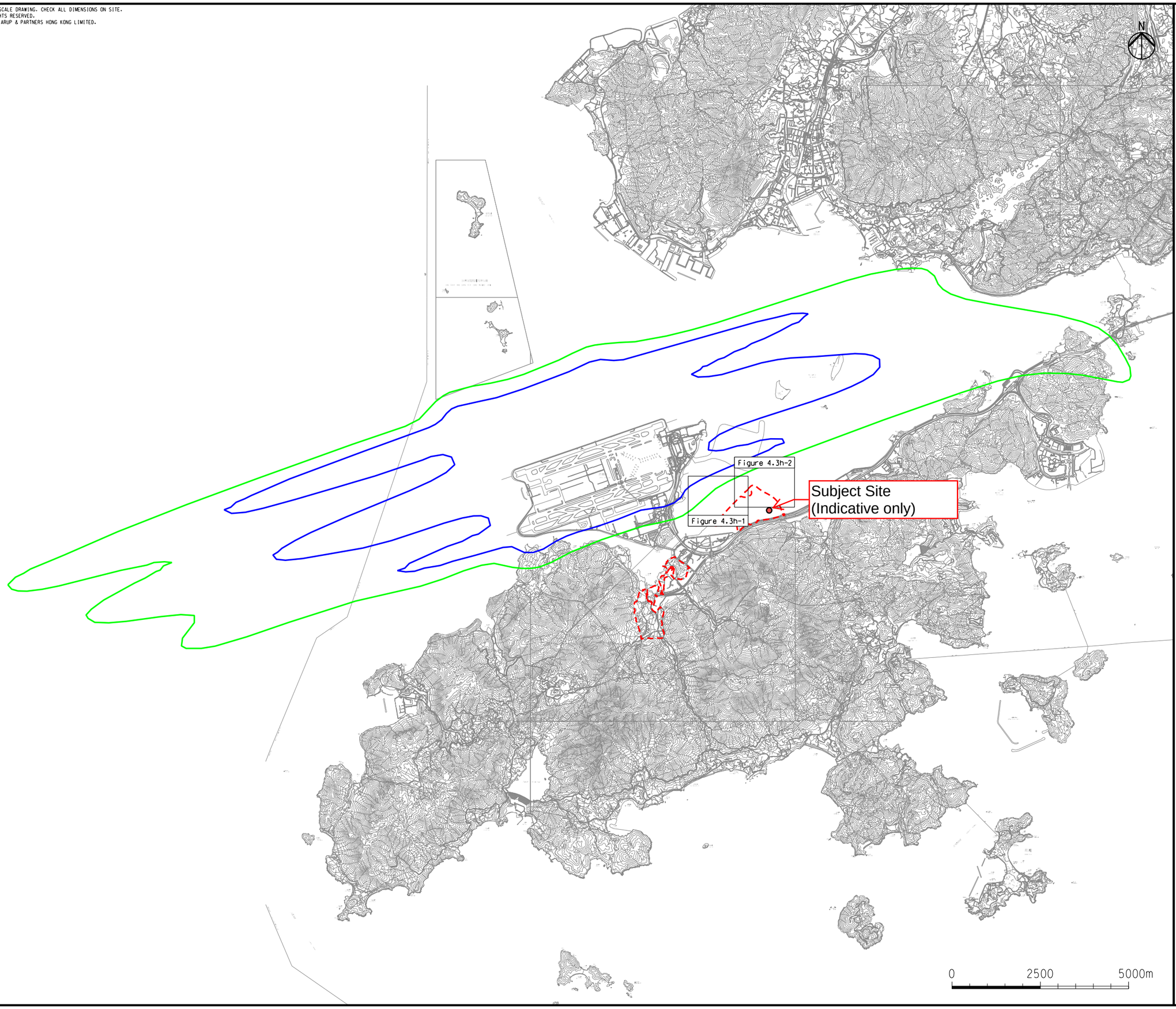

LEGEND

- POSSIBLE DEVELOPMENT AREA
- NEF25 CONTOUR
- NEF30 CONTOUR

EXTRACTED FROM "EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM" EIA REPORT

Rev	Description	By	Date
D	FOURTH ISSUE	GL	10/15
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A	FIRST ISSUE	GL	04/15

Consultant

ARUP

Project title

Tung Chung
New Town Extension

Drawing title

NEF Contours Against
TCE Phasing
(Year 2032)
(Sheet 1 of 3)

Drawing no.			Rev.
Figure 4.3g			D
Drawn: GL	Date: 10/15	Checked: LK	Approved: FC
Scale: 1:100000 @A3		Status: PRELIMINARY	

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Printed by : 11/8/2015
Filename : G:\env\project\219844-70\13 Drawing Deliverables\24 Environmental Impact Assessment\Figure 4.3g - NEF Contours Against TCE Phasing (Year 2032) (Sheet 1 of 3).dgn

Attachment 4

CORRESPONDENCE ON THE LATEST EAS

Outlook

Re: [2240] Information Request on concurrent projects for Areas 134 and Area 135 Tung Chung JPOMQ S16 Planning Application

From Alan KK LAU <alan.lau@housingauthority.gov.hk>
Date Thu 16/10/2025 10:32
To Christine Goh Siew Yinn <christinegoh@aecasia.io>

Dear Christine,

I have forward your email to our Civil Engineer, who is responsible for the EAS, for her action please.

Regards,
Alan

From: "Christine Goh Siew Yinn" <christinegoh@aecasia.io>
To: "alan.lau@housingauthority.gov.hk" <alan.lau@housingauthority.gov.hk>
Date: 2025/10/16 10:12 上午
Subject: [2240] Information Request on concurrent projects for Areas 134 and Area 135 Tung Chung JPOMQ S16 Planning Application

Dear Mr Alan Lau (Planning Offr 11),

1. Tried to call you but in vain, please feel free to contact me at 5290 3688 at your convenience.
2. We are the Environmental Consultant conducting an Environmental Assessment for the Proposed Junior Police Married Quarters (JPOMQ) at Area in Tung Chung New Town Extension East (Subject Site) at Area 134 for S16 Planning Application.
3. We refer to EPD comments dated 14.10.2025 as below is referred.

"Table 5-6 – For Note [3], please check if there is update in the EAS version."

Table 5-6 List of Concurrent Projects

Concurrent Projects		Construction Programme	Potential Cumulative Impacts		Approximate Distance from the Application Site
			Construction Phase	Operational Phase	
1.	Public Housing Development at Area 133A, Area 133B and Area 133C [3]	2024/25 till 2029/30	Yes	No	Area 133A: 156m Area 133B: 93m Area 133C: 3m

Note:
[1] reference to Tung Chung Line Extension (TCLE) EIA report (AEIAR-235/2022)
[2] reference to Tung Chung New Town Extension (TCNTE) EIA (AEIAR-196/2016)
[3] reference to Hong Kong Housing Authority (HKHA) report Public Housing Development at Tung Chung Area 133A, 133B and 133C Environmental Assessment Study Final Report" (April 2024)
[4] reference to "Section 16 Planning Application for Proposed Minor Relaxation of Building Height Restrictions for Permitted Public Housing Development at Tung Chung Area 114 and Tung Chung Area 117, Lantau Island" (August 2024)

4. To facilitate our review, we would like to request information on the construction programme of nearby concurrent projects, particularly Areas 133A, Area 133B, and Area 133C, for our environmental assessment.

5. It would be grateful if you can provide us with latest Environmental Assessment Report to verify whether the construction programme of these areas are still remans valid and up-to-date.

Thank you very much for your kind attention and assistance.

Best regards,

Christine Goh – Assistant Consultant
Environmental Consultancy | Green & Healthy Building
T: (852) 5290 3688 | **E:** christinegoh@aecasia.io

Allied Environmental Consultants Limited *Member of AEC Group (HKEX Stock Code: 8320.HK)*

27/F, Overseas Trust Bank Building, 160 Gloucester Road, Wan Chai, Hong Kong
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Attachment 5

REPLACEMENT PAGES OF SEWERAGE IMPACT ASSESSMENT

List of Tables

Table 2-1 Development Schedule 4
Table 2-2 Reference from CEDD report 6
Table 4-1 Unit Flow Factors Adopted for the Assessment 10
Table 4-2 Sewage Flow Estimation for the Proposed Development 11
Table 4-3 Worker Density Adopted for the Assessment 12
Table 4-4 Peaking Factors 13
Table 4-5 Population and Sewage Flow Estimation 14
Table 5-1 Comparison between Original and Updated Sewage Flow Contribution to East Sewerage Pumping Station 15
Table 6-1 Sewage Generated from Proposed Development 16
Table 6-2 Used Capacity from Proposed Development 16

List of Figures

Figure 2.1 Site Location and Its Environs
Figure 3.1 Overview of Sewerage System and Catchments

List of Appendices

Appendix A Layout Design Scheme of the Proposed Development
Appendix B Extract from CEDD report "Sewerage System and Sewage Implication Review for Population Increase and Development Intensity – Case 2 (Final)" (Ref. P149-03)
Appendix C Sewerage Plan of the Application Site
Appendix D Estimation of Sewage Discharge from the Site
Appendix E Estimation of Sewage Discharge from Catchment Areas
Appendix F Calculation of Flow Capacity of Proposed Development

2.3. Existing Sewerage Condition

2.3.1. The latest Drainage information was obtained from the Civil Engineering and Development Department (CEDD) in February 2025 to gather the background information on sewerage infrastructure in the vicinity of the Application Site. The infrastructure works, including drainage works, sewerage works (including two sewage pumping stations) are under construction. Concerned sewerage network was identified for estimation of the potential sewerage impact to the downstream sewers associated with the proposed development.

2.3.2. As refer to CEDD report "Sewerage System and Sewage Implication Review for Population Increase and Development Intensity – Case 2 (Final)" (Ref. P149-03), a sewerage network comprising gravity sewer is proposed to convey the collected sewage to the ESPS, which will be locating to the south of the application development. Extract from CEDD report is shown in ***Appendix B***. The implication review was conducted to identify and address possible implication due to the proposed increase in population and residential flats due to the continuous pressing need for housing and further housing intensification in private developments.

2.3.3. Reference to P149-03 report is adopted as conservative approach for this SIA report to assess the cumulative impact from the Application Site and the increased population and development density on the sewerage system within the Tung Chung New Town Extension (TCNTE), and to incorporate the recommended mitigation measures based on latest design information and inputs from relevant authorities. The estimation of the design catchment of ESPS and the estimated average dry weather flow of the subject site are as follows.

Table 2-2 Reference from CEDD report

Development	**ADWF (m^3/day)**	**Peak Flow (m^3/day)**	**Remarks and Assumption**
Design Catchment to ESPS (Area 132)	35,727 (Design)	67,723(1) (Maximum)	Information from CEDD report "Sewerage System and Sewage Implication Review for Population Increase and Development Intensity – Case 2 (Final)" (Ref. P149-03)
Application Site (Area 134)	**314.8 (2)**	-	
Area 129	786.1	-	
Area 130	875.8	-	
Area 131	65.2	-	
Area 135	337.8	-	
Area 137	256.6	-	
Area 138	84.2	-	
Area 133A	4,572.2	-	
Area 133B	1,614.7	-	
Area 133C	1,708.7	-	
Area 132 (3)	3.3	-	
Area 52 (E6)	141.9	-	

Notes:

(1) Peaking Factor 1.89 (excluding stormwater allowance) is adopted according to CEDD Report (Ref. P149-03)

(2) Estimated population of 1,166 people adopted based on CEDD Report (Ref. P149-03)

(3) Sewage generated from the employee of east sewage pumping station (ESPS)

3. Sewerage Impact Assessment

3.1. Legislation, Standards and Guidelines

3.1.1. With reference to ProPECC PN 1/23 Drainage Plans Subject to Comment by the Environmental Protection Department ("EPD"), foul water should be discharged to a foul sewer under the Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations (Cap.123I) Section 40(1), 40(2), 41(1) and 90.

3.1.2. The following standards and guidelines are adopted for the estimation, assessment and evaluation of sewerage implication of the proposed development:

- "Hong Kong Planning Standards and Guidelines" issued by the Planning Department;
- "Sewerage Manual Part 1" published by DSD; and
- "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning Version 1.0 (Report No.: EPD/TP1/05)" ("GESF") published by Environmental Protection Department ("EPD");

3.2. Assessment Methodology and Assessment

3.2.1. As shown in the drainage plan in ***Appendix C***, the sewage generated from the proposed development will be discharged through the existing terminal manhole (S1: PLUG C0.2) at the south of the Application Site. This terminal hole will be connected to the existing public foul water manhole (S2: SE-C13) outside the Application Site through a 280mm diameter polyethylene (PE) sewage pipe system. The existing sewers in the vicinity of the proposed development are shown in ***Figure 3.1***.

4.2. Estimation of Sewage Flow from Existing and Proposed Developments

4.2.1. The sewage generated from the proposed development will be collected and discharged into an existing terminal sewage manhole PLUG C0.2, as shown in ***Figure 3.1***. This terminal manhole will be connected to the existing public manhole S1 (SE-C13) with 280mm polyethylene sewage pipe.

4.2.2. The proposed development comprises of two 27-storey towers with about 432 residential units. The estimated sewage flow is given in ***Appendix D***.

4.2.3. With reference to **Table 4-2**, the total estimated Average Dry Weather Flow ("ADWF") from the proposed development is 315.7 m^3/day. The population and the estimated ADWF of proposed development are summarized in Table 1 of ***Appendix D***.

Table 4-2 Sewage Flow Estimation for the Proposed Development

Proposed Development			
Residential	**Value**	**Unit**	**Remark**
Total Number of Units	432	units	
Average Household Size	2.7	person/unit	Referred to the average domestic household size of Islands District Council in 2021 Population Census: Summary Results, published by the Census and Statistics Department
Total Number of residents	1,167	persons	
Unit flow	0.27	m^3/person/day	Referred to the planning unit flow for Domestic (housing type specific) – R2 in Table T-1 of GESF.
Average Sewage Discharge	315.1	m^3/day	
Management Office (G/F)			
GFA	58.64	m^2	Provided by project team
Worker Density per GFA (in 100m^2)	3.4	person/100m^2	Refer to worker density of All Economic Activities (All Type) in Table 8 of CIFSUS
Total number of employees	2	persons	
Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF
Average Sewage Discharge	0.6	m^3/day	
Total Average dry weather flow of the Proposed Development	**315.7**	**m^3/day**	

4.5. Peak Discharge from Study Areas

4.5.1. Flow rates of peak discharge from the proposed development and other catchment areas are estimated in accordance with the DSD's "Sewerage Manual Part 1". Peak flows from different catchments at the study area are summarized in **Table 4-5** and detailed calculation for proposed development are given in ***Appendix F***.

Table 4-5 Population and Sewage Flow Estimation

Contributing Catchment Area	Connected Manhole	Revised ADWF (m^3/day)[1]	Contributing Population[2]	Peaking Factor[3]	Total Peak Discharge (m^3/s)[4]
Application Site	PLUG C0.2	315.7	1,169	6.0	0.022
Application Site + Catchment A to Catchment E	SE-C13	1059.5	3,924	6.0	0.074
Application Site + Catchment A to Catchment M	SE-E28	35,539.7	131,628	3.5	1.444

Notes:
[1] Revised ADWF (m^3/day) = ADWF (m^3/day) × Catchment Inflow Factor
[2] According to Section 12.1 of GESF, Contributing Population = Calculated Total Average Flow (m^3/day) ÷ 0.27 (m^3/person/day)
[3] According to Table T-5 of GESF
[4] Total Peak Discharge (m^3/s) = (Revised ADWF (m^3/day) × Peaking Factor ÷ 86400s/day)

5. Sewerage Capacity

5.1.1. According to the "Sewerage Manual – Key Planning Issues and Gravity Collection System" (Sewerage Manual) published by DSD in 2013, the capacities of respective sewers have been calculated based on the Colebrook White's equation. The roughness coefficients (k_s) of 1.5mm for polyethylene sewer pipe, under poor condition are adopted in the assessment in accordance with Table 5 of DSD's "Sewerage Manual Part 1".

5.1.2. The sewerage impact on various segments of the sewer was evaluated by comparing the estimated peak flow against the capacity of the respective sewer segments. The detailed calculations are provided in ***Appendix F***.

5.1.3. For the capacity of the ESPS, the design capacity is 35,727m^3/day. Given that the ADWF and peak flow from the Application Site are 315.7m^3/day and 0.022m^3/s respectively. Comparing with CEDD report "Sewerage System and Sewage Implication Review for Population Increase and Development Intensity – Case 2 (Final)" (Ref. P149-03), the original designed sewage flow generated from Area 134 is 314.8m^3/day which is lower than the latest designed sewage flow rate. However, the increase represents an overall percentage change of 0.003%, and the sewage discharge from the Application Site accounts for less than 1% of the ESPS design capacity, as shown in table below. As the sewage contribution from the Application Site is minimal, no adverse sewerage impact is expected from the increased population in the proposed development.

Table 5-1 Comparison between Original and Updated Sewage Flow Contribution to East Sewerage Pumping Station

	Original	**Newly estimated**
ADWF	314.8m^3/day	315.7m^3/day
Capacity of ESPS (Design)	35,727m^3/day	
Percentage contribution to ESPS	0.881%	0.884%
Overall percentage change [1]	**+ 0.003%**	

Notes:
[1] Positive sign denotes increase, whereas negative sign denotes reduction

6. Result and Discussion

6.1. Daily Flow and Peak Flow from Existing and Proposed Development

6.1.1. The estimated daily flow and peak flow of the proposed redevelopment will be 315.7 m^3/day and 0.022 m^3/s, taking catchment inflow factor of 1.0 into account. **Table 6-1** tabulates the sewage generated proposed development.

Table 6-1 Sewage Generated from Proposed Development

Development	Daily Flow (m^3/day)	Peak Flow (m^3/s)
Proposed Development	315.7	0.022

6.2. Sewage Generation after Proposed Development

6.2.1. After the development, the percentages of used capacity for the existing sewers (segment S1 – S4) range from 18% to 77%. Flow estimation and capacity checking are detailed in ***Appendix D*** and ***Appendix F***, respectively. Used capacity of proposed development is presented in **Table 6-2** below.

Table 6-2 Used Capacity from Proposed Development

Pipe Segments	Used Capacity, % Proposed Development
S1 – S2	18%
S2 – S3	20%
S3 – S4	77%

Notes:
Pipe segment that exceeded 100% used capacity are bolded and underlined.

6.2.2. Based on the results shown above, none of the sewer pipes exceeded their used capacity.

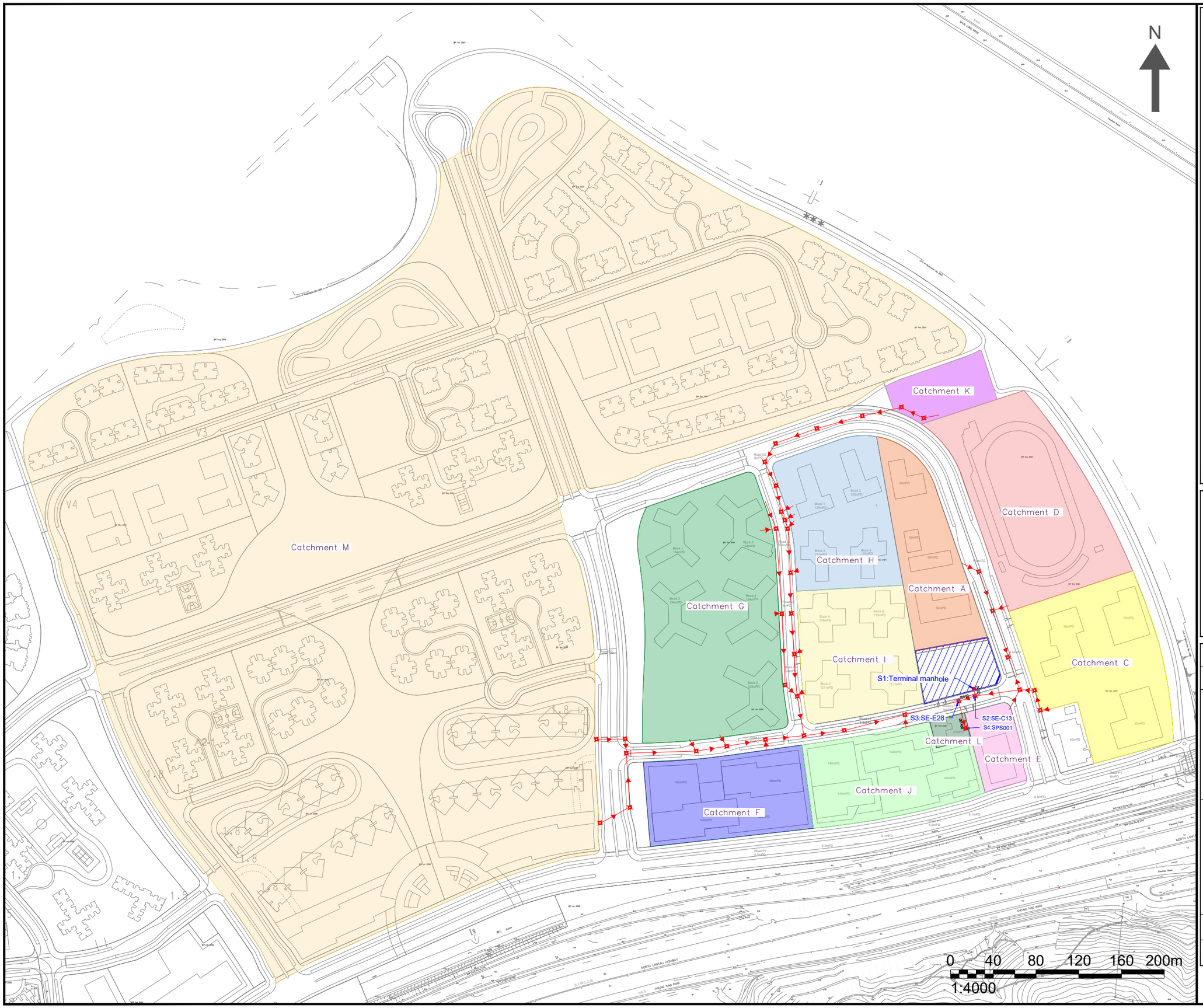
7. Conclusion

7.1.1. A Sewerage Impact Assessment (SIA) has been conducted to evaluate the possible impacts on the public sewerage network due to the proposed development. The sewage generated from the proposed development will be collected and discharged into the existing 280mm public sewers via Manhole (PLUG C0.2). The result showed that 315.7m^3/day of average sewage discharge and 0.022m^3/s of peak sewage discharge are expected to be generated from the proposed development.

7.1.2. The assessment results demonstrated that all sewers have sufficient sewer capacity to cope with the sewage flow from catchments and the proposed development. Therefore, significant sewerage impact arising from the proposed development on the existing sewers is not expected, no mitigation measures are considered necessary for the existing sewers.

7.1.3. The Applicant will be responsible for the design and construction of the proposed sewer segments between the existing public sewers and the proposed development, which will be further discussed with DSD, while future maintenance of sewers outside the Application Site boundary will be carried out by DSD.

7.1.4. Based on the above, it is concluded that the sewerage impact arising from the proposed development should be acceptable.



NOTES :

Subject Site

Catchment Area

Sewer Pipe

Sewer Manhole

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

OVERVIEW OF EXISTING SEWAGE NETWORK AND CATCHMENTS

Drawing No : FIGURE 3.1	Revision : 2
Scale : AS SHOWN	Date : OCT 2025

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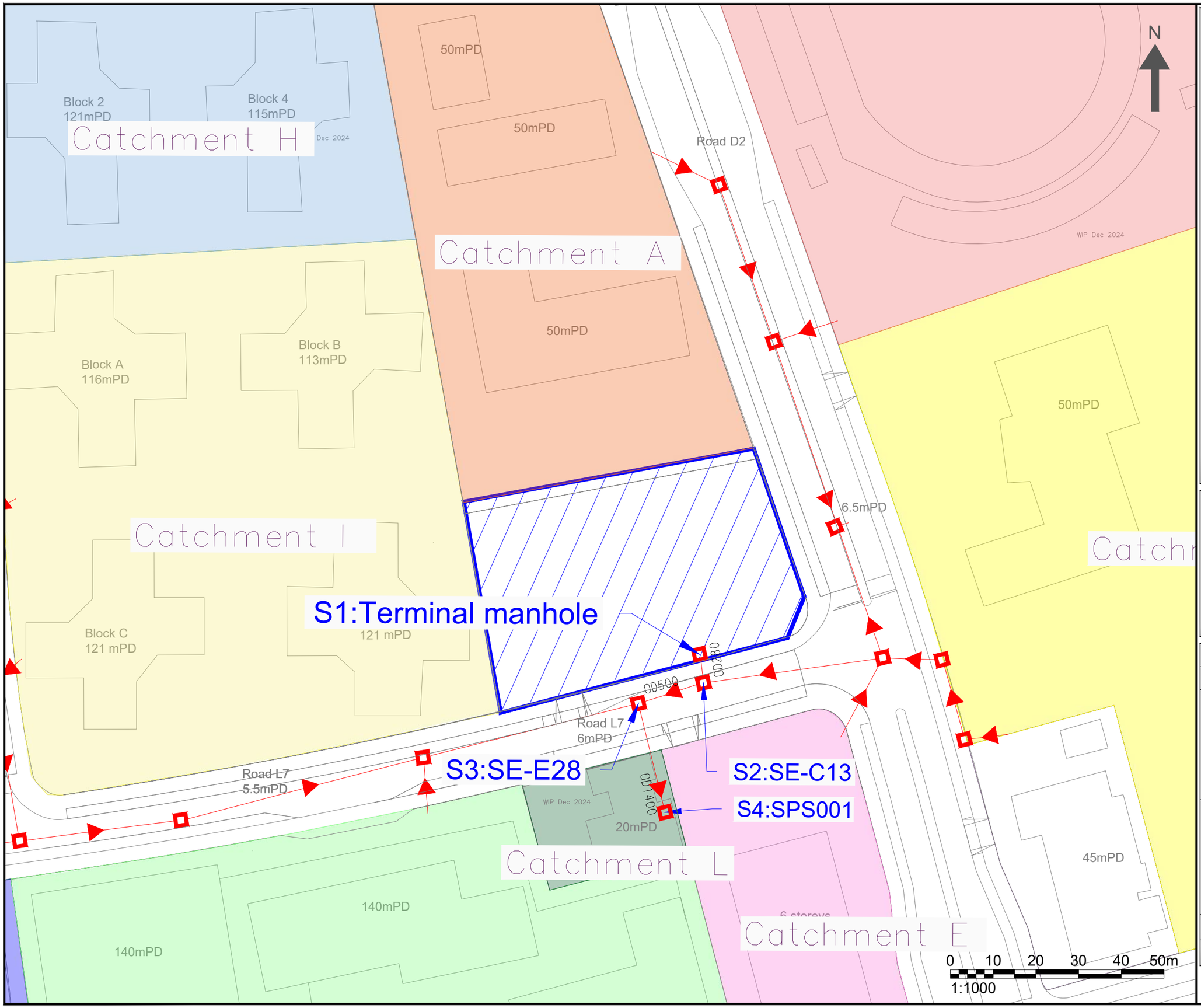
A3 420 x 297

C:\USERS\CHRISTINEGOHSIEWYINN\SYNOLOGYDRIVE\2240 TUNG CHUNG JPOMQ\05 REPORT\01 AEC REPORT\SIA\ISSUE 1\WORKING CG\[2240] TUNG CHUNG DSIA FIGURES.DWG



NOTES :

- Subject Site
- Catchment Area
- Sewer Pipe
- Sewer Manhole

Consultant

Allied Environmental Consultants Limited

Project No. :	2240
Drawing By :	CC

Project :

S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND

Drawing Title :

OVERVIEW OF EXISTING SEWAGE NETWORK AND CATCHMENTS

Drawing No : FIGURE 3.1a	Revision : 2
Scale : AS SHOWN	Date : OCT 2025

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A3 420 x 297

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Appendix C

Sewerage Plan of the Project Site

SEWERAGE MANHOLE SCHEDULE FOR SE-H1 TO SPS001

U/S M.H.	D/S M.H.	U/S G.L. (mPD)	D/S G.L. (mPD)	GRADIENT 1 IN	U/S I.L. (mPD)	D/S I.L. (mPD)	PIPE SIZE (mm) (DN/OD)	MH TYPE U/S	MH TYPE D/S	BACKDROP TO D/S MH	PIPE MATERIAL	BEDDING	SDR NO.
SE-H1	SE-H2	6.000	5.500	220	-1.400	-1.611	800	S1	S1	-	PE	B	17
SE-H2	SE-H3	5.500	5.500	220	-1.611	-1.684	800	S1	S1	-	PE	B	17
SE-H3	SE-H4	5.500	5.000	220	-1.684	-1.788	800	S1	S1	BD2	PE	B	17
SE-H4	SE-H4A	5.000	5.500	220	-3.312	-3.449	800	S1	S1	-	PE	B	17
SE-H4A	SE-H5	5.000	5.500	220	-3.449	-3.657	800	S1	S1	-	PE	B	17
SE-H5	SPS001	5.500	5.500	220	-3.657	-3.700	800	S1	TO SPS	-	PE	B	17

SEWERAGE MANHOLE SCHEDULE FOR SPS001 TO BOX CULVERT NO. 4

U/S M.H.	D/S M.H.	U/S G.L. (mPD)	D/S G.L. (mPD)	GRADIENT 1 IN	U/S I.L. (mPD)	D/S I.L. (mPD)	PIPE SIZE (mm) (OD)	MH TYPE U/S	MH TYPE D/S	BACKDROP TO D/S MH	PIPE MATERIAL	BEDDING	SDR NO.
SPS001	SE-J1	5.500	5.500	187	3.700	3.658	1000	G1	G1	-	PE	B	17
SE-J1	SE-J1A	5.500	5.500	190	3.658	3.445	1000	G1	G1	-	PE	B	17
SE-J1A	SE-J2	5.500	5.100	190	3.445	3.256	1000	G1	H/D	BD2	PE	B	17
SE-J2	BC4	5.100	5.000	190	2.131	2.000	1000	H/D	TO BC4	-	PE	B	

PE pipe

OD 420mm
ID 500mm
Length: 19.201m

UP_INV : 1.59mPD
DN_INV : 1.24mPD

Gradient: 1/55

PE pipe

OD 280mm
ID 235mm
Length: 6.55m

UP_INV : 5.233mPD
DN_INV : 4.3mPD

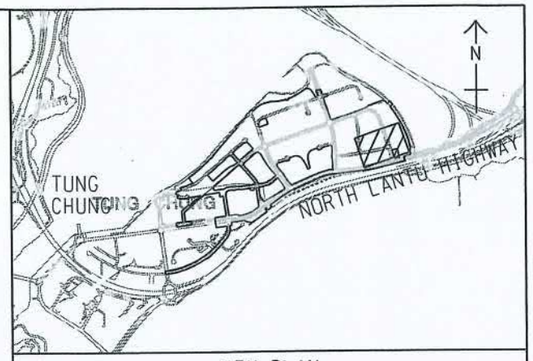
Gradient: 1/22

PE pipe

OD 1400mm
ID 1190mm
Length: 105m

UP_INV : -2.339mPD
DN_INV : -2.401mPD

Gradient: 1/480



KEY PLAN
SCALE 1:50000 (A3)

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60507694/C3/1350.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60507694/C3/SSK1017B TO SSK1018A.
3. THE LEAD-IN LOCATION IS SHOWN FOR INDICATION AND SHALL BE CONFIRMED WITH CORRESPONDING INTERFACING CONTRACTORS.

CONNECTED TO THE CO-USED BOX CULVERT AT I.L. -1.400mPD

CO-USE BOX CULVERT

CONNECTED TO THE CO-USE BOX CULVERT AT I.L. +2.000mPD
CONNECTION DETAILS REFER TO 60507694/C3/5008

ROAD L7

ROAD D2

CUT LINE A-A
SEE DRAWING NO. 60507694/C3/SSK1017B

817900 N

817400 E

817300 E

EXTRACTED FROM DRG. NO. 60507694/C3/1368B & 1370A

PREPARED BY MA

$USER$
$TIME$
$DATE$
$FILE$

AECOM

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

SEWERAGE LAYOUT PLAN AT ROAD L7

SHEET 2 OF 2

SCALE	1:1000 (A3)	DATE	22-MAY-2024
CHECK	TP	DRAWN	KYY
CONTRACT No.	NL/2020/03	DRAWING No.	60507694/C3/SSK1018
		REV	A

Appendix D

Estimation of Sewage Discharge from the Site

1 Proposed Development

JPOMQ Residential Block			
Site Area	4876	m^2	
Flat unit	432	units	
Average housedhold size [1]	2.7	person/unit	Refer to Average Domestic Household Size of Islands District Council in 2021 Population Census: Summary Result, published by Census and Statistics Department
Total Number of Persons	1167	persons	
Unit Flow Factor [2]	0.27	m^3/person/day	Referred to the planning unit flow for Domestic (housing type specific) - R2 in Table T-1 of GESF
Average Sewage Discharge	315.1	m^3/day	
JPOMQ G/F			
Management Office			
GFA	58.64	m2	Provided by project team
Worker Density per GFA (in 100m2)	3.4	person/100 m2	Refer to worker density of All Economic Activities (All Type) in Table 8 of CIFSUS
Total number of employee	2	persons	
Unit Flow Factor [2]	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
Average Sewage Discharge	0.6	m^3/day	
Total			
Total Sewage Generation Rate (DWF)	**315.7**	**m^3/day**	
Catchment Inflow Factor (North Lantau)	1.0		Reference from Table T-4 of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning
Revised Dry Weather Flow	**315.7**	**m^3/day**	
Contributing Population	1169		
Peaking Factor	6		Refer to Table T-5 of GESF
Peak Flow	**0.022**	**m^3/s**	

Notes:
[1] The average household size is made reference to "*2021 Population Census Summary Results* ", published by C&SD.
[2] The unit flow factor is made reference to "*Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (Version 1.0)* ", published by EPD.

Appendix E

Estimation of Sewage Discharge from Catchment Areas

Table 2 - Population Estimation for Catchment Area （data based on CEDD report)

Area No.	Catchment ID	Description	Magnitude	Unit	Remark
135	A	**Other School Use**			
		Total no. of student	1200	persons	based on CEDD SIA report
		Unit flow	0.04	m^3/person/day	Referred to the planning unit flow for School Student in Table T-2 of GESF.
		Total no. of teacher	104	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**77.1**	m^3/day	
		Fire Station			
		FSD quarters			
		Total no. of residents	810	persons	based on CEDD SIA report
		Unit flow	0.27	m^3/person/day	based on Table T-1: Private residential R2 type
		Average dry weather flow	**218.7**	m^3/day	
		Sub-divisional fire Station sum ambulance depot			
		Total no. of employee	150	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**42.0**	m^3/day	
		Total ADWF for Area 135	**337.8**	m^3/day	
137	C	**Post Secondary Institution**			
		Total no. of student	4000	persons	based on CEDD SIA report
		Unit flow	0.04	m^3/person/day	Referred to the planning unit flow for School Student in Table T-2 of GESF.
		Total no. of employee	345	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Total ADWF for Area 137	**256.6**	m^3/day	CEDD SIA report = 256.6m3/d OK
138	D	**Sports Ground**			
		Total no. of spectator	2500	persons	based on CEDD SIA report
		Unit flow	0.032	m^3/person/day	Estimated by HAB in 2015, based on the employment figures of Tseung Kwan O Sports Ground. According to 2015 employment figures of Tseung Kwan O Sports Ground with 5,000 spectatators, the permanent employees are 30. The UFF of 0.032 is estimated by making reference to the deviation under Section 7.4 of the EIA report of Kai Tak Multi-Sports Complex.
		Total no. of employee	15	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Total ADWF for Area 138	**84.2**	m^3/day	
131	E	**Police Station**			
		Total number of person	233	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Total ADWF for Area 131	**65.2**	m^3/day	
		Total ADWF connected to SE-C13	**743.9**	m^3/day	Sum of Catchement A to Catchment E
129	F	**Retail**			
		Total number of employee	736	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Wholesale & Retail J4 in Table T-2 of GESF.
		Average dry weather flow	**206.1**	m^3/day	
		Office			
		Total number of employee	7250	persons	based on CEDD SIA report
		Unit flow	0.08	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Business Services J6 in Table T-2 of GESF.
		Average dry weather flow	**580.0**	m^3/day	
		F&B trade			
		Population of possible F&B trade	73.6	persons	Population of possible F&B trade in TCE is assumed to be 10% of retail employee
		Unit flow	1.58	m^3/person/day	Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
		Average dry weather flow	**116.3**	m^3/day	
		Total ADWF for Area 129	**902.4**	m^3/day	

Table 2 - Population Estimation for Catchment Area （data based on CEDD report)

Area No.	Catchment ID	Description	Magnitude	Unit	Remark
133A	**G**	**Kindergarten**			
		Total no. of student	452	persons	based on CEDD SIA report
		Unit flow	0.04	m^3/person/day	Referred to the planning unit flow for School Student in Table T-2 of GESF.
		Total no. of teacher	51	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**32.4**	m^3/day	
		Management Office			
		Total number of employee	50	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**14.0**	m^3/day	
		Commercial			
		Total number of employee	913	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Wholesale & Retail J4 in Table T-2 of GESF.
		Average dry weather flow	**255.6**	m^3/day	
		F&B trade			
		Total number of employee	393	persons	based on CEDD SIA report
		Unit flow	1.58	m^3/person/day	Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
		Average dry weather flow	**620.9**	m^3/day	
		F&B trade			
		Population of possible F&B trade	96	persons	Population of possible F&B trade in TCE is assumed to be 10% of commercial+management office employee
		Unit flow	1.58	m^3/person/day	Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
		Average dry weather flow	**152.2**	m^3/day	
		Special Residential			
		Total number of residents	18406	persons	based on CEDD SIA report
		Unit flow	0.19	m^3/person/day	based on Table T-1: Private residential R1 type
		Average dry weather flow	**3497.1**	m^3/day	
		Total ADWF for Area 133A	**4572.2**	m^3/day	

Table 2 - Population Estimation for Catchment Area （data based on CEDD report)

Area No.	Catchment ID	Description	Magnitude	Unit	Remark
133B	**H**	**Welfare facilities**			
		Total number of employee	182	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Total number of residents	100	persons	based on CEDD SIA report
		Unit flow	0.19	m^3/person/day	based on Table T-1: Private residential R1 type
		Average dry weather flow	**70.0**	m^3/day	
		Special Residential			
		Total number of residents	7984	persons	based on CEDD SIA report
		Unit flow	0.19	m^3/person/day	based on Table T-1: Private residential R1 type
		Average dry weather flow	**1517.0**	m^3/day	
		Kindergarten			
		Total no. of student	239	persons	
		Unit flow	0.04	m^3/person/day	Referred to the planning unit flow for School Student in Table T-2 of GESF.
		Total no. of teacher	26	persons	
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**16.8**	m^3/day	
		Management Office			
		Total number of employee	25	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**7.0**	m^3/day	
		F&B trade			
		Total number of employee	3	persons	Population of possible F&B trade in TCE is assumed to be 10% of retail employee
		Unit flow	1.58	m^3/person/day	Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
		Average dry weather flow	**4.0**	m^3/day	
		Total ADWF for Area 133B	**1614.7**	m^3/day	
133C	**I**	**Welfare facilities**			
		Total number of employee	194	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Total number of residents	180	persons	based on CEDD SIA report
		Unit flow	0.19	m^3/person/day	based on Table T-1: Private residential R1 type
		Average dry weather flow	**88.5**	m^3/day	
		Special Residential			
		Total number of residents	8382	persons	based on CEDD SIA report
		Unit flow	0.19	m^3/person/day	based on Table T-1: Private residential R1 type
		Average dry weather flow	**1592.6**	m^3/day	
		Kindergarten			
		Total no. of student	233	persons	based on CEDD SIA report
		Unit flow	0.04	m^3/person/day	Referred to the planning unit flow for School Student in Table T-2 of GESF.
		Total no. of teacher	26	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**16.6**	m^3/day	
		Management Office			
		Total number of employee	25	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**7.0**	m^3/day	
		F&B trade			
		Total number of employee	3	persons	Population of possible F&B trade in TCE is assumed to be 10% of management office
		Unit flow	1.58	m^3/person/day	Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
		Average dry weather flow	**4.0**	m^3/day	
		Total ADWF for Area 133C	**1708.7**	m^3/day	

Table 2 - Population Estimation for Catchment Area （data based on CEDD report)

Area No.	Catchment ID	Description	Magnitude	Unit	Remark
130	**J**	**Office**			
		Total number of employee	6900	persons	based on CEDD SIA report
		Unit flow	0.08	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Business Services J6 in Table T-2 of GESF.
		Average dry weather flow	**552.0**	m^3/day	
		Retail			
		Total number of person	739	person	based on CEDD SIA report
		Unit flow	0.28	m3/person/day	Referred to the planning unit flow for Commercial Employee + Wholesale & Retail J4 in Table T-2 of GESF.
		Average dry weather flow	**207.0**	m^3/day	
		F&B trade			
		Total number of employee	74	person	Population of possible F&B trade in TCE is assumed to be 10% of retail employee
		Unit flow	1.58	m3/person/day	Commercial Employee + Restaurants & Hotels - J10 in Table T-2 of GESF.
		Average dry weather flow	**116.8**	m^3/day	
		Total ADWF for Area 130	**875.8**	m^3/day	
52 (E6)	**K**	**Open Space**			
		Total number of employee	14	persons	based on CEDD SIA report
		Unit flow	0.28	m^3/person/day	Referred to the planning unit flow for Commercial Employee + Community, Social & Personal Services in Table T-2 of GESF.
		Average dry weather flow	**3.9**	m^3/day	
		Open Space (No shower room)			
		Total number of person	10	person	based on CEDD SIA report
		Unit flow	10.8	m3/person/day	Calculation of ADWF in open space retrieved from agreed SIA for Open Space Development in Tung Chung New Town Extension (East) in Agreement No. 9AJ126.
		Average dry weather flow	**108.0**	m^3/day	
		Open Space (Visitor)			
		Total number of person	3000	person	based on CEDD SIA report
		Unit flow	0.01	m3/person/day	Calculation of ADWF in open space retrieved from agreed SIA for Open Space Development in Tung Chung New Town Extension (East) in Agreement No. 9AJ126.
		Average dry weather flow	**30.0**	m^3/day	
		Total ADWF for Area 52	**141.9**	m^3/day	
132	**L**	**Sewage Pumping Station**			
		Total number of employee	10	persons	based on CEDD SIA report
		Unit flow	0.33	m^3/person/day	based on CEDD SIA report
		Total ADWF for Area 132	**3.3**	m^3/day	
	M	**Total ADWF for Catchement M**	**24661.2**	m^3/day	based on CEDD SIA report, the accumulated ADWF connecting manhole SE-A15 to SE-E23A is 24,661.2m3/day
		Total ADWF connected to SE-E28	**35224.0**	m^3/day	Catchment A to Catchment M

Appendix F

Calculation of Flow Capacity of Proposed Development

Calculation of Flow Capacity of Proposed Development

Sewer No.				Material	Outer Diameter (m)	Internal Diameter (m) [a]	Cross-section Area (m^2)	Length (m)	Inlet mPD (m) [a]	Outlet mPD (m) [a]	Hydraulic pipeline roughness (m) [b]	Hydraulic Gradient	Mean Velocity (m/s) [c]	Max Capacity of Sewer (m^3/s)	Total Average Dry Weather Flow	Catchment Inflow Factor	Revised Total Average Dry Weather Flow [g]	Contributing Population	Peaking Factor	Peak Discharge from Project Site m^3/day	Peak Discharge through Manhole m^3/s	Percentage of capacity after Development	Proposed Development Contribution	Remark
ID	From	ID	To		d	D	A	l				s	V		m^3/day	[f]	m^3/day	[d]	[e]			[h]		
S1	PLUG C0.2	S2	SE-C13	PE	0.28	0.235	0.043	6.550	4.300	4.000	0.0015	0.04580	2.841	0.123	315.7	1.0	315.7	1169	6.0	1893.9	0.022	18%	18%	The Site
S2	SE-C13	S3	SE-E28	PE	0.50	0.420	0.139	19.201	1.590	1.240	0.0015	0.01823	2.607	0.361	1059.5	1.0	1059.5	3924	6.0	6357.1	0.074	20%	6%	The Site + Catchment A-E
S3	SE-E28	S4	SPS001 Sewage pumping Station (TCE East)	PE	1.40	1.190	1.112	29.735	-2.339	-2.401	0.0015	0.00209	1.686	1.876	35539.7	1.0	35539.7	131628	3.5	124776.8	1.444	77%	1%	The Site + Catchment A-M

[a] Reference from CEDD Design Report

[b] Reference from CEDD Design Report,
Pipe is made up of polyethylene, roughness coefficient = 0.0015m

[c] The velocity is calculated using the Colebrook-White Formula:

$$V = -2(2gDS)^{0.5} \log\left(\frac{k}{3.7D} + \frac{2.5v}{D(2gDS)^{0.5}}\right)$$

where
k = Colebrook-White roughness coefficient, in meter
V = mean velocity (m/s)
D = circular cross-section pipe, inside diameter (m)
S = slope, in meters per meter
v = kinematic viscosity of water, in meter per second (0.000001306 m/s)
g = gravitational acceleration (m/s2) (9.807m/s2)

[d] The Contributing Population is defined as:

$$\text{Contributing Population} = \frac{\text{Calculated total average flow } (m^3/\text{day})}{0.27\ (m^3/\text{person/day})}$$

[e] Reference from Table T-5 of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning
[f] Reference from Table T-4 of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning
[h] Revised Total Average Dry Weather Flow = Total Average Dry Weather Flow x Catchment Inflow Factor
[i] Pipe segment that exceeded 100% used capacity are bolded and underlined

Attachment 6

REPLACEMENT PAGES OF LANDSCAPE MASTER PLAN

Summary of Proposed New Tree Species

Tree Species (Botanicla Name)	Tree Species (Chinese Name)	Size	Spacing (m)	Live- Crown Ratio
Cinnamomum burmannii	陰香	Heavy Standard	5	0.4
Liquidambar formosana	楓香	Heavy Standard	5	0.4
Osmanthus fragrans	桂花	standard	5	0.4

NOTE: Species highlighted in **BOLD** text denote Native plant species.

TUNG CHUNG AREA 135

TUNG CHUNG AREA 133C

C LP_006

B LP_006

A LP_006

K

B

U

C

D

E

F

A

Y

Z

I

H

G

6.50 TOS 5.20 SFL

6.50 TOS 5.70 SFL

6.40 FFL 6.20 SFL

CAR RAMP UP TO 1/F

BUILDING LINE ABOVE

LOADING / UNLOADING AREA

HGV : 2nos.

RAMP UP

E&M

RSMRC

'A'&'D'

CAR PARK

CAR PARKING SPACE : 25nos

DRIVEWAY (EMERGENCY VEHICULAR ACCESS)

RS&MRC

RCV : 1no.

TOWER 1

LIFT LOBBY

TOWER 2

LIFT LOBBY

GUARD BOOTH

MANAGEMENT OFFICE / TOILET & CHANGING ROOM / MULTI-PURPOSE ROOM

COVERED CORRIDOR

LEGEND

- APPLICATION SITE BOUNDARY
- SPOT LEVEL
- BUILDING LINE ABOVE
- VEHICULAR ENTRANCE/ EXIT
- PEDESTRIAN ENTRANCE/ EXIT
- NEW TREE
- EVA/ VEHICULAR ACCESS
- PLANTING AREA
- HARD PAVED AREA
- LIFT LOBBY
- MANAGEMENT OFFICE/ STAFF FACILITIES
- LIFT/ STAIRCASE/ RSMRC/ PLANTROOM
- IRRIGATION POINT (20 METER RADIUS)
- BOUNDARY FENCE WALL

LANDSCAPE MASTER PLAN - G/F (DWG NO. LP_001)

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

Project no. 2412 S16

REVISON NO. / DATE:	
(-)03/09/2025	

03/09/2025
Rev. -

N

0 3 6 9 15m

Landscape Consultant

SLSL
STEPHEN LAI STUDIO LIMITED
G/F, Sun Chun Street, Tai Hanf Hong Kong

Architect

Ivanho Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
JPOMQ@ivanhoarchitect.com

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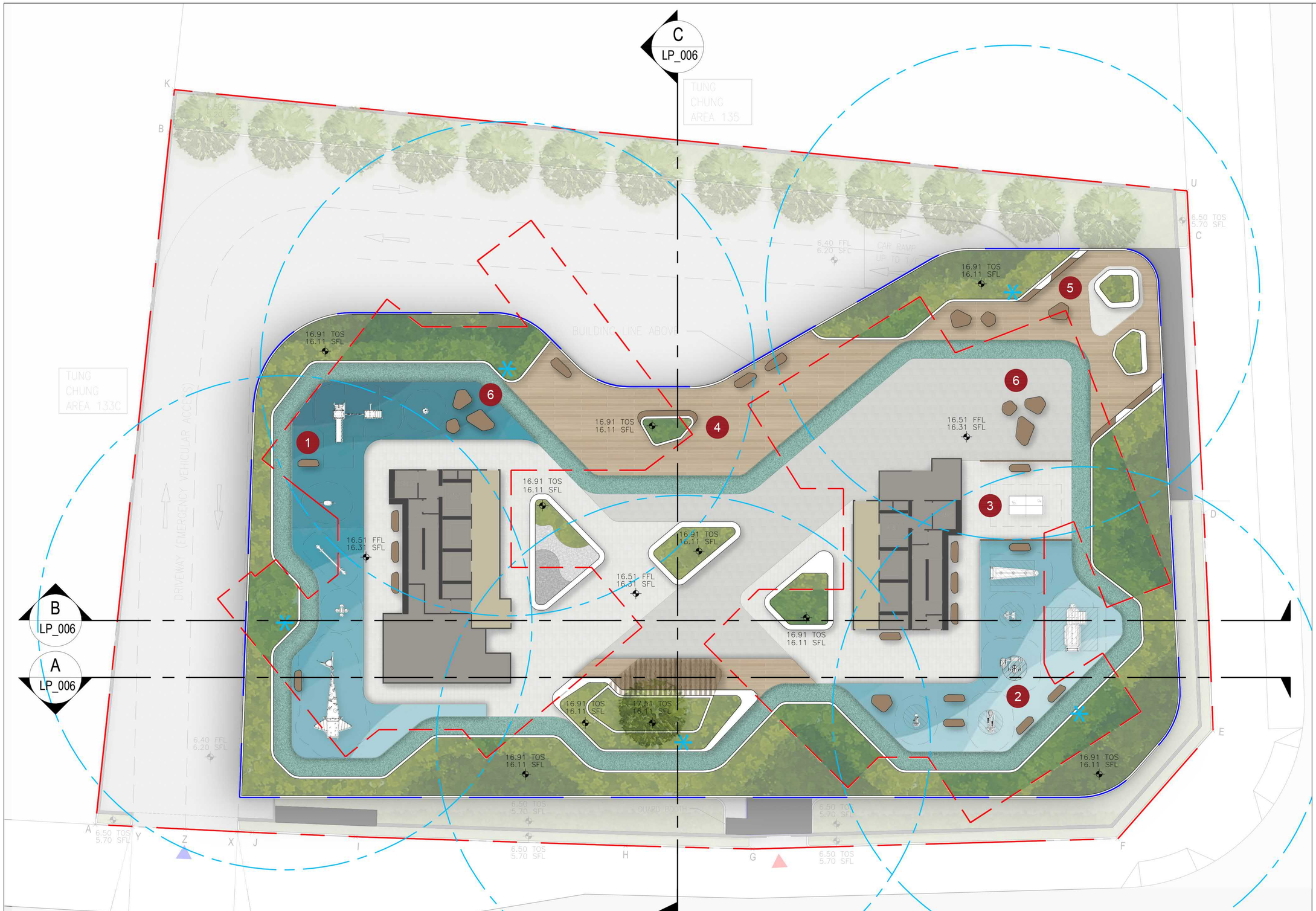

LEGEND

- APPLICATION SITE BOUNDARY
- SPOT LEVEL
- SECOND FLOOR
- BUILDING LINE ABOVE
- NEW TREE
- PLANTING AREA
- COVERED PLANTING AREA
- HARD PAVED AREA
- SAFETY MAT
- TIMBER DECK
- BENCH
- LIFT LOBBY
- LIFT/ STAIRCASE/ RSMRC
- IRRIGATION POINT (20 METER RADIUS)
- 1 CHILDREN PLAY AREA
- 2 FITNESS AREA
- 3 TABLE TENNIS TABLE
- 4 GREEN VIEW CORRIDOR
- 5 SEA VIEW PLATFORM
- 6 LEISURE SEATING SPACE

LANDSCAPE MASTER PLAN - 2/F (DWG NO. LP_002)

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

Project no. 2412	S16
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N

0 3 6 9 15m

Landscape Consultant

SLSL
STEPHEN LAI STUDIO LIMITED
G/F, Sun Chun Street, Tai Hanf Hong Kong

Architect

Ivanho Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
JPOMQ@ivanhoarchitect.com

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Attachment 7

EMAIL CONFIRMATION FROM HONG KONG POLICE FORCE ON PARKING PROVISION

From: cip-2b-p-d@police.gov.hk
Sent: Tuesday, October 21, 2025 4:14 PM
To: CKM Asia
Cc: JPOMQ; Kelvin Chung; lamyw2@archsd.gov.hk; sp-2-p-d@police.gov.hk; wonglss2@archsd.gov.hk
Subject: Re: Proposed Junior Police Officers Married Quarters at Area 134 in Tung Chung New Town Extension (East) (TPB ref.: A/I-TCE/6)

Dear Tommy,

Please note that we have no adverse comments on the proposed provisions.

I would like to take this opportunity to quote the relevant provision of vehicles from the paper for clarification, which are: -

- 87 private car parking spaces;
- 13 motorcycles spaces; and
- 22 bicycle spaces.

Grateful if you could confirm the above accuracy of the information, as the motorcycles spaces part is missing out in your previous email.

BRs,
Otto Wong

Chief Inspector of Police (2B)
Planning and Development Branch
Hong Kong Police Force
Tel : 3660 7622 Fax : 2856 2922

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"CKM Asia" <mail@ckmasia.com.hk>
2025/10/20 16:55

To: "ottowong@police.gov.hk" <ottowong@police.gov.hk>
Cc: "cip-2b-p-d@police.gov.hk" <cip-2b-p-d@police.gov.hk>, "sp-2-p-d@police.gov.hk" <sp-2-p-d@police.gov.hk>, "wonglss2@archsd.gov.hk" <wonglss2@archsd.gov.hk>, "lamyw2@archsd.gov.hk" <lamyw2@archsd.gov.hk>, "Kelvin Chung" <kelvin.chung@townland.com>, "JPOMQ" <JPOMQ@ivanhoarchitect.com>
Subject: Proposed Junior Police Officers Married Quarters at Area 134 in Tung Chung New Town Extension (East) (TPB ref.: A/I-TCE/6)
Reference:

Dear Otto Sir,

We refer to comments B1 and B3 from Transport Department on the Proposed Junior Police Officers Married Quarters at Area 134 in Tung Chung New Town Extension (East) (TPB ref.: A/I-TCE/6). It is much appreciated if you can confirm before 21 October 2025, your agreement to the following provision within the captioned Proposed Junior Police Officers Married Quarters at Area 134 in Tung Chung New Town Extension (East):

(i) 87 car parking spaces
(ii) 22 bicycle parking spaces

Thank you for your attention.

Regards,

Tommy Law
CKM Asia Limited
Traffic and Transportation Planning Consultant
21st Floor, Methodist House
36 Hennessy Road
Wan Chai, Hong Kong
Tel: (852) 2520 5990
Fax: (852) 2528 6343
Email: mail@ckmasia.com.hk
Website: www.ckmasia.com.hk

[attachment "TD comments on A_I_TCE_6.pdf" deleted by cip-2b-p-d/P&D/STATION/POLICE/HKSARG]

Attachment 8

REPLACEMENT PAGE OF TRAFFIC IMPACT ASSESSMENT

Use	HKPSG Recommendation 432 flats comprise of 378 flats @ 40.1 – 70m^2, 54 flats @ 70.1 – 100m^2	Proposed Provision
Residential	1 motorcycle parking space per 100 – 150 flats Minimum = 432 / 150 = 2.9, say 3 nos. Maximum = 432 / 100 = 4.3, say 5 nos.	13 nos. @ 2.4m(L) x 1m(W) x 2.4m(H) > maximum
	Loading / Unloading Bay	
Residential	Minimum of 1 loading / unloading bay for goods vehicles within the site for every 800 flats or part thereof, subject to a minimum of 1 bay for each housing block = minimum 2nos. for 2 residential blocks	2 nos. HGV@ 11m(L) x 3.5m(W) x 4.7m(H) = HKPSG recommendation, OK
	Bicycle parking spaces	
Residential	Bicycle parking spaces shall be provided in the residential developments where proper cycle tracks with direct connection to rail stations are accessible. The following guidelines on the level of bicycle parking provision for these residential developments are recommended: (a) within a 0.5-2km radius of a rail station, 1 bicycle parking space for every 15 flats with flat size smaller than 70m^2. (b) outside a 2km radius of a rail station, 1 bicycle parking space for every 30 flats with flat size smaller than 70m^2. Since the Proposed JPOMQ is located within 2km radius of the Tung Chung East Station, provision rate (a) is adopted, and the calculation based on the HKPSG is presented below: Bicycle parking spaces to be provided for 324 flats with flat size < 70m^2 = 324 / 15 = 21.6, say 22 nos.	22 nos. = HKPSG recommendation, OK

2.4 Table 2.2 shows that the car parking spaces, loading / unloading bay and bicycle parking spaces provided comply with the recommendation of the HKPSG.

2.5 In order to satisfy the operational needs of the residents of the Proposed JPOMQ at Area 134 in TCNTE, a total of 13 motorcycle parking spaces are provided.

2.6 The carpark layout plans for G/F and 1/F are shown in Figures 2.1 – 2.2.

Swept Path Analysis

2.7 The CAD-based swept path analysis program, Autodesk Vehicle Tracking, was used to check the ease of vehicle manoeuvring. Vehicles are found to have no manoeuvring problems and all vehicles could enter and leave the spaces with ease. The swept path analysis drawings for critical movements are found in Appendix A.

Attachment 9

REPLACEMENT PAGES OF VISUAL IMPACT ASSESSMENT

TABLE OF CONTENTS

1 INTRODUCTION 4
1.1 BACKGROUND 4
1.2 OUTLINE OF THE VISUAL IMPACT ASSESSMENT 5

2 METHODOLOGY FOR VISUAL IMPACT ASSESSMENT 6
2.1 METHODOLOGY 6

3 VISUAL CONTEXT AND VISUAL ELEMENTS 7
3.1 SITE LOCATION AND EXISTING CONDITION 7
3.2 SURROUNDING CONTEXT 8
3.3 VISUAL ELEMENTS 8

4 PROPOSED DEVELOPMENT 9
4.1 BASELINE SCHEME 9
4.2 PROPOSED SCHEME 9
4.3 DESIGN CONSIDERATION 10

5 IDENTIFICATION OF BASELINE VISUAL CONDITION 11
5.1 ASSESSMENT AREA 11
5.2 VIEWING POINTS 11

6 VISUAL APRAISAL 12
6.1 INTRODUCTION 12
6.2 VIEWPOINT 1 - VIEW FROM TUNG MUI ANCIENT TRAIL 12
6.3 VIEWPOINT 2 - VIEW FROM THE PLANNED LINEAR PARK AT TUNG CHUNG AREA 145B 13
6.4 VIEWPOINT 3 - VIEW FROM THE PLANNED WATERFRONT PROMENADE AT TUNG CHUNG AREA 52 14
6.5 MITIGATION MEASURES 15

7 CONCLUSION AND SUMMARY OF IMPACTS 16
7.1 SUMMARY OF VISUAL IMPACTS 16

6 VISUAL APRAISAL

6.1 INTRODUCTION

The visual impacts of the Proposed JPOMQ on the selected VPs are assessed and described in this section. The locations of the VPs are shown in **Figure 5.1**.

6.2 VIEWPOINT 1 - VIEW FROM TUNG MUI ANCIENT TRAIL

The comparison of the Proposed JPOMQ under baseline scheme and proposed scheme for this VP is shown in **Figure 6.1**.

6.2.1 Effects on Visual Composition

The existing visual composition of this VP comprises vegetation, the highway, and the railway in the foreground. The background consists of the planned developments at the TCNTE, the sea, and open sky. From this VP, the Proposed JPOMQ, along with the nearby public housing developments at Area 133 and commercial developments at Area 130, creates a cluster of high-rise development. The maximum building height of both baseline and proposed schemes is lower than the maximum building height of the surrounding developments in Area 129, 130, and 133. Consequently, the proposed scheme has a **negligible** visual impact on the overall visual composition from this VP.

6.2.2 Effects on Visual Obstruction

In comparison to the baseline scheme, the proposed schemes will slightly obstruct more views of the sea and open sky in the background. However, they contribute to a cohesive building form alongside the surrounding developments. The change in visual impact between the baseline and proposed schemes is considered **slightly adverse**, as most of the sky and sea views remain unobstructed.

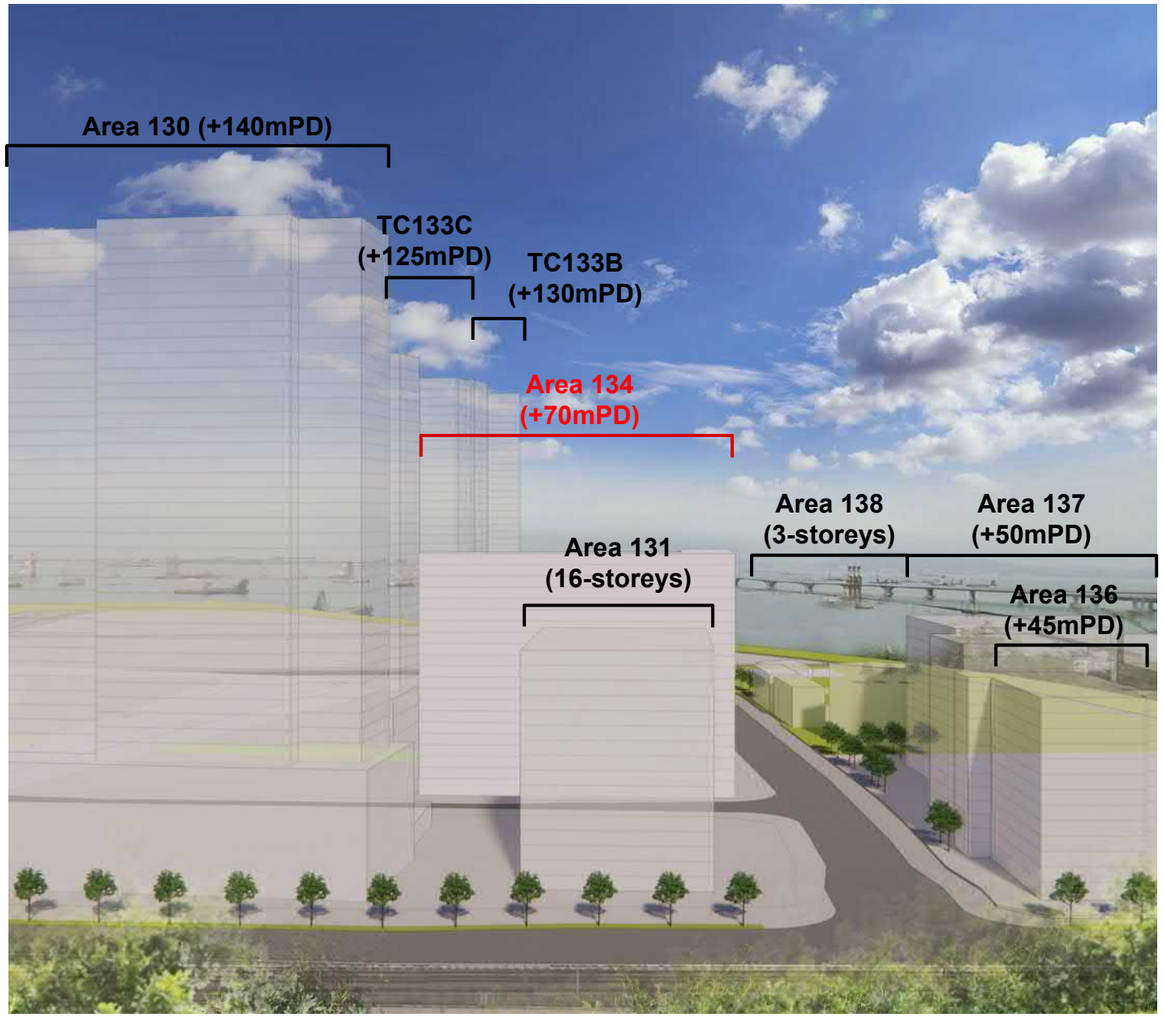
6.2.3 Effects on Public Viewers

The public viewers of this VP are mostly hikers and other recreational users, whom are of transient nature. When viewing from this VP, both baseline and proposed schemes of the Proposed JPOMQ will be part of the cluster of high-rise development and with a slightly lower building height compared with the surrounding developments in Area 130 and 133. Therefore, the Proposed JPOMQ will not be incompatible or isolated. The visual change to the viewers is **slightly adverse**.

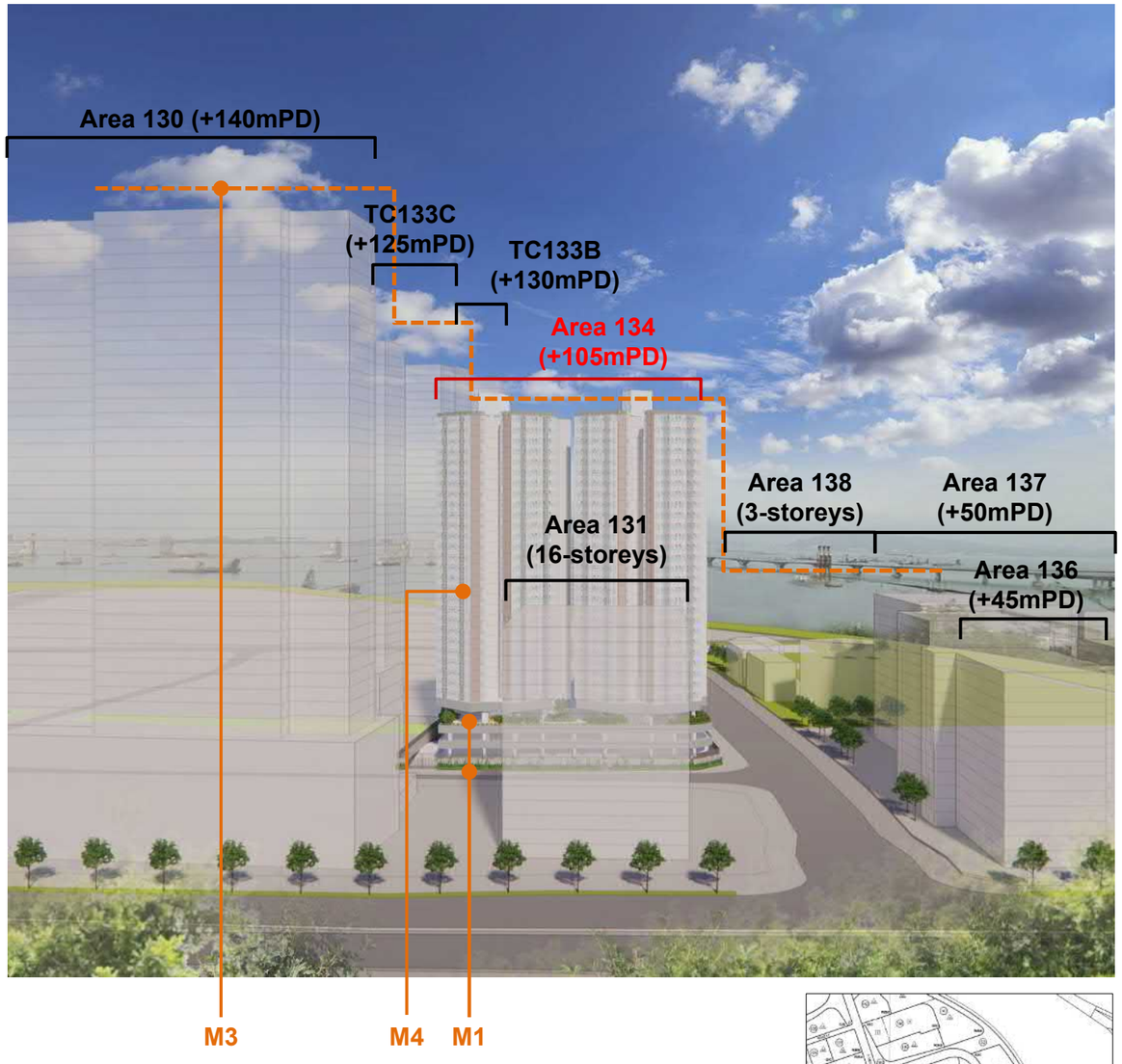
6.2.4 Effects on Visual Resources

The open sky view and sea view at the background is the major visual resources at this VP. Both baseline and proposed schemes of the Proposed JPOMQ will be integrated with the overall planned development at the TCNTE and most of the sky and sea views remain unobstructed. There is **slightly adverse** impact to the visual resources.

BASELINE SCHEME



PROPOSED SCHEME



VIEWPOINT 1 - VIEW FROM TUNG MUI ANCIENT TRAIL (FIGURE 6.1)

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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Landscape Consultant
SLSL
STEPHEN LAI STUDIO LIMITED
G/F, Sun Chun Street, Tai Hanf Hong Kong

Architect
Ivanho Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
JPOMQ@ivanhoarchitect.com

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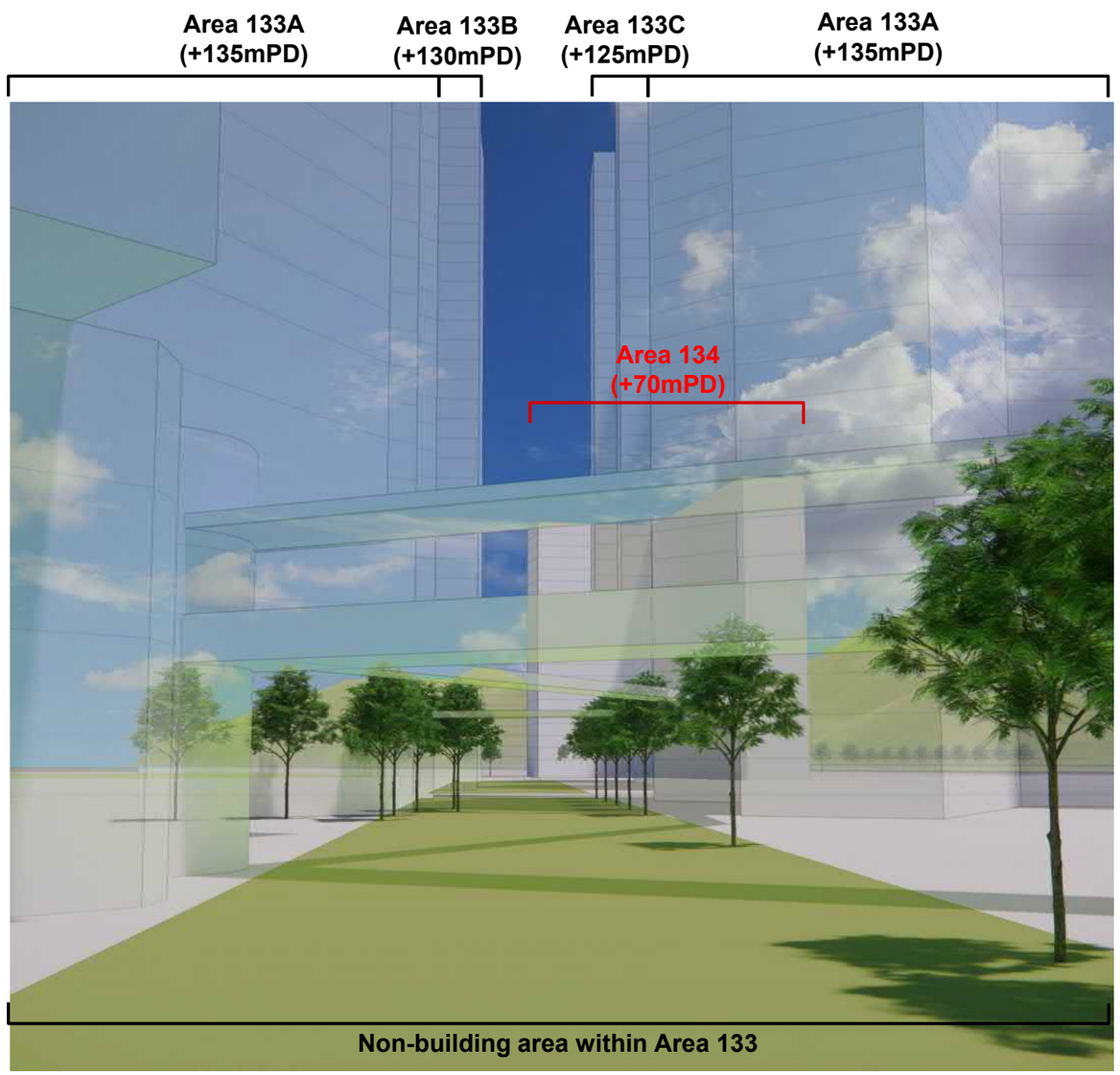
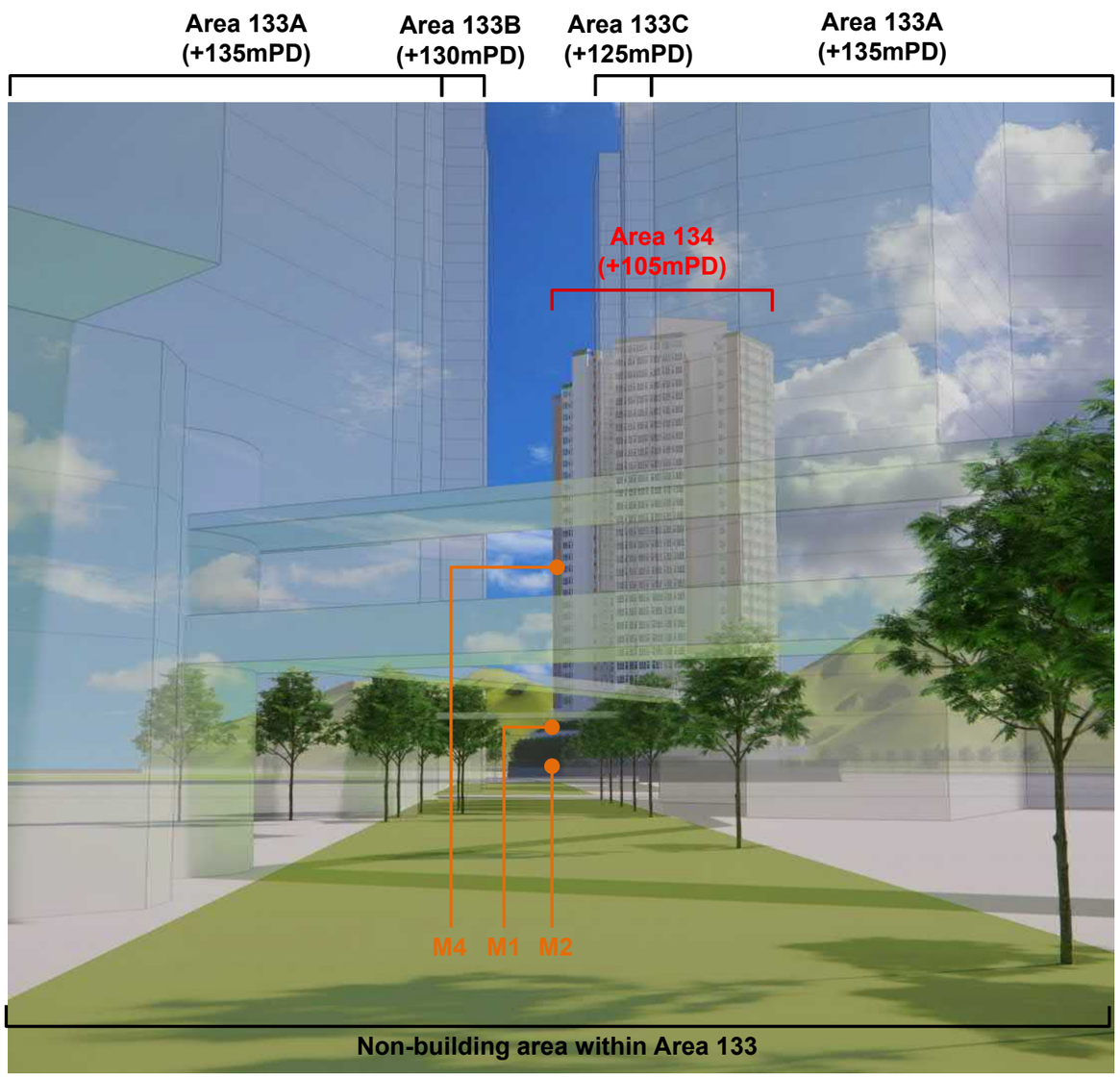
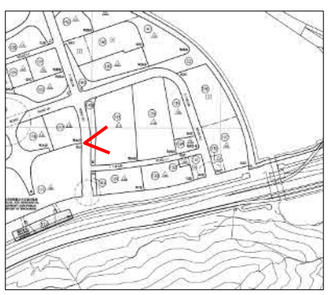
BASELINE SCHEME



PROPOSED SCHEME





VIEWPOINT 2 - VIEW FROM THE PLANNED LINEAR PARK AT TUNG CHUNG AREA 145B (FIGURE 6.2)

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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Landscape Consultant
SLSL
STEPHEN LAI STUDIO LIMITED
G/F, Sun Chun Street, Tai Hang Hong Kong

Architect
Ivanho Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
JPOMQ@ivanhoarchitect.com

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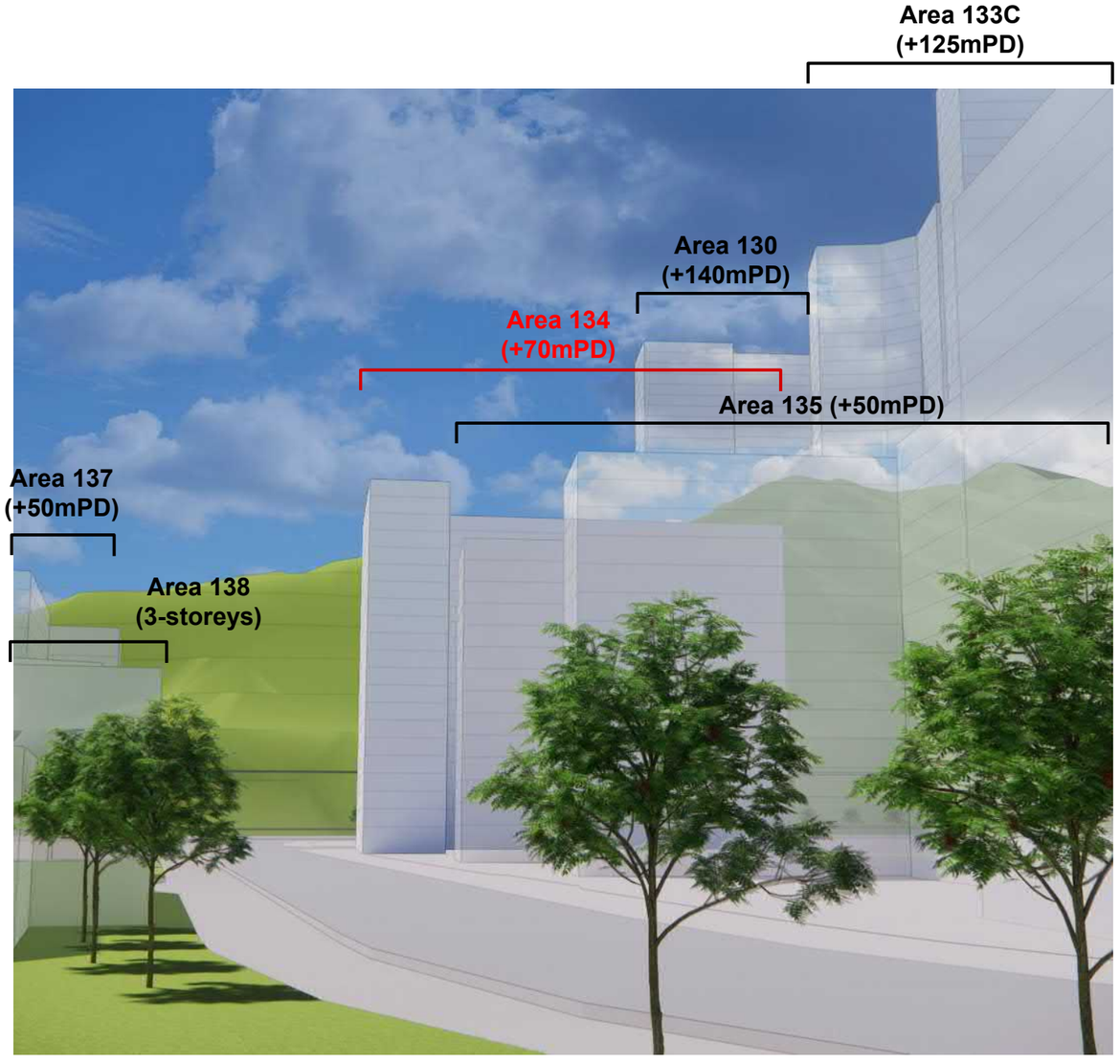
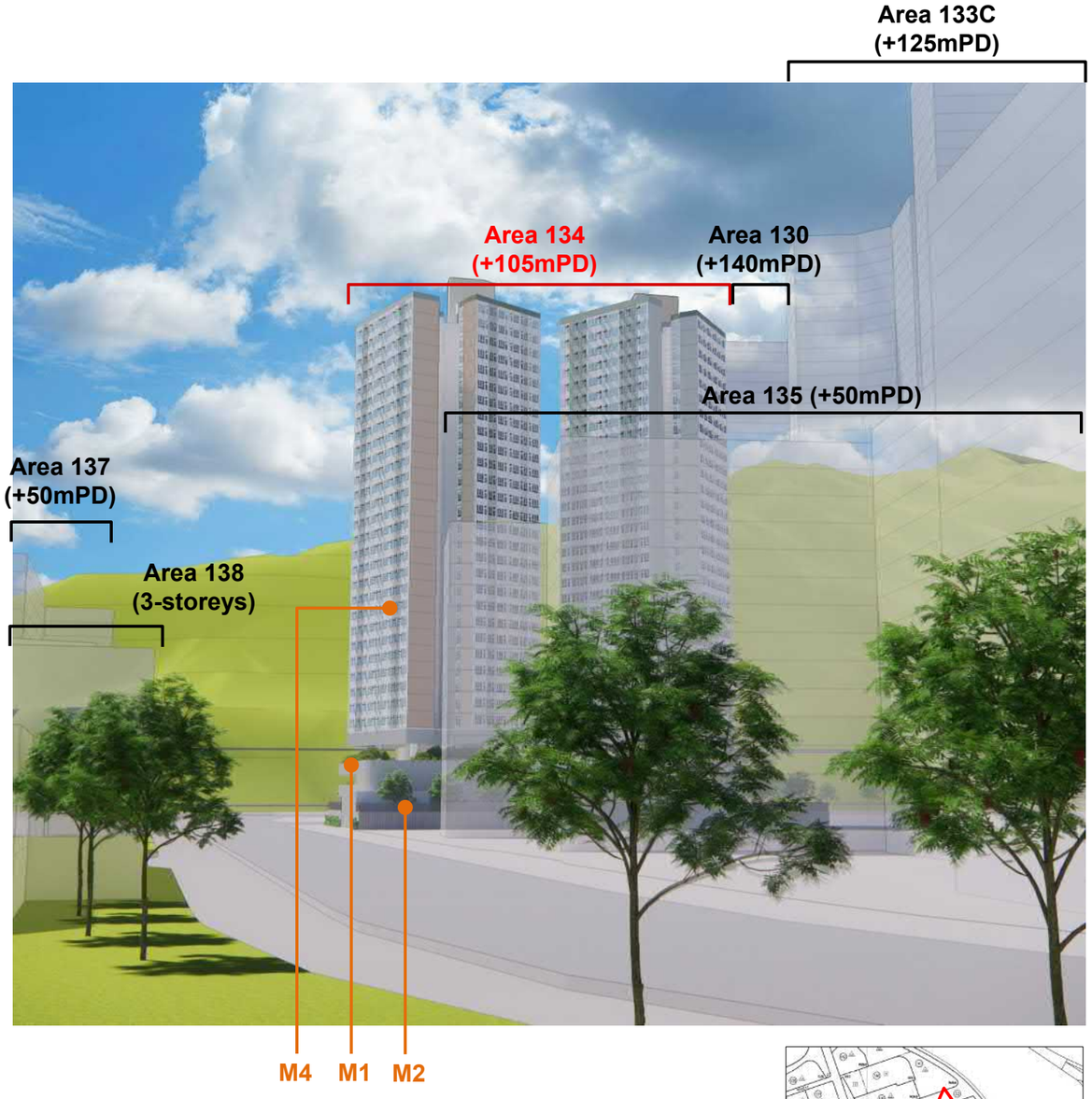
BASELINE SCHEME



PROPOSED SCHEME



VIEWPOINT 3 - VIEW FROM THE PLANNED WATERFRONT PROMENADE AT TUNG CHUNG AREA 52 (FIGURE 6.3)

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community(1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 and 135, Tung Chung, Lantau Island

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Landscape Consultant
SLSL
STEPHEN LAI STUDIO LIMITED
G/F, Sun Chun Street, Tai Hanf Hong Kong

Architect
Ivanho Architect Limited
803, 8/F, Lee Garden Five, 18 Hysan Avenue
Causeway Bay, Hong Kong.
T +852 . 2882 2677 F +852 . 2576 7196
JPOMQ@ivanhoarchitect.com

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6.5 MITIGATION MEASURES

Mitigation measures are proposed to reduce and eliminate the visual impacts of the proposed development. The specific actions and design strategies are described below and are visually detailed in Figures 6.1, 6.2, and 6.3.

6.5.1 Landscape and Green Buffer Strategy

Extensive landscape treatments will be implemented at both at-grade and podium levels to significantly enhance green coverage and effectively reduce the visual impact of the Proposed JPOMQ. Specifically:

No.	Description
M1	**Large shrubs and green hedges** will be provided along the boundary fence wall to soften the building's solid mass and act as green buffer plantings for the surrounding developments.
M2	**A row of new trees** will be provided on the ground floor along the north side, serving as a greenery backdrop when viewed from the podium floor and creating a further green buffer to adjacent lots.

6.5.2 Architectural Integration and Façade Treatment

No.	Description
M3	The Proposed JPOMQ will be designed to **conform to the overall visual context** and the **intended stepped building height concept of the TCE**, thereby ensuring cohesive integration with the surrounding urban fabric. Specifically, the proposed development's height strategically falls between the adjacent higher buildings (Areas 133A, 133B, and 133C) and the lower buildings to the east (Areas 136, 137, and 138). This graduated approach directly aligns with the TCE concept of creating a stepped height profile across the development zone.
M4	**Light-toned façade materials/finishes** will be explored during the detailed design stage to minimize the building's visual presence and overall impact. These specific mitigation measures regarding façade treatment will be finalized in the detailed design phase.
M5	The proposed development provided a setback from the northern boundary. This feature ensures that the structures of the proposed development will not encroach into the planned breezeway designated within Area 133, effectively preserving this vital corridor and mitigating visual obstruction.

7 CONCLUSION AND SUMMARY OF IMPACTS

7.1 SUMMARY OF VISUAL IMPACTS

Based on the analysis on the appraisal of visual changes on Visual Composition, Visual Obstruction, Effects on Public Views and Effects on Visual Resources, the overall visual impact caused by the Proposed JPOMQ of the VPs are presented in **Table 5.1**.

TABLE 5.1 Summary Table of Visual Impacts

VPs	Visual Composition	Visual Obstruction	Effects on Public Viewers	Effects on Visual Resources	Visual Sensitivity	Overall
VP1: View from Tung Mui Ancient Trail	Negligible	Slightly Adverse	Slightly adverse	Slightly Adverse	Low to Medium	Slightly adverse
VP2: View from the Planned Linear Park at Tung Chung Area 145B	Negligible	Negligible	Negligible	Negligible	Medium to High	Negligible
VP3: View from the Planned Waterfront Promenade at Tung Chung Area 52	Negligible	Slightly adverse	Slightly adverse	Slightly adverse	Medium to High	Slightly adverse

In conclusion, the proposed scheme will incur slightly adverse impacts on the identified VPs and is compatible with the surrounding developments in TCNTE. The integration of the Proposed JPOMQ into the existing visual landscape ensures that key visual resources, such as views of the sky and sea, remain largely unobstructed. While there may be slight adverse effects on visibility at certain points, these changes do not detract significantly from the overall visual experience. Additionally, the proposed scheme respects the stepped building height profile in TCE, further enhancing the coherence of the built environment while maintaining the visual integrity of the area. The proposed scheme with a maximum building height of 105mPD is acceptable in visual terms.

TOWNLAND CONSULTANTS LTD.
URBAN AND REGIONAL PLANNING, DEVELOPMENT CONSULTANCY, MASTER PLANNING, URBAN DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, PROJECT MANAGEMENT AND SOCIAL DEVELOPMENT

Reference ASD/TCNTE/KELVINHC/04 By EMAIL and FAX
Date 27 October 2025

The Secretary, Town Planning Board
c/o Planning Department
15/F North Point Government Offices,
333 Java Road, North Point, HONG KONG

Dear Sir / Madam,

SECTION 16 PLANNING APPLICATION
THE TOWN PLANNING ORDINANCE (CHAPTER 131)

PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY (1)" ZONE AND PROPOSED FLAT (POLICE MARRIED QUARTERS) IN "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE IN GOVERNMENT LAND AT TUNG CHUNG AREAS 134 AND 135, TUNG CHUNG, LANTAU ISLAND (TPB REF: A/I-TCE/6)

We refer to the captioned Planning Application submitted to the Town Planning Board ("**TPB**") on 12 September 2025 and the Further Information (our ref: ASD/TCNTE/KELVINHC/03) dated 23 October 2025.

Further to comments received from the Urban Design and Landscape Unit ("**UD&L**") of Planning Department ("**PlanD**"), please find enclosed our Responses-to-Comments ("**R-to-C**") table at ***Attachment 1*** and replacement page to the Visual Impact Assessment ("**VIA**") at ***Attachment 2*** which have fully addressed the comments from the above-mentioned Government Department.

Please note that these responses are clarifications only and there is no material change to the S16 Planning Application. Should there be any queries, please do not hesitate to contact the undersigned, Mr Eric Chan or Mr Kelvin Chung.

Yours faithfully,
FOR AND ON BEHALF OF
TOWNLAND CONSULTANTS LIMITED

Vincent Lau
Director

VIN/ERIC/KELVINHC/yv

Enc Attachment 1: R-to-C table
Attachment 2: Replacement Page to the VIA

cc Client / Team

城市規劃顧問

MAIN HONG KONG OFFICE
2801, 28th Floor, 148 Electric Road, North Point, Hong Kong
Telephone : (852) 2521 2911 Facsimile : (852) 2521 6631
E-mail address : tcltd@townland.com Website : www.townland.com

CHINA OFFICE :
Room 1111, Building 1, Yagang Industry and Trade Building, No.18 Fuan Avenue, Hehua Community, Pinghu Street, Longgang District, Shenzhen, PRC Postal Code 518111
Telephone : (86) 181 2417 9366
E-mail address : tcltd@townland.com

INDIA OFFICE :
Coworking Space Ministry of New, 3rd Floor, Kitab Mahal, 192 Dr Dadabhai Naoroji Road, Azad Maidan, Fort, Mumbai, India
Telephone : (91) 9819919804
E-mail address : tcpl@townland.com

INDONESIA OFFICE :
Gedung Menara Anugrah, Lantai 21
Kantor Taman E.3.3, Jl. DR. Ide Anak Agung Gde Agung Lot.8.6-8.7
Kawasan Mega Kuningan, Jakarta Selatan 12950, Indonesia
Telephone : (62 21) 2941 0621
E-mail address : tcljkt@townland.com

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TOWNLAND CONSULTANTS (INTERNATIONAL) LIMITED (International)
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Attachment 1

RESPONSES-TO-COMMENTS TABLE

Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Police Married Quarters) in "Government, Institution or Community (1)" Zone and Proposed Flat (Police Married Quarters) in "Government, Institution or Community" Zone in Government Land at Tung Chung Areas 134 And 135, Tung Chung, Lantau Island [TPB Ref: A/I-TCE/6]

Responses to Comments Table

	Comments/ Suggestions	**Applicant's Responses**
A.	**Comments from Urban Design Unit of Planning Department received from Planning Department on 27.10.2025:** ***(Contact person: Mr. LAM Sau Yin, Timothy, Tel no.: 3565 3940)***	
	Please find below our comments from visual impact perspective for your consideration:	
1.	Para 6.5.1 (M2) – The meaning of the sentence is not clear, it is advised to revise as "A row of new trees will be provided ~~***on***~~ ***at*** the ground floor along the north side, serving as a greenery backdrop ~~***when viewed from the podium floor***~~ and creating a further green buffer to adjacent lots.	Noted and revised accordingly (***Attachment 2*** refers).
2.	Para 6.5.2 (M3) – It is suggested revising the paragraph as "Specifically, the proposed development's height strategically falls between the ~~***adjacent surrounding***~~ higher buildings (Areas 133A, 133B, 133C ***to the northwest and Areas 129 and 130 to the south and southwest***) and the lower buildings to the ***north (Areas 135 and 141) and*** east (Areas 136, 137, and 138). This graduated approach directly aligns with the TCE concept of creating a stepped height profile ~~***across the development zone***~~ that ***the building height reduced from the mountain backdrop in the south to the waterfront area in the north as stated in the ES of the OZP paragraph 7.1.6.***"	Noted and revised accordingly (***Attachment 2*** refers).
3.	Para 6.5.2 (M5) – It is suggested providing the dimension of the setback in this paragraph.	Noted and revised accordingly (***Attachment 2*** refers).

Date: October 2025
File Ref: ASD/TCNTE

Attachment 2

REPLACEMENT PAGE TO THE VISUAL IMPACT ASSESSMENT

6.5 MITIGATION MEASURES

Mitigation measures are proposed to reduce and eliminate the visual impacts of the proposed development. The specific actions and design strategies are described below and are visually detailed in Figures 6.1, 6.2, and 6.3.

6.5.1 Landscape and Green Buffer Strategy

Extensive landscape treatments will be implemented at both at-grade and podium levels to significantly enhance green coverage and effectively reduce the visual impact of the Proposed JPOMQ. Specifically:

No.	Description
M1	**Large shrubs and green hedges** will be provided along the boundary fence wall to soften the building's solid mass and act as green buffer plantings for the surrounding developments.
M2	**A row of new trees** will be provided at the ground floor along the north side, serving as a greenery backdrop and creating a further green buffer to adjacent lots.

6.5.2 Architectural Integration and Façade Treatment

No.	Description
M3	The Proposed JPOMQ will be designed to **conform to the overall visual context** and the **intended stepped building height concept of the TCE**, thereby ensuring cohesive integration with the surrounding urban fabric. Specifically, the proposed development's height strategically falls between the surrounding higher buildings (Areas 133A, 133B, 133C to the northwest and Areas 129 and 130 to the south and southwest) and the lower buildings to the north (Areas 135 and 141) and east (Areas 136, 137, and 138). This graduated approach directly aligns with the TCE concept of creating a stepped height profile that the building height reduced from the mountain backdrop in the south to the waterfront area in the north as stated in the ES of the OZP paragraph 7.1.6.
M4	**Light-toned façade materials/finishes** will be explored during the detailed design stage to minimize the building's visual presence and overall impact. These specific mitigation measures regarding façade treatment will be finalized in the detailed design phase.
M5	The building towers provided a 7.5m setback from the northern boundary. This feature ensures that the structures of the proposed development will not encroach into the planned breezeway designated within Area 133, effectively preserving this vital corridor and mitigating visual obstruction.

Appendix II of
RNTPC Paper No. A/I-TCE/6

Recommended Advisory Clauses

(a) to note the comments of Chief Town Planner/Urban Design and Landscape, Planning Department that:

- to update the Supplementary Planning Statement to reflect the latest tree planting proposal within the Site; and

- approval of the S.16 application under Town Planning Ordinance does not imply approval of the site coverage of greenery requirements under DEVB TC(W) No. 3/2012. The site coverage of greenery calculation should be submitted separately to relevant authorities for approval.

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

- the Site is subject to aircraft/helicopter noise and is audible to the future residents due to the close proximity to the flight paths/helicopter routes of Hong Kong International Airport (HKIA) and there are aircraft noise complaints from the residents in Tung Chung are received from time to time; and

- appropriate noise mitigation measures (e.g. use of acoustic insulation) is recommended to minimize the potential aircraft/helicopter noise nuisance to future residents in accordance with the recommendation of the Preliminary Environmental Review (PER).

(c) to note the comments of Director of Food and Environmental Hygiene that:

- if domestic waste collection service in the development is required from FEHD in future, prior comment from FEHD on the detailed waste collection plan (including swept path analysis), collection mode and design of the refuse collection point should be sought. Provision of service may not be possible if there is restriction(s) or safety consideration(s) on manoeuvre of refuse collection vehicles to the designated collection point(s) for domestic refuse in the development.

(d) to note the comments of Director of Fire Services that:

- detailed fire safety requirements will be formulated upon receipt of a formal submission of STT/STW, general building plans or referral of application via relevant licensing authority; and

- the EVA provision in the captioned work shall comply with the standard as stipulated in Section 6, Part D of the Code of Practice for Fire Safety in Buildings 2011, which is administered by the Building Authority.

(e) to note comments of Director of Housing that:

- the planned fixed noise sources at the proposed PMQ should not affect the public housing developments at TC 133 A, B and C.

(f) to note comments of the Director of Environmental Protection (DEP) that:

- noting that the PER will be further updated during the detailed design stage under funding approval process, such PER should: (a) review the noise impact assessment during detailed design stage, and include all possible scenarios at the time of report preparation (e.g. to adopt the latest development programme for the planned commercial buildings in front of the proposed development) to demonstrate full compliance with HKPSG requirements; and (b) make reference to the relevant regulations/circulars/guidelines on waste management and contaminated land management for any potential development on the Site.

☐Urgent ☐Return receipt ☐Expand Group ☐Restricted ☐Prevent Copy

From:
Sent: 2025-10-05 星期日 04:09:13
To: tpbpd/PLAND <tpbpd@pland.gov.hk>
Subject: A/I-TCE/6 Area 134 and 135

A/I-TCE/6 HKPF

Government Land at Area 134 and Area 135, Tung Chung

Site area: About 4,876sq.m

Zoning: "GIC (1)" and "GIC"

Applied development: 432 Government Staff Quarters / PR 6.5 / 105mPD / 90 Vehicle Parking

Dear TPB Members,

Strong objection to the development of additional 'ghettos' where members of the same operation are housed together. Government quarters should be phased out so that staff live in the community and have shared experience with other citizens.

Government staff should be encouraged to be independent and purchase their own homes so that when they retire, they are not a burden on the limited PH supply.

Having police quarters adjacent to educational and sports facilities is also problematic as the development would be equipped with extensive surveillance equipment that would impact the privacy rights of students and members of the public using the sports facilities.

The height of the development is also an issue as it cancels the stepped height intention that was promised close to the waterfront and creates wall effect that would impact the educational facilities.

There are many community facilities lacking in the district that should be provided on the site in a lower rise development that is compatible with the original planning intention.

Mary Mulivhill

MTR Corporation Limited
香港鐵路有限公司

MTR

2

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

Our ref: T&ESD/E&IC/FS/EnvE/L1300

Date: - 8 OCT 2025

By Post and Fax
(Fax no.: 2877 0245 / 2522 8426)

Dear Sir/Madam,

Comments on the Section 16 Planning Application regarding Proposed Minor Relaxation of Building Height Restriction for Permitted Flat (Government Staff Quarters) and Proposed Flat (Government Staff Quarters) at Government Land at Area 134 and Area 135, Tung Chung, Lantau Island
(Application No. A/I-TCE/6)
Railway Noise Concern

The Corporation has, in general, no objection to the captioned Section 16 application (Application No. A/I-TCE/6) for a proposed minor relaxation of building height restriction for permitted flat and proposed flat (Government Staff Quarters) at Government Land at Areas 134 and 135 in Tung Chung. As the proposed development is situated close to the MTR Tung Chung Line (TCL) and Airport Express (AEL), noise from train operations could have a potential impact on any future occupants. Also, due to the proposed relaxation of the building height restriction from 70mPD to 105mPD, a greater number of occupants are expected to be potentially impacted by train noise.

We noted from the applicant's Railway Noise Impact Assessment (RNIA) that the predicted noise levels at the noise sensitive receivers of the proposed development were evaluated qualitatively by making reference to the railway noise contours (including 7.2mPD, 15mpD and 30mPD) in the approved Environmental Impact Assessment (EIA) Report for Tung Chung Line Extension (AEIAR-235/2022), and that the proposed development would not be subjected to any unacceptable railway noise impacts from TCL and AEL. Nevertheless, as the proposed building height of the development is expected to be updated, it is recommended that the applicant's consultant conduct a detailed quantitative noise assessment based on the latest building scheme in order to obtain a more comprehensive and accurate estimate of the railway noise impact.

We also noticed that the Area Sensitive Rating (ASR) for the southeast façade of Tower 1 and the east and south facades of Tower 2 has been designated as "C", with the statutory night-time Acceptable Noise Level of 60 dB(A) adopted as the assessment criterion. However, we have reservations regarding this classification, as it may not accurately reflect the actual site conditions. Given the commercial and G/IC developments at Areas 129, 130, 131, 132,

MTR Corporation Limited
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Our ref: T&ESD/E&IC/ES/EnvE/L1300
Date : -8 OCT 2025

136 and 137 located in front of the subject site may provide a shielding effect for the lower residential floors, the sensitive facades at lower levels may not be directly affected by the Influencing Factor (IF), namely the North Lantau Highway. In view of this, we recommend that the project proponent review the ASR designation and corresponding noise criteria, and seek endorsement from EPD on their suitability for the subject site.

While the key mitigation measure for railway noise impact is the adjacent noise screening structures of the high-rise commercial development and G/IC development, it is recommended that the applicant's consultant conduct supplementary noise assessments and implement appropriate mitigation measures to ensure full compliance with statutory requirements under the following scenarios: (i) a programme mismatch arises between the occupation of the proposed residential development and the completion for constructing the noise screening structures; or (ii) the noise screening structures are ultimately constructed at a height lower than that assumed in the approved EIA, resulting in certain flats having a direct line-of-sight to the railway.

Should approval be granted to the Section 16 Planning Application, we respectfully urge the Town Planning Board to give due consideration to our concerns and impose related development requirements through planning approval conditions.

Should you have any queries, please feel free to contact our Lead Environmental Manager Ms. Catherine Leung at

Yours faithfully,

Chan Hing Keung
Chief of Operations Engineering Service & Innovation

c.c Mr. TAM Cheuk Wai, Gary - Assistant Director of EPD (Environmental Assessment)

Mr. LEE Chee Kwan - Principal Environmental Protection Officer (Assessment & Noise)