

ZONES		
COMMERCIAL	C	商業
COMPREHENSIVE DEVELOPMENT AREA	CDA	綜合發展區
COMMERCIAL / RESIDENTIAL	CR	商業 / 住宅
RESIDENTIAL (GROUP A)	R(A)	住宅 (甲類)
RESIDENTIAL (GROUP B)	R(B)	住宅 (乙類)
RESIDENTIAL (GROUP C)	R(C)	住宅 (丙類)
VILLAGE TYPE DEVELOPMENT	V	鄉村式發展
INDUSTRIAL	I	工業
GOVERNMENT, INSTITUTION OR COMMUNITY	GIC	政府、機構或社區
OPEN SPACE	O	休憩用地
OTHER SPECIFIED USES	OU	其他指定用途
UNDETERMINED	U	未決定用途
GREEN BELT	GB	綠化地帶
COMMUNICATIONS		
MAJOR ROAD AND JUNCTION		主要道路及路口
ELEVATED ROAD		高架道路
MISCELLANEOUS		
BOUNDARY OF PLANNING SCHEME		規劃範圍界線
PLANNING AREA NUMBER		規劃區編號
MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)		最高建築物高度 (在主水平基準上若干米)
PETROL FILLING STATION		加油站

土地用途及面積一覽表
SCHEDULE OF USES AND AREAS

USES	大約面積及百分率 APPROXIMATE AREA & %		用途
	公頃 HECTARES	% 百分率	
COMMERCIAL	3.11	0.47	商業
COMPREHENSIVE DEVELOPMENT AREA	3.16	0.47	綜合發展區
COMMERCIAL / RESIDENTIAL	22.07	3.31	商業 / 住宅
RESIDENTIAL (GROUP A)	133.11	19.95	住宅 (甲類)
RESIDENTIAL (GROUP B)	8.18	1.23	住宅 (乙類)
RESIDENTIAL (GROUP C)	21.82	3.27	住宅 (丙類)
VILLAGE TYPE DEVELOPMENT	83.30	12.48	鄉村式發展
INDUSTRIAL	34.91	5.23	工業
GOVERNMENT, INSTITUTION OR COMMUNITY	99.45	14.90	政府、機構或社區
OPEN SPACE	42.30	6.34	休憩用地
OTHER SPECIFIED USES	38.68	5.80	其他指定用途
UNDETERMINED	0.90	0.13	未決定用途
GREEN BELT	65.00	9.74	綠化地帶
RIVER CHANNEL	24.25	3.63	河道
MAJOR ROAD ETC.	67.01	13.05	主要道路等
TOTAL PLANNING SCHEME AREA	667.25	100.00	規劃範圍總面積

夾附的《註釋》屬這份圖則的一部分，
現經修訂並按照城市規劃條例第5條展示。
THE ATTACHED NOTES ALSO FORM PART OF THIS PLAN
AND HAVE BEEN AMENDED FOR EXHIBITION UNDER
SECTION 5 OF THE TOWN PLANNING ORDINANCE

核准圖編號 S / F S S / 2 4 的修訂
AMENDMENTS TO APPROVED PLAN No. S/FSS/24

按照城市規劃條例第5條展示的修訂
AMENDMENTS EXHIBITED UNDER SECTION 5 OF THE TOWN PLANNING ORDINANCE

修訂項目 A 1 項 AMENDMENT ITEM A1		修訂項目 C 2 項 AMENDMENT ITEM C2	
修訂項目 A 2 項 AMENDMENT ITEM A2		修訂項目 D 1 項 AMENDMENT ITEM D1	
修訂項目 A 3 項 AMENDMENT ITEM A3		修訂項目 D 2 項 AMENDMENT ITEM D2	
修訂項目 B 項 AMENDMENT ITEM B		修訂項目 D 3 項 AMENDMENT ITEM D3	
修訂項目 C 1 項 AMENDMENT ITEM C1		修訂項目 D 4 項 AMENDMENT ITEM D4	

(參看附表)
(SEE ATTACHED SCHEDULE)



2021年12月17日 按照城市規劃條例第5條展示的
核准圖編號 S/FSS/24 的修訂
AMENDMENTS TO APPROVED PLAN No. S/FSS/24 EXHIBITED
UNDER SECTION 5 OF THE TOWN PLANNING ORDINANCE ON
17 DECEMBER 2021

Signed Mr C K YIP 葉子季 簽署
SECRETARY 城市規劃委員會秘書
TOWN PLANNING BOARD

香港城市規劃委員會依據城市規劃條例擬備的粉嶺／上水分區計劃大綱圖
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD
FANLING / SHEUNG SHUI - OUTLINE ZONING PLAN

SCALE 1:10,000 比例尺
米 METRES 250 0 500 1,000 1,500 METRES 米

規劃署遵照城市規劃委員會指示擬備
PREPARED BY THE PLANNING DEPARTMENT UNDER
THE DIRECTION OF THE TOWN PLANNING BOARD

圖則編號
PLAN No. S/FSS/25

城市規劃委員會根據《城市規劃條例》(第 131 章)
對粉嶺/上水分區計劃大綱核准圖編號 S/FSS/24
所作修訂項目附表

I. 就圖則所顯示的事項作出的修訂項目

- A1 項 — 把位於粉嶺第 17 區馬會道以東及粉嶺樓路以西的一幅用地由「政府、機構或社區」地帶及「住宅(丙類)1」地帶改劃為「住宅(甲類)7」地帶，並訂明建築物高度限制。
- A2 項 — 把位於粉嶺第 17 區前臨粉嶺樓路的一幅用地由「政府、機構或社區」地帶及「住宅(丙類)1」地帶改劃為「住宅(甲類)8」地帶，並訂明建築物高度限制。
- A3 項 — 把位於粉嶺第 17 區馬會道以東及粉嶺花園西南面的一幅用地由「政府、機構或社區」地帶及「住宅(丙類)1」地帶改劃為「住宅(甲類)8」地帶，並訂明建築物高度限制。
- B 項 — 把位於上水第 36 區清曉路的一幅用地由「政府、機構或社區」地帶及「綠化地帶」地帶改劃為「住宅(甲類)9」地帶，並訂明建築物高度限制。
- C1 項 — 把位於上水第 35 區大頭嶺的一幅用地由「政府、機構或社區」地帶及「綠化地帶」地帶改劃為「住宅(甲類)10」地帶，並訂明建築物高度限制。
- C2 項 — 把位於上水第 35 區沿粉嶺公路的一塊狹長土地由「綠化地帶」地帶改劃為顯示為「道路」的地方。
- D1 項 — 把位於上水第 30 區彩順街的一幅用地由「工業」地帶改劃為「住宅(甲類)11」地帶，並訂明建築物高度限制。
- D2 項 — 把位於上水第 30 區彩發街及彩園路與彩順街交界的兩幅用地由「工業」地帶改劃為「政府、機構或社區」地帶。

- D3 項 — 把位於上水第 30 區東南部的工業區由「工業」地帶改劃為「商業」地帶，並訂明建築物高度限制。
- D4 項 — 把位於上水第 4 區的工業區由「工業」地帶改劃為「其他指定用途」註明「商貿」地帶，並訂明建築物高度限制。

II. 就圖則《註釋》作出的修訂項目

- (a) 把「住宅(甲類)」地帶的第一欄用途內的「公眾停車場(貨櫃車除外)(只適用於指定為「住宅(甲類)1」、「住宅(甲類)4」及「住宅(甲類)5」的土地)」修訂為「公眾停車場(貨櫃車除外)(只適用於指定為「住宅(甲類)1」、「住宅(甲類)4」、「住宅(甲類)5」、「住宅(甲類)7」、「住宅(甲類)9」、「住宅(甲類)10」及「住宅(甲類)11」的土地)」。
- (b) 修訂「住宅(甲類)」地帶的「備註」，以納入有關所有「住宅(甲類)」支區的發展限制條款及要求。
- (c) 加入新的「商業」地帶及「其他指定用途」註明「商貿」地帶的《註釋》。
- (d) 修訂「工業」地帶的「備註」(a)段，以刪除上水第 4 區的發展限制。

城市規劃委員會

2021 年 12 月 17 日

有關《粉嶺/上水分區計劃大綱草圖編號 S/FSS/25》
的申述人和提意見人名單

I. 申述人名單

申述編號 (TPB/R/S/FSS/25-)	申述人名稱
R1	惠力投資有限公司
R2	香港中華煤氣有限公司
R3	John Douglas Moore
R4	Melanie Ann Moore
R5	Wilhelmina Evelyn Moore
R6	Genevieve James Moore
R7	Piter Lu
R8	Mary Mulvihill
R9	Wong Fung Chui Ling Cindy 黃馮翠玲
R10	Chan Wai Yee Wendy 陳惠兒
R11	Helen Yu
R12	Wong Chun Keung 黃振強
R13	Li Chun Ming Alexander
R14	Ang Chiu Hak 洪朝霞
R15	Ku Chiu Kwan Manfred
R16	區錦成
R17	梁國忠
R18	香港鐵路有限公司

II. 提意見人名單

意見編號 (TPB/R/S/FSS/25-)	提意見人名稱
C1	簡達和
C2	Mary Mulvihill



PLANNING LIMITED
規劃顧問有限公司

UNIT K, 16/F, MG TOWER
133 HOI BUN ROAD, KWUN TONG
KOWLOON, HONG KONG

九龍觀塘海濱道133號
萬兆豐中心16樓K室

電話TEL (852) 3426 8451

傳真FAX (852) 3426 9737

電郵EMAIL kta@ktaplanning.com

Our Ref: S3005/SS_WR/22/001Lg

16 February 2022

By Hand

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

Dear Sir/Madam,

**Submission of Written Representation in respect of
Draft Fanling / Sheung Shui Outline Zoning Plan No. S/FSS/25
In relation to Amendment Item D4
– Rezoning Sheung Shui Area 4 from “I” to “OU(B)” with a maximum BH of 75mPD
at 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui**

On behalf of Kung Hei Investment Limited, we submit herewith an original copy of the completed Application Form No. S6 and 90 sets of Written Representation for the consideration of the Town Planning Board. An authorization letter and a completed “Particulars of “Representer” and Authorized Agent” are also enclosed with this letter.

Meanwhile, should you have any queries in relation to the above please do not hesitate to contact the undersigned or Ms Sylvia Lam at [REDACTED]

Yours faithfully
For and on behalf of
KTA PLANNING LTD

David FOK

Encl.

cc. the Representer

KT/DF/SL/vy



For Official Use Only 請勿填寫此欄	Reference No. 檔案編號	
	Date Received 收到日期	

- The representation should be made to the Town Planning Board (the Board) before the expiry of the specified plan exhibition period. The completed form and supporting documents (if any) should be sent to the Secretary, Town Planning Board, 15/F., North Point Government Offices, 333 Java Road, North Point, Hong Kong.
申述必須於指定的圖則展示期限屆滿前向城市規劃委員會（下稱「委員會」）提出，填妥的表格及支持有關申述的文件（倘有），必須送交香港北角渣華道 333 號北角政府合署 15 樓城市規劃委員會秘書收。
- Please read the "Town Planning Board Guidelines on Submission and Publication of Representations, Comments on Representations and Further Representations" before you fill in this form. The Guidelines can be obtained from the Secretariat of the Board (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), or downloaded from the Board's website at <http://www.info.gov.hk/tpb/>.
填寫此表格之前，請先細閱有關「根據城市規劃條例提交及公佈申述、對申述的意見及進一步申述」的城市規劃委員會規劃指引。這份指引可向委員會秘書處（香港北角渣華道 333 號北角政府合署 15 樓 - 電話：2231 4810 或 2231 4835 及規劃署的規劃資料查詢處（熱線：2231 5000）（香港北角渣華道 333 號北角政府合署 17 樓及新界沙田上禾輦路 1 號沙田政府合署 14 樓）索取，亦可從委員會的網頁下載（網址：<http://www.info.gov.hk/tpb/>）。
- 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, preferably in both English and Chinese. The representation may be treated as not having been made if the required information is not provided.
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。提出申述的人士須以打印方式或以正楷填寫表格，填寫的資料宜中英文兼備。倘若未能提供所需資料，則委員會可把有關申述視為不曾提出論。

1. Person Making this Representation (known as "Representer" hereafter) 提出此宗申述的人士（下稱「申述人」）

Full Name 姓名 / 名稱 (~~Mr./Ms./Company/Organisation~~* 先生/女士/公司/機構*)

Kung Hei Investment Limited

(Note: for submission by person, full name shown on Hong Kong Identity Card/Passport must be provided)
(注意：若個人提交，須填上與香港身份證／護照所載的全名)

2. Authorised Agent (if applicable) 獲授權代理人(如適用)

Full Name 姓名 / 名稱 (~~Mr./Ms./Company/Organisation~~* 先生/女士/公司/機構*)

KTA Planning Limited

(Note: for submission by person, full name shown on Hong Kong Identity Card/Passport must be provided)
(注意：若個人提交，須填上與香港身份證／護照所載的全名)

3. Details of the Representation 申述詳情

Draft plan to which the representation relates (please specify the name and number of the draft plan)
與申述相關的草圖（請註明草圖名稱及編號）

Draft Fanling/Sheung Shui Outline Zoning Plan
No. S/FSS/25

* Delete as appropriate 請刪去不適用者

Please fill in "NA" for not applicable item 請在不適用的項目填寫「不適用」

3. Details of the Representation (Continued) (use separate sheet if necessary) [#] 申述詳情(續)(如有需要,請另頁說明) [#]		
Nature of and reasons for the representation 申述的性質及理由		
Subject matters 有關事項 [@]	Are you supporting or opposing the subject matter? 你支持還是反對有關事項?	Reasons 理由
Amendment Item D4 - Rezoning Sheung Shui Area 4 from "I" to "OU(B)" with maximum building height of 75mPD	<input type="checkbox"/> support 支持 <input checked="" type="checkbox"/> oppose 反對	Please refer to the attached Written Representation.
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
<p>Any proposed amendments to the draft plan? If yes, please specify the details. 對草圖是否有任何擬議修訂? 如有的話,請註明詳情。</p> <p>Please refer to the attached Written Representation.</p>		

[#] If supporting documents (e.g. colour and/or large size plans, planning studies and technical assessments) is included in the representations, 90 copies (or 40 hard copies and 50 soft copies) of such information shall be provided.
若申述附有支持其論點的補充資料(例如彩色及/或大尺寸的圖則、規劃研究及技術評估),則須提供 90 份複本(或 40 份印文本和 50 份電子複本)。

[@] Please describe the particular matter in the plan to which the representation relates. Where the representation relates to an amendment to a plan, please specify the amendment item number provided in the Schedule of Proposed Amendments. 請形容圖則內與申述有關的指定事項,如申述與圖則的修訂有關,請註明在修訂項目附表內的修訂項目編號。

Please fill "NA" for not applicable item 請在不適用的項目填寫「不適用」

☒ at the appropriate box 請在適當的方格內加上 ☒ 號



Our Ref: 144-54-00-701-EW/OY/cl-2022-P0194

11 February 2022

KTA Planning Limited
Unit K, 16/F, MG Tower
133 Hoi Bun Road
Kwun Tong

Attn: Mr. David Fok

Dear Sir,

**Submission of Written Representation in respect of
Draft Fanling / Sheung Shui Outline Zoning Plan No. S/FSS/25
In relation to Amendment Item D4
– Rezoning Sheung Shui Area 4 from “I” to “OU(B)” with a maximum BH of 75mPD
at 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui**

We are pleased to appoint KTA Planning Limited (KTA) as the Planning Consultant to prepare and submit the above Written Representation relating to the Draft Fanling/ Sheung Shui Outline Zoning Plan No. S/FSS/25 on our behalf. KTA are hereby authorized to liaise and correspond with relevant Government Departments regarding the captioned Written Representation.

Yours faithfully

For and on behalf of
Kung Hei Investment Limited



Authorized Signature(s)

KUNG KEI INVESTMENT LIMITED

3/F, One Harbourfront, 18 Tak Fung Street, Hung Hom, Kowloon, Hong Kong 香港九龍紅磡德豐街18號海濱廣場一座3樓
Tel 電話 +852 2128 7500 Fax 傳真 +852 2128 7888



Member of CK Asset Group 長江實業集團成員

Written Representation in relation to Amendment Item D4 of
Draft Fanling / Sheung Shui Outline Zoning Plan No. S/FSS/25 on
Rezoning of Park'N Shop Sheung Shui Fresh Food Distribution Centre
from "Industrial" to "Other Specified Uses" annotated "Business" Zone at
6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui

WRITTEN REPRESENTATION


February 2022

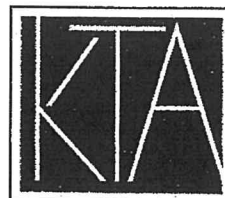
Representer:

Kung Hei Investment Limited

Planning Consultant & Submitting Agent:

KTA Planning Limited

 S3005_SS_WR_V04



PLANNING LIMITED
規劃顧問有限公司

Executive Summary

This Written Representation is prepared and submitted on behalf of Kung Hei Investment Limited (the "Representer"), under Section 6(1) of the Town Planning Ordinance ("TPO") in relation to the Draft Fanling/Sheung Shui Outline Zoning Plan (the "Draft OZP") No. S/FSS/25 gazetted on 17 December 2021.

The representation is made with regard to Amendment Item D4 to the Matters shown on the Draft OZP, which is related to the rezoning of the Subject Site at 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui ("the Representation Site"/ "the Site") from "Industrial" ("I") into "Other Specified Uses" annotated "Business" ("OU(B)") with stipulation of plot ratio restriction of 5 and building height restriction of 75mPD.

Having reviewed the changing planning circumstances in the surrounding areas of Sheung Shui Area 4 and in the metropolitan context, the Representer, being the owner of the Representation Site, considered the redevelopment of the existing industrial building at the Site would serve a good initiative from the private sector to facilitate the functional land use transformation of the North District to align with the strategic directions for the prospective comprehensive commercial/residential development in Lo Wu/Man Kam To Comprehensive Development Node put forward under the Northern Metropolis Development Strategy.

To enable a composite residential development in the emerging mixed-use 'living circle' in the vicinity of the Site, the Representer puts forward a proposed rezoning from "I" to "Residential (Group E)" ("R(E)") with a proposed domestic PR of 5 and a non-domestic PR of 0.5, subject to the same building height restrictions of 75mPD set out for the adjoining "OU(B)" zone.

The indicative development scheme for the proposed composite residential development with a domestic plot ratio of 5 and a non-domestic plot ratio of 0.5 with a maximum building height at 75mPD is feasible under the proposed "Residential (Group E)" zoning for the Representation Site.

The Representation is fully justified with the following grounds:

- The proposal will synergise with the Government's Northern Metropolis Development Strategy in unleashing potential for residential/commercial development in the North District;
- The site is suitable for composite residential development;
- The proposed "R(E)" zoning is in line with the transformation of Sheung Shui Industrial Area into a mixed-use neighbourhood;
- The proposed composite residential development will continue to comply with the building height restriction on the draft OZP;
- In support of Government's on-going policy on increasing supply of flats to meet the imminent housing demand; and
- The proposed rezoning will not cause/subject to adverse environmental, traffic and sewerage impact.

In view of the above, the Board is kindly requested to recognise the potential redevelopment opportunity of the Site for composite residential development by:

- Rezoning the Subject Site to "Residential (Group E)" zone (with a maximum Plot Ratio of 5.5, in which a maximum plot ratio of 5 shall be for domestic use and a maximum plot ratio of 0.5 shall be for non-domestic use, and a maximum building height of 75mPD.)

行政摘要

(內文如有差異，應以英文版本為準)

這份申述書是代表申述人 Kung Hei Investment Limited 就《城市規劃條例》第 6(1)條有關於 2021 年 12 月 17 日刊憲的粉嶺／上水分區計劃大綱草圖編號 S/FSS/25 (大綱草圖) 擬備及遞交的。

申述人反對就圖則所顯示的事項作出的「修訂項目」D4 項，把位於上水上水第 4 區嘉富坊 6 號的「申述地點」，由「工業」地帶改劃為「其他指定用途 (商貿)」地帶，以及容許相關之地積比率限制為 5 倍及主水平基準上 75 米的建築物高度限制。

在審視了上水第 4 區周邊地區和都會環境不斷變化的規劃環境後，申述人作為申述地點的業主，認為重建申述人作為申述地點的現有工業大廈是一個正面舉措，協助推動北區的土地用途轉型，以配合《北部都會區發展策略》下建設羅湖／文錦渡綜合發展樞紐附近土地的未來綜合商住發展的策略方向。

申述人提出把申述書提出把申述地點「工業」地帶改劃為「住宅 (戊類)」地帶，作綜合住宅發展，以配合在申述地點周邊逐漸成形的混合用途「生活圈」。建議總地積比率為 5.5 倍 (住用地積比率 5 倍；非住用地積比率 0.5 倍)，而最高建築物高度為主水平基準上 75 米，與相鄰的「其他指定用途 (商貿)」地帶的建築高度限制相同。

此申述書的理據包括以下各點：

- 發展方案將配合政府的《北部都會區發展策略》，釋放北區土地的住宅/商業發展潛力；
- 申述地點適合作綜合住宅發展；
- 建議的「住宅 (戊類)」地帶有助推動上水工業區轉型為混合用途社區；
- 擬議的綜合住宅發展將繼續符合大綱草圖列明的建築高度限制；
- 符合政府現時推行的增加房屋供應政策；
- 擬議的改劃不會帶來或受到環境、交通和排污影響。

鑑於以上理據，申述人促請城規會考慮申述地點的綜合住宅發展潛力，對粉嶺／上水分區計劃大綱草圖的建議修訂：

- 將申述地點改劃為「住宅 (戊類)」，並把該地帶的最高地積比率訂為 5.5 倍，其中住宅地積比率上限為 5 倍，非住宅地積比率上限為 0.5 倍，而最高建築物高度則為主水平基準以上 75 米。

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1. INTRODUCTION

1.1 Purpose

1.1.1 The Written Representation is prepared and submitted on behalf of Kung Hei Investment Limited (the "Representer"), under Section 6(1) of the Town Planning Ordinance ("TPO") in relation to the Draft Fanling / Sheung Shui Outline Zoning Plan (the "Draft OZP") No. S/FSS/25 gazetted on 17 December 2021. The Representation Site (the Site) is located at 6 Ka Fu Close (Fanling Sheung Shui Town Lot 97) (**Figure 1.1** refers).

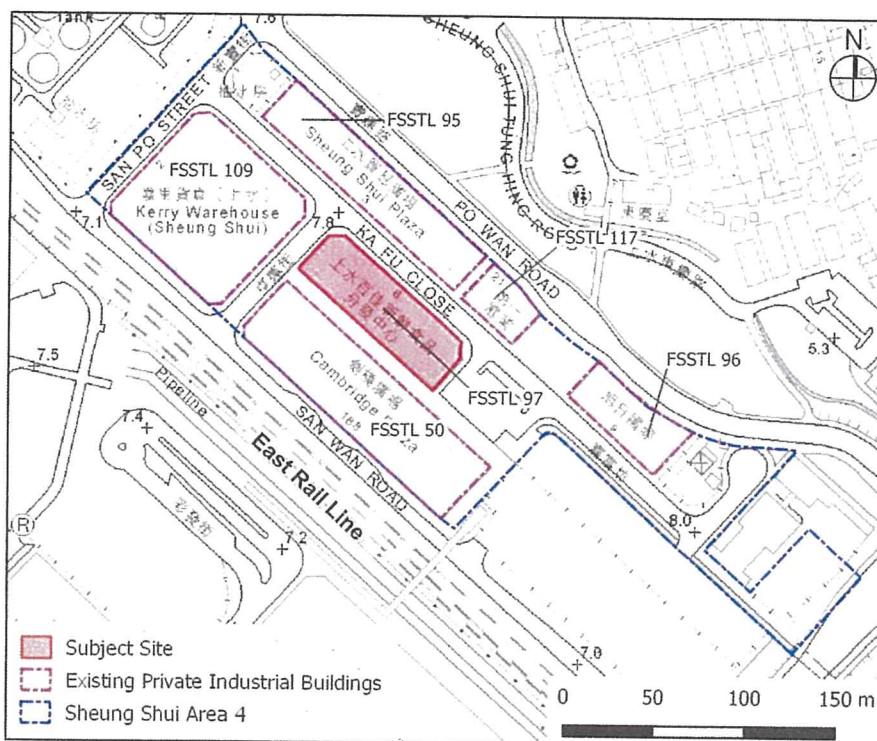


Figure 1.1 Location Plan of Subject Site in Sheung Shui Area 4

1.2 The Particular Matters to which this Representation Relate

1.2.1 This representation is made with regard to

(i) **Amendment Item D4** to the Matters shown on the Draft OZP, which is:

Item D4 – Rezoning Sheung Shui Area 4 from "I" to "OU(B)" with a maximum Building Height (BH) of 75mPD.

1.2.2 The Representer objects to the Draft Fanling / Sheung Shui Outline Zoning Plan No. S/FSS/25 in relation to the above-mentioned Amendment Item. The Representer urges the Town Planning Board (TPB) to recognise the potential redevelopment opportunity of the Representation Site for composite residential development and propose the following further amendments to the Draft OZP:

Rezoning the Representation Site to "Residential (Group E)" zone (with a maximum Plot Ratio of 5.5, in which a maximum plot ratio of 5 shall be for domestic use and a maximum plot ratio of 0.5 shall be for non-domestic use, and a maximum building height of 75mPD.)

1.3 Report Structure

1.3.1 Following this introductory section, the proposed zoning of the Site in the Draft OZP and the planning context of the Site and its surrounding will be briefly set out in **Section 2**. The indicative development scheme is included in **Section 3**. **Section 4** will provide the grounds and justifications of this representation while the proposed amendments to the Draft Fanling / Sheung Shui OZP are outline at **Section 5**.

2. THE SITE AND PLANNING CONTEXT

2.1 Site Location, Existing Use and Land Status

2.1.1 The Representation Site is located at FSSTL 97 at 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui. The Site is bounded by Ka Fu Close to its north-east, Cheung Wan Street to its north-west, an industrial building namely Cambridge Plaza to its south-west and a public vehicle park to its south-east respectively. The planned public housing development in Sheung Shui Area 4 (Site 2) is located about 60m to the south-east of the Site.

2.1.2 The Representation Site has a site area of about 3,041m² and an existing plot ratio of 4.439¹. It is currently occupied by a 6-storey industrial building for the use of cold storage, workshop and ancillary office, namely Park'n Shop Sheung Shui Fresh Food Distribution Centre, completed in July 1991. The subject building is currently under single ownership of the Representer. Existing vehicular run-in and run-out the Site is provided on Ka Fu Close. **Figures 2.1 to 2.3** present the existing condition of the Site and the adjacent developments in Sheung Shui Area 4.



Figure 2.1 View of the Representation Site from Ka Fu Close
(Photo taken on 30 January 2022)

¹ According to Approved General Building Plan for the subject building (BOO Ref. 9360-89)

Written Representation in relation to Amendment Item D4 of Draft Fanling / Sheung Shui Outline Zoning Plan No. S/FSS/25 on Rezoning of Park'N Shop Sheung Shui Fresh Food Distribution Centre from "Industrial" to "Other Specified Uses" annotated Business Zone at 6 Ka Fu Close, Sheung Shui

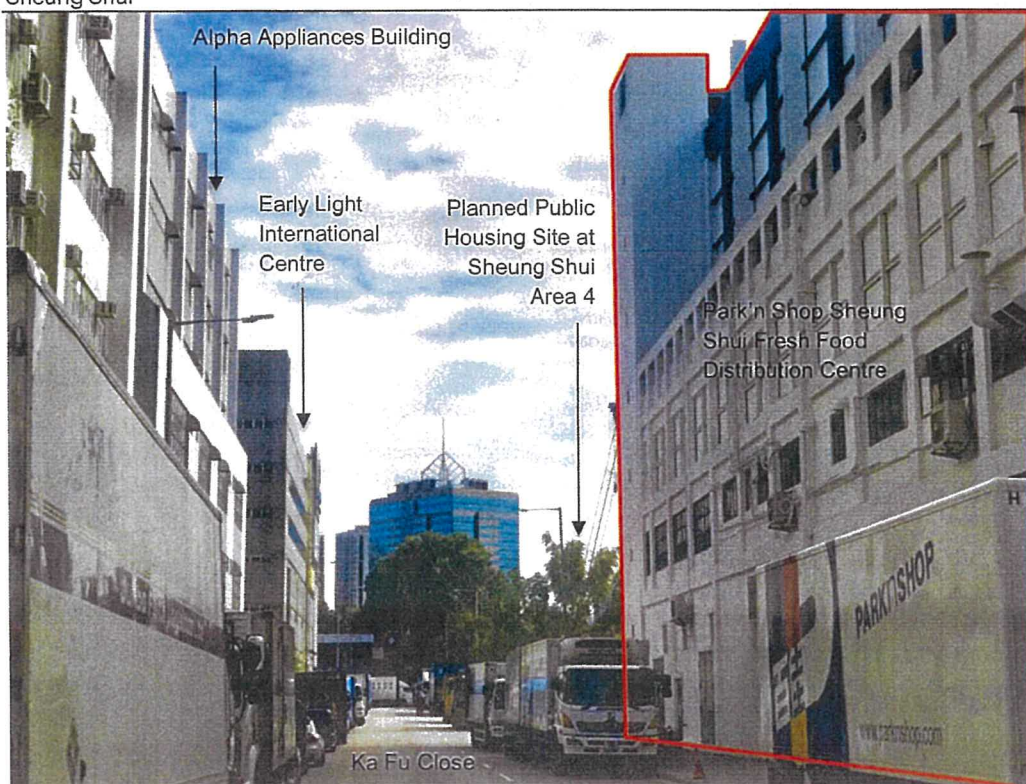


Figure 2.2 View of the Representation Site and the surrounding developments from Ka Fu Close (Photo taken on 30 January 2022)



Figure 2.3 View of the Representation Site and the surrounding developments from southern site boundary (Photo taken on 30 January 2022)

Written Representation in relation to Amendment Item D4 of Draft Fanling / Sheung Shui Outline Zoning Plan No. S/FSS/25 on Rezoning of Park'N Shop Sheung Shui Fresh Food Distribution Centre from "Industrial" to "Other Specified Uses" annotated Business Zone at 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui

2.2 Transformation of the Surrounding Area

2.2.1 The surrounding areas of the Representation Site is characterised by an urban locality which has been undergoing gradual transformation from a predominantly industrial area in the late 1980s to a mixed use neighbourhood, intermingled with industrial buildings, commercial buildings, Government, Institution and Community ("GIC") facilities and planned residential developments, (Figure 2.4 refers).

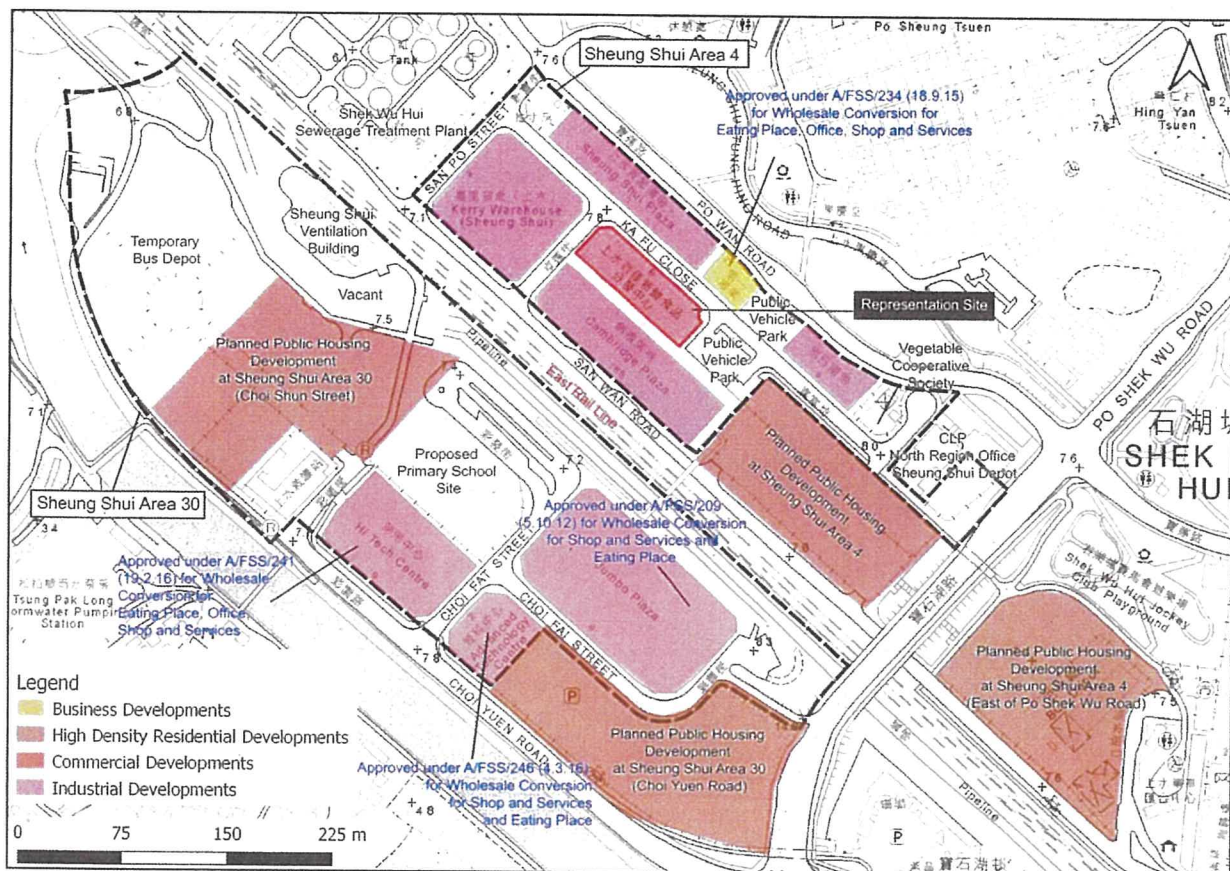


Figure 2.4 Land Use Pattern of the Emerging Mixed Use Neighbourhood in Sheung Shui Areas 4 and 30

Transformation for Business and Commercial Uses via Wholesale Conversion of Industrial Buildings

2.2.2 The trend of wholesale conversion in the adjoining area of the Representation Site is well-observed from past planning application records. Alpha Appliances Building, located to the north-east of the Representation Site along Ka Fu Close, has obtained planning permission (under Planning Application No. A/FSS/234) in 2015 for wholesale conversion for non-industrial uses including office, eating place and shop and services uses with a total non-domestic GFA of 4,647 sq.m. In addition, the trend of land use transformation for non-industrial uses in the surroundings is evidenced by 3 other industrial building sites in the

adjacent Sheung Shui Area 30 undergoing different stages of wholesale conversion for eating place, office and shop and services uses (approved under Planning Application Nos. A/FSS/209, A/FSS/241, A/FSS/246) involving a total of about 73,200 sq.m floorspace.

**Transformation for Residential Uses –
Government's Recent Proposal on Rezoning Sites in Sheung Shui for
Residential Uses Transformation for Residential Uses**

2.2.3 It was affirmed in the 2014 Policy Address that the Government would continue to actively conducting land use reviews and undertaking procedures to rezoning sites as appropriate for residential use. In this regard, some potential housing sites in Sheung Shui were identified in the land use review to materialize the Government's policy directives in increasing land supply for housing development in a persistent manner.

2.2.4 The Government's proposals have been reflected on the recent rounds of amendments to rezone various Government land parcels in Sheung Shui for residential uses in the proposed amendments to Fanling/Sheung Shui OZPs in 2019 and 2021, involving 4 nos. of public housing sites with domestic PR of 6 to 6.5 in close vicinity of the Representation Site (Figure 2.4 and Table 2.1 refers).

Table 2.1 Planned Housing Sites in the Vicinity of the Representation Site

Ref.	Location	Original Zoning	Present Zoning	Plot Ratio	Site Area (in ha) (about)	No. of Units (about)
1	Choi Shun Street, Sheung Shui Area 30	I	R(A)11	Domestic 6.5 Non-domestic 0.2	1.96ha	2,400
2 (*)	Sheung Shui Area 30 Site	I	R(A)4	Domestic 6.5 Non-domestic 0.6	1.44ha	2,088
3 (*)	Sheung Shui Area 4 Site	I	R(A)4	Domestic 6.5 Non-domestic 0.6	1.13ha	1,556
4	East of Po Shek Wu Road, Sheung Shui Area 4	O	R(A)5	Domestic 6 Non-domestic 0.9	1.38ha	1,800
Total No. of Units: about 7,844						

Remarks: (*) The planned public housing developments at Sheung Shui Areas 4 and 30 Site are subject to a S.16 planning application No. A/FSS/280 approved by the TPB in May 2021 for minor relaxation of plot ratio restriction from a total PR of 6.6 (Domestic PR 6+ Non-domestic PR 0.6) to a total PR of 7.1 (Domestic PR 6.5+ Non-domestic PR 0.6)

2.2.5 There is no doubt that the Sheung Shui Areas 4 and 30 are gradually transforming into a mixed use neighbourhood with industrial, commercial and residential developments.

2.3 Prevailing Proposed Amendments in Relation to the Site on the Draft OZP

- 2.3.1 The Sheung Shui Areas 4 had been zoned "Industrial" ("I") on the draft Fanling/Sheung Shui OZP No. S/FSS/1 in October 1987 and the the subsequent Fanling/Sheung Shui OZPs. It was subject to development restrictions of a maximum plot ratio (PR) of 5 and a maximum building height (BH) of 25m.
- 2.3.2 Having in view of recommendations under the latest 2020 Area Assessments of Industrial Land in the Territory with the purpose to facilitate land use restructuring and address the potential industrial/residential interface problems, the subject Sheung Shui Area 4 comprising 6 nos. of industrial buildings are proposed to be rezoned from "Industrial" to "Other Specified Uses" annotated "Business" ("OU(B)") subject to a maximum plot ratio of 5 and a building height restriction of +75mpD.
- 2.3.3 According to the Draft Fanling / Sheung Shui Outline Zoning Plan ("OZP") No. S/FSS/25 (the Draft OZP), the Representation Site is rezoned from "I" to "OU(B) (Figure 2.5 refers). The statutory notes of the Draft OZP stipulates that the "OU(B)" zone is *"intended primarily for general business uses. A mix of information technology and telecommunications industries, non-polluting industrial, office and other commercial uses are always permitted in new "business" buildings"* and *"less fire hazard-prone office use that would not involve direct provision of customer services or goods to the general public is always permitted in existing industrial or industrial-office buildings"*.
- 2.3.4 According to the Explanatory Statement of the Draft OZP, the subject "OU(B)" zone is intended *"to control the building density and avoid over-development and the "OU(B)" zone "is restricted to a maximum non-domestic plot ratio of 5.0 and the maximum building height in terms of metres above Principal Datum as stipulated on the Plan (viz. +75mPD) or the plot ratio and the height of the existing building, whichever is the greater."*
- 2.3.5 In conjunction with the rezoning proposal, PlanD has undertaken a review on the BH restriction of the industrial area. Having regards to the changes in planning circumstances brought by the planned Kwu Tung North/Fanling North New Development Areas (KTN/FLN NDAs) and the planned public housing developments (with maximum BH of +130mPD to +160mPD) in the surroundings, the BH restriction for the subject "OU(B)" zone is relaxed from 25m to +75mPD (equivalent to about 65m above ground with site formation level at about 10mPD). It is understood that the relaxation of BH would enable a greater flexibility to incentivise building conversion/redevelopment for the other gainful land uses with more spacious street environment.

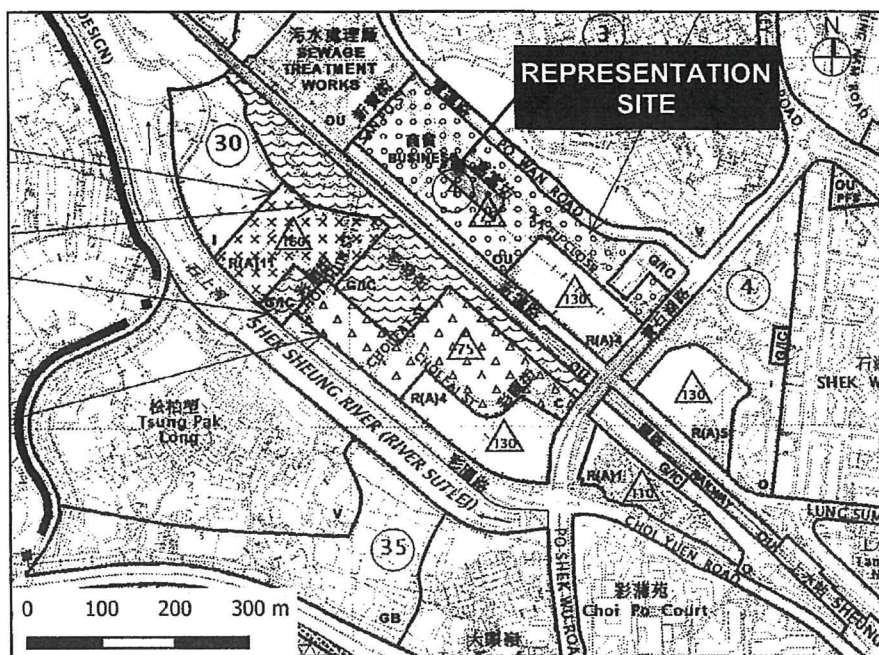


Figure 2.5 Statutory Zoning of the Representation Site on the Draft Fanling / Sheung Shui OZP No. S/FSS/25

2.4 Government's Determination on Increasing Housing Supply

2.4.1 In response to the acute shortage of land supply, the Government has put strong emphasis on increasing supply of housing land in recent years to resolve the housing and land problems in Hong Kong. Major policies to expedite, in particular, the short to medium term land supply for private housing are as follows:

Multi-pronged Approach to Increase Land Supply for Housing

2.4.2 It has been the Government's Policy since 2013 to increase land supply to meeting housing needs of Hong Kong through a multi-pronged approach with short, medium and long term measures. The short term measures include optimising the use of developed land as far as practicable through reviewing land uses and rezoning sites with development potential to untap the development potential of land and increasing development intensity wherever appropriate.

2.4.3 The Task Force on Land Supply (the "Task Force") was established in September 2017 with a view to making recommendations to the overall land supply strategy and prioritising different land supply options for the Government. The Task Force submitted the final report to the administration on 31 December 2018 for consideration. The report opined that the actual land shortfall may be much higher than 1,200 ha and there will be an acute shortage of land for housing (about 108 ha) in the short

term. As such, the Task Force suggests giving priority to studying and implementing 8 land supply options and that no short-to-medium options should be given up lightly unless there are strong justifications. Tapping into private agricultural land reserve in the New Territories is one of the three short-to-medium term supply options suggested by the Task Force after wide consultations with the public. On 20 February 2019, the Government announced that it fully endorses the recommendations rendered by the Task Force on land supply strategy.

- 2.4.4 As discussed in paragraph 2.2.4 above, 4 sites in Sheung Shui Areas 4 and 30 were identified as housing sites providing over 7,800 number of units.
- 2.5 Government's Latest Strategic Directions in the North District under the Northern Metropolis Development Strategy**
- 2.5.1 The Northern Metropolis Development Strategy ("Development Strategy") put forward by the Chief Executive in the 2021 Policy Address offers strategic directions, spatial concepts, and planning principles with a vision to develop Hong Kong into a promising metropolitan area to live in, work and travel. Geographically speaking, the Development Strategy proposes to expand the Northern Economic Belt under the Hong Kong 2030+ to cover existing new towns in Yuen Long, Tin Shui Wai and Fanling/Sheung Shui, various NDAs and development nodes in different planning and construction stages as well as their neighbouring suburban and rural areas, with the purpose to consolidate the above into a holistic metropolis with a total area of 30,000 hectares.
- 2.5.2 North District is one of the district administration areas falling within the Northern Metropolis. The Representation Site is strategically located given its location in the North District with proximity to the surrounding action areas under *Key Action Direction (3) and (4)*, consideration has been given to extend the Northern Link eastwards by constructing the future railway stations between Lo Wu South and On Lok Tsuen to form a railway link connecting the strategic development nodes in the Kwu Tung North/ Fanling North NDA, Man Kam To Development Corridor and New Territories North New Town. In parallel, a new Lo Wu/ Man Kam To Comprehensive Development Node is proposed in land parcels which span across the proposed Lo Wu South Station to the Man Kam To Control Point and Lo Shue Ling.
- 2.5.3 As illustrated in **Figure 2.6**, the Representation Site is located about 425m south of the proposed Lo Wu/ Man Kam To Comprehensive Development Node (LW/MKT CDN), which has been identified for commercial/residential development. With comprehensive/residential development likely driven by the enhanced provision of railway services, it is timely to undertake planning review for the land uses in the surroundings and consider suitable

locations of railway extension for more convenient and efficient railway services such that development potential can be unleashed for developing the LW/MKT CDN, thereby substantially increasing the housing supply in the long run.



Figure 2.6 Representation Site in Proximity to the Proposed Lo Wu/ Man Kam To Comprehensive Development Node and Eastern Extension of Northern Link under the Northern Metropolis Development Strategy

Based on the figure on P.48 of the "Report on Northern Metropolis Development Strategy" published on 6 October 2021

3. INDICATIVE DEVELOPMENT SCHEME

3.1 Proposed Amendment to Rezone the Representation Site from "I" to "R(E)"

3.1.1 Having reviewed the changing planning circumstances in the surrounding areas of Sheung Shui Area 4 and the metropolitan context, the Representer, being the owner of an existing industrial building at the Representation Site, considered the redevelopment of the Site would serve a good initiative from the private sector to facilitate the functional land use transformation of the North District to align with the strategic directions for the prospective comprehensive commercial/residential development in LW/MKT CDN put forward under the Northern Metropolis Development Strategy.

3.1.2 This Representation puts forward a proposed rezoning from "I" to "R(E)" with a proposed domestic PR of 5 and a non-domestic PR of 0.5. In terms of land use compatibility and economic viability, the proposed "R(E)" zoning for the Representation Site will provide incentive for redeveloping the existing industrial building at the Representation Site (with an actual PR of 4.439) to enable a composite residential development to facilitate the local transformation into a mixed-use residential neighbourhood in a new 'living circle' in Sheung Shui. Under "R(E)" zoning, "Flat" is a column 2 use that would require further S16 Planning Application to enable the proposed composite residential development.

3.2 Indicative Composite Residential Development

3.2.1 An indicative Development showing the proposed amendment of the Plan is illustrated in **Appendix 1**. Based on a total plot ratio ("PR") of 5.5 (Domestic PR: 5; Non-domestic PR: 0.5) and a site area of approximately 3,041sq.m, the indicative development yields a total Gross Floor Area ("GFA") of 16,725.50sq.m (Domestic GFA: 15,205 sq.m; Non-domestic GFA of 15,202.5sq.m). The proposed composite residential development at the Representation Site would be able to deliver about 304 residential units to accommodate an estimated population intake of about 882. Subject to the agreement by the TPB on the proposed "R(E)" zoning, the indicative development could be completed in late 2027.

3.2.2 The Indicative Development consists of 2 residential towers with 23 storeys (including 1 level of retail shop, 1 level of landscaped podium and 2 levels of basement). The proposed building height of the residential towers is about +75mPD, which will comply with the maximum BH permissible (i.e. +75mPD) under the "OU(B)" zoning of the Draft OZP.

3.2.3 Other ancillary facilities in the form of residential recreational facilities and landscape area are suitably proposed at the ground floor and podium level

for enjoyment by the future residents. Retail facilities are proposed on ground floor with convenient access to visitors from the general public. Parking spaces and E&M facilities are located at the basement level.

Table 3.1 Indicative Development Schedule

Key Parameters	
Site Area (*)	3,041m ²
Total PR	Not more than 5.5
• Domestic PR	Not more than 5
• Non domestic PR	Not more than 0.5
Total GFA	Not more than 16,725.5m ²
• Domestic GFA (*)	Not more than 15,205m ²
• Non domestic GFA	Not more than 1,520.5m ²
No. of Residential Units	About 304
Total No. of Blocks	2 Residential Towers
Average Flat Size	About 50m ²
No. of Storeys	23 storeys
• Residential Tower	19 storeys
• Landscaped Podium	1 storey
• Retail Shop	1 storey
• Basement	2 storeys
Building Height (main roof)	+75mPD
Site Coverage	About 27.7%
Greenery Coverage	Not less than 20% of site coverage
Estimated Population (#)	About 882

Remarks

(*) Site Area is based on Approved General Building Plan

(#) The estimated population is derived by assuming 2.9 persons per flat as per the average household size in Fanling/ Sheung Shui New Town in the 2016 Population By-Census carried out by the Census and Statistics Department

3.3 Key Design Considerations

3.3.1 It is the Representer's intention to demonstrate the feasibility of the redevelopment the Representation Site for proposed composite residential development with a prime objective in rejuvenating the mixed-use neighbourhood in Sheung Shui. The Indicative Development Proposal has taken into account of the following considerations:

Appropriate Development Intensity

3.3.2 The development intensity of the indicative development has been carefully devised to create a harmonious built form with the future developments in the adjacent "OU(B)" zone (subject to a maximum PR of 5 and building height of +75mPD) and the planned public housing developments in Sheung Shui Areas 4 and 30 (with domestic PR ranges from 6 to 6.5 and a non-domestic PR ranges from 0.2 to 0.9; and building height ranges from +130mPD and +160mPD).

3.3.3 In terms of BH, the indicative BH of the proposed residential composite development in the Representative Site is at +75mPD, which will be in line with the BH restriction of +75mPD stipulated in the adjoining "OU(B)" zone

in Sheung Shui Area 4 on the Draft OZP. A stepped building height profile would be created with the adjacent public housing development at Sheung Shui Area 4 (Figure 3.1 below refers). In terms of PR, a maximum total PR of 5.5 is proposed, of which a non-domestic PR of 0.5 is proposed for retail floor space of about 1,520.5 sq.m, providing spaces for necessary daily necessities in meeting the local needs.



Figure 3.1 Development Intensity of the Proposed Indicative Development and Surroundings Planned Public Housing Sites

3.3.4

Encourage Mixed-Use Development in the Neighbourhood

The proposal aims at encouraging a mixed-use development both within the Representation Site and the adjoining neighbourhood to promote a livelier ambience in the surrounding Sheung Shui Areas 4 and 30 under transformation. The formulation of an overall domestic PR of 5 and a non-domestic PR of 0.5 will encourage both residential uses and various compatible non-domestic uses in the indicative development. The indicative development will incorporate a continuous retail frontage of over 135m in length on the ground level along Ka Fu Close. The mixed-use development scheme will extend the activity hours to enrich the urban experience for those who live and work in Sheung Shui.

3.3.5

Single-level Podium Design

The indicative development will adopt a single-level podium design while maintaining a relatively low site coverage at about 27.7% for the residential towers above. Compared with the existing industrial building at the

Representation Site with 90% actual site coverage, the indicative development represents an enhancement in the reduction of building bulk.

3.4 Access Arrangement and Internal Transport Facilities Provision

3.4.1 The vehicular access to the indicative development will be located at Cheuk Wan Street at the south-western edge of the Representation Site. The location of the proposed vehicular access is shown diagrammatically in the Indicative Ground Floor Plan in **Appendix 1**. Internal transport facilities would be provided in accordance with the requirements as stipulated in the Hong Kong Planning Standards and Guidelines ("HKPSG"). The internal transport facilities provision for the indicative development is presented in **Table 3.2** below.

Table 3.2 Internal Transport Facilities Provision

Type of Facilities	Proposed Provision
Private Car Parking Space	82
Visitor Parking Space	5
Loading/ unloading bay for goods vehicles	4

4. GROUNDS AND JUSTIFICATIONS FOR THE REPRESENTATION

4.1 The Proposal will Synergise with the Government's Northern Metropolis Development Strategy in Unleashing Potential for Residential/ Commercial Development in North District

4.1.1 As announced in latest 2021 Policy Address, Government's Northern Metropolis Development Strategy proposes to make optimal use of the land by advocating the expansion of development in 10 key action directions. As illustrated in **Figure 2.6** above, the Representation Site is located about 425m south of the proposed Lo Wu/ Man Kam To Comprehensive Development Node (LW/MKT CDN), which has been identified for commercial/residential development. The Representation Site is strategically located in the North District with proximity to the action areas under Key Action Direction (3) and (4). Under these Key Action Directions, the Northern Link is proposed to be extended eastwards to connect with Lo Wu, Man Kam To, New Territories North and Fanling to strengthen connections among different strategic development projects.

4.1.2 The indicative proposal in this Representation echoes with the Government's timely review of the land uses in the North District for eastern extension of the Northern Link and the land use potential to be unleashed for commercial/residential in the surrounding development areas in the future Northern Metropolis.

4.1.3 Having reviewed the land use transformation potential of the surrounding, the Representer, being the owner of an existing industrial building (with existing PR of 4.439) at the Sheung Shui Area 4, considered the redevelopment of the Representation Site for composite residential use (with proposed domestic PR of 5 and non-domestic PR of 0.5) would serve as a positive initiative from the private sector to facilitate the functional transformation of the North District. The proposed "R(E)" zone for the subject Site will therefore align with the strategic directions for the prospective comprehensive commercial/residential development in LW/MKT CDN as envisaged under the Northern Metropolis Development Strategy.

4.2 The Site is Suitable for Composite Residential Development

Land Use Compatibility

4.2.1 The Representation Site is conveniently located among various emerging mixed use neighbourhood in the surroundings of Sheung Shui Areas 4 and 30. As shown in **Figures 2.2 and 2.5** above, four of the planned public housing sites zoned "R(A)4", "R(A)5" and "R(A)11" located at the south-eastern fringe of the Sheung Shui Areas 4 and 30 are conveniently located within a 400m-radius of the Representation Site. The closest planned

public housing development is just about 60m away on the south-eastern side of the Representation Site.

Adequately Properly Industrial/Residential Interface Issue

4.2.2 Being located in a mixed use neighbourhood with existing industrial developments, the proposed composite residential development shall properly address potential industrial/residential interface issues, such as environmental noise and air quality issues.

4.2.3 The findings from the Environmental Assessment in **Appendix 3** have demonstrated that the indicative development are technically feasible given that suitable mitigation measures are in place to resolve the potential industrial/residential interface issue.

Potential Noise Impacts

4.2.4 As regards the fixed noise sources, some fixed plants are identified to the south, southwest and west of the Representation Site. Nevertheless, the lines of sight are blocked by the Kerry Warehouse (Sheung Shui) to the west and Cambridge Plaza to the south. Details of the mitigation for potential fixed noise impact, if any, could be further investigated when the detailed layout of the indicative composite residential development is available.

4.2.5 In respect of road traffic noise impact, with the implementation of appropriate noise mitigation measures, including the installation of acoustic windows (baffle type) on the affected residential units along Ka Fu Close with potential noise exceedances, adverse road traffic noise impacts for the future residents of the proposed composite residential development are not anticipated. The working principle, tentative configuration and schedule of the noise mitigation designs are illustrated in **Figures 4.3a and 4.3b** of the Environmental Assessment ("EA") in **Appendix 3**.

4.2.6 In addition, the potential railway noise impacts from the East Rail Line at the identified Noise Sensitive Receivers are evaluated. It is found that the maximum railway noise levels during night-time would comply with the noise criteria under the Noise Control Ordinance such that adverse railway noise impact at the future residents of the indicative development is not anticipated.

Potential Air Quality Impact

4.2.7 There are expected potential air quality impacts during operation phase due to vehicular emissions from surrounding roads and public vehicle park. The roads abutting the Representation Site (viz. Ka Fu Close and Cheuk Wan Road) are classified as 'Local Distributor' and 5m of buffer distances, measured from the road kerbs of the road, shall be provided for the fresh

air intake and active recreational uses. As shown in Figure 3.1 of the EA in **Appendix 3**, all air sensitive uses of the indicative development will be carefully positioned outside of the recommended buffer zone for the respective road types under the Hong Kong Planning Standards and Guidelines.

- 4.2.8 As regards industrial emission, desktop survey was conducted on 20 January 2022 to identify active chimney and odour within the Study Area. No chimneys were found within the 500m Study Area. Hence, adverse air quality impact on and from the indicative development is not anticipated.

Potential Odour Impact

- 4.2.9 The Shek Wu Hui Sewerage Treatment Works ("SWHSTW") is located at about 143m north-west to the Representation Site. Previous on-site measurement from the Final EIA Report for North East New Territories New Development Areas Planning and Engineering Study - Investigation of Agreement No. CE 61/2007 (CE), Shek Wu Hui Sewerage Treatment Works is adopted as the basis to estimate the potential odour emission rates associated with the expanded SWHSTW. Referring to the contours of odour concentrations of SWHSTW at ground level (1.5m above ground) and worst hit level (55m above ground) from the EIA Report (Appendix 3.1 in the EA in **Appendix 3** refers), the Representation Site is not within the 50U non-compliance zone at 55m above the ground. It is concluded that no adverse odour impact within the Project Site is anticipated due to the SWHSTW from 2011 to after the completion of the planned expansion.

Further Review under S16 Planning Application Procedures

- 4.2.10 Under the proposed "R(E)" zoning, the environmental acceptability of any future residential development at the Representation Site would be guaranteed subject to the consideration of detailed assessments by Government Departments and TPB in subsequent S16 Planning Application(s). Details of the mitigation measures for potential environmental impacts shall be further scrutinised and designed when the detailed layout of residential development is available in future S16 planning application stage.

4.3 The Proposed "R(E)" Zoning is in Line with the Transformation of Sheung Shui Industrial Area into a Mixed-Use Neighbourhood

- 4.3.1 Having reviewed the changing surrounding land use context with "R(A)", "OU(B)", "C" and "G/IC" zones discussed in **Section 2**, a "R(E)" zoning is considered appropriate for the proposed composite residential development at the Representation Site located, which is intended "primarily for phasing out of existing industrial uses through redevelopment for residential use on application to the Town Planning Board". In addition, it is stated that "whilst existing industrial uses will be tolerated, new

industrial developments are not permitted in order to avoid perpetuation of industrial/residential interface problem".

- 4.3.2 In terms of functional transformation, the planned public housing sites along Po Shek Wui Road and Choi Yuen Road, together with a number of old industrial developments undergoing wholesale conversion stages for business/commercial uses, will form a new "living circle" serving an emerging mixed-use neighbourhood in Sheung Shui Areas 4 and 30. To enable the proposed composite residential development at the subject Site, it is considered appropriate to rezone the subject Site from to "R(E)" to gradually phase out the existing industrial operations and to facilitate a changing character of the immediate area from industrial to a mixed-use neighbourhood.

4.4 The Proposed Composite Residential Development Will Continue to Comply with the Building Height Restriction on the Draft OZP

- 4.4.1 PlanD has recently stipulated a more "relaxed" building height restriction of +75mPD (vs 25m in the previous OZP) for the subject site and the building height review is justified by the Government's latest visual appraisal and Air Ventilation Assessment report. The building height of indicative development at the Representation Site is therefore proposed to be within +75mPD in order to ensure that the resultant residential development would visually integrate with the overall building height profile stepping down from the high-rise commercial and residential developments in the southeast to the low-rise village settlements of Sheung Shui Heung in the north, with a view to avoid creating adverse visual and air ventilation impacts on the surrounding areas.

- 4.4.2 The indicative development with a building height of about 75mPD is formulated in accordance with the maximum building height of 75mPD stipulated under the "OU(B)" zone on the Draft OZP. Aiming to optimise the building bulk, all of the car parking spaces and the majority of E&M facilities will be accommodated in the basement level. As efforts have been made to comply with the building height restriction of the draft OZP, the proposed building height for the new "R(E)" zone is considered reasonable.

4.5 In Support of Government's On-going Policy on Increasing Supply of Flats to Meet the Imminent Housing Demand

- 4.5.1 In view of the continued tight supply of developable land in Hong Kong and the acute housing shortage in short-to-medium term, addressing the land shortage has been an urgent priority for many terms of government. The Government has continued to adopt a multi-pronged strategy to increase land supply on a sustained basis at full steam. Government's determination on increasing housing supply has been reflected in the recent attempts to

rezone 6 nos. of potential sites in Sheung Shui for planned public housing developments.

- 4.5.2 The Representative Site falls under the sole ownership of the Representer. The indicative development is self-contained in terms of provision of vehicular access, internal transport facilities, open space and landscape area. Under the Indicative Development Proposal, the proposed rezoning of the Representation Site for residential use can make way for about 304 housing units that could be made readily available in the short to medium term. The subject representation is therefore in line with the Government's policy and contribute to meet the imminent housing need. The current rezoning proposal is on exactly the same path as the Government's proposal to make the maximal use of the scarce urban land resources available.

4.6 No Adverse Traffic Impact

- 4.6.1 A Traffic Impact Assessment ("TIA") has been conducted to assess the impact of the proposed composite residential development at the Representation Site onto the surrounding road network and is annexed at **Appendix 4** of this Written Representation. The assessment results in Table 5.1 in the TIA confirmed that all identified critical junctions for design scenarios in 2030 will operate with ample capacities.

- 4.6.2 In particular, taking into account of the junction improvement scheme carried out by Civil Engineering and Development Department under Kwu Tung North and Fanling North New Development Area (NDA) Project for Po Shek Wu Interchange, which provides a flyover to allow the right turning traffic from Po Shek Wu Road southbound to Fanling Highway westbound to bypass the existing Junction E and F (i.e. Po Shek Wu Road/ Choi Yuen Road and Po Shek Wu Road/ Fan Kam Road/ Fanling Highway), the junction performance would be greatly improved in future.

- 4.6.3 With the planned traffic improvement works, all assessed junctions will have adequate capacity to serve area including the indicative. It is demonstrated that the traffic generated by the proposed development significant traffic impact to the local and can be absorbed by the nearby road network in the vicinity.

4.7 No Adverse Sewerage Impact

- 4.7.1 Same as the existing industrial building, the sewage generated from the indicative composite residential development would be directed to the sewer manhole at Ka Fu Close in the existing sewerage system. Review of the potential sewerage impact of the proposed composite residential development in the Sewerage Impact Assessment ("SIA") in **Appendix 5** demonstrated that the estimated total sewage discharge from the operation of the indicative composite residential development (i.e. 252.9m³

per day) would be smaller than that of an assumed business development for office, retail and restaurant uses with PR 5 under the "OU(B)" zone (i.e. 362.1m³ per day). Hence, adverse impacts on the existing sewerage system from the indicative composite residential development is not anticipated.

5. PROPOSED AMENDMENTS TO THE DRAFT FANLING/SHEUNG SHUI OUTLINE ZONING PLAN

5.1 In view of all of the above, the Representer will withdraw its objection to the Draft Fanling/Sheung Shui Outline Zoning Plan No. S/FSS/25 subject to TPB's agreement on the following amendments:

- Recognise the Potential Redevelopment Opportunity of the Site for Composite Residential Development by:
Rezoning the Subject Site to "Residential (Group E)" zone (with a maximum Plot Ratio of 5.5, in which a maximum plot ratio of 5 shall be for domestic use and a maximum plot ratio of 0.5 shall be for non-domestic use, and a maximum building height of 75mPD.)

Written Representation in relation to Amendment Item D4 of Draft Fanling / Sheung Shui Outline Zoning Plan
No. S/FSS/25 on Rezoning of Park'N Shop Sheung Shui Fresh Food Distribution Centre from "Industrial" to
"Other Specified Uses" annotated Business Zone at 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui

Appendix 1

Indicative Development Scheme

3

HH

KA FU CLOSE 1.9

10012

1.5

1.8

CHEUK WAN STREET

10400

1A

TOWER 1

75.00

19

29404

22600

12.60

TOWER 2

75.00

19

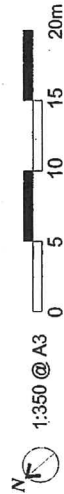
29404

LEGEND

N RESIDENTIAL STOREYS (EXCLUDING G/F, 1/F AND BASEMENT LEVELS)

RESIDENTIAL TOWERS

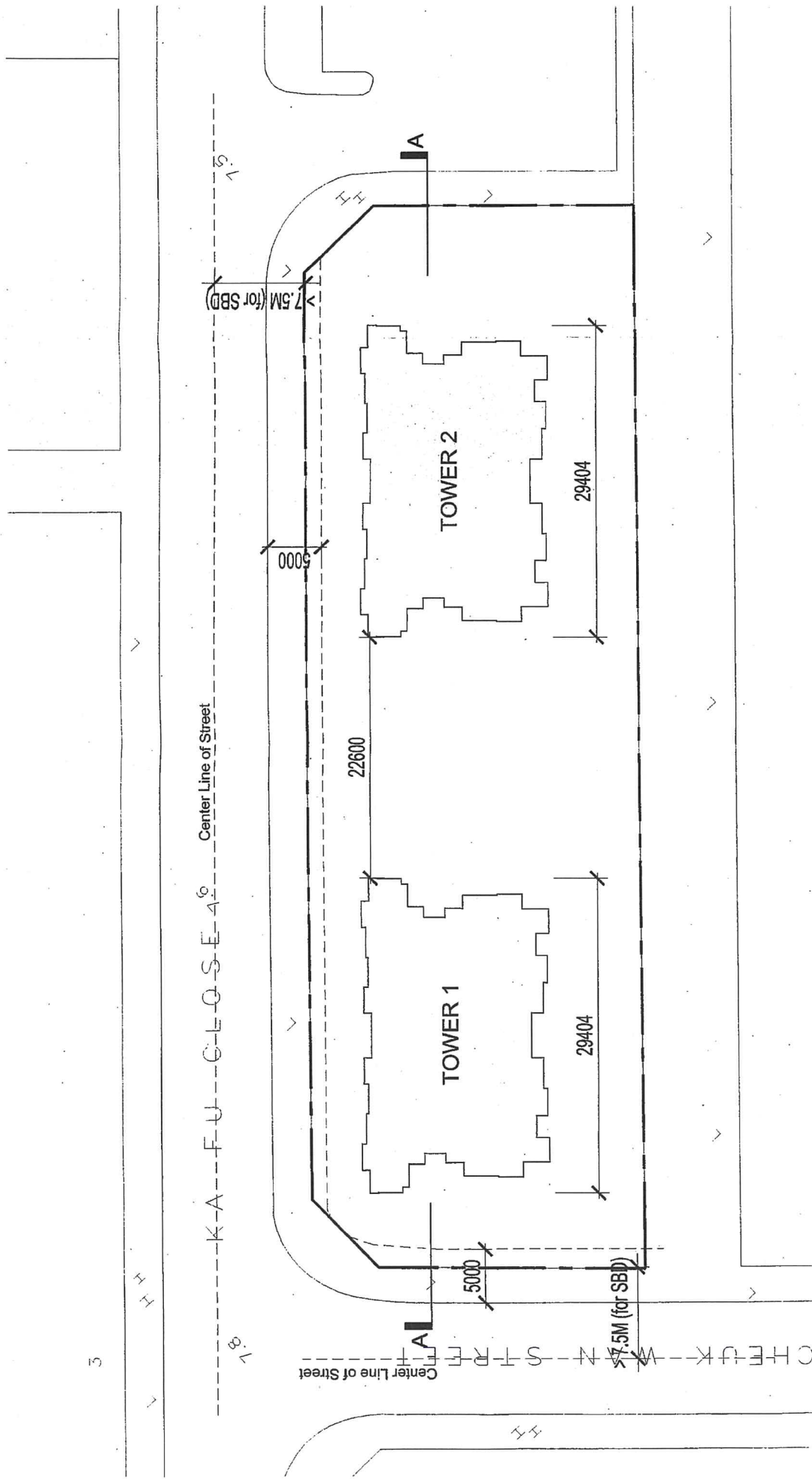
1/F PODIUM



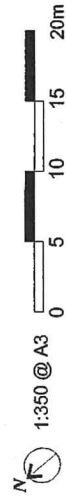
INDICATIVE BLOCK PLAN

Proposed Residential Development at F.S.S.T.L. 97,
6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui

LWK
+PARTNERS



LEGEND
RESIDENTIAL FLOOR



TYPICAL FLOOR PLAN

**LWK
+PARTNERS**

Proposed Residential Development at F.S.T.L. 97,
6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui

Center Line of Street

TOWER 1

TOWER 2

7.5M (for SBD)

Center Line of Street

7.5M (for SBD)

RETAIL

7.60
B/F STAIRS
TOWER LOBBY

7.60

RETAIL

TOWER STAIRS

7.60

RESIDENTIAL RECREATIONAL FACILITIES

7.60

TOWER STAIRS

7.60
B/F STAIRS
TOWER LOBBY

7.60

RETAIL

EM

B/F STAIRS

LEGEND

RESIDENTIAL LOBBY / STAIRCASE

E&M

RETAIL

RUN-IN/OUT

RESIDENTIAL RECREATIONAL FACILITIES

CARPARK ACCESS

INDICATIVE LAYOUT PLAN - G/F



**LWK
+PARTNERS**

Proposed Residential Development at F.S.T.L. 97,
6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui

Center Line of Street

K A F U C L O S E A S

7.5M (for SBD)

Center Line of Street

C H E U T W I T H S T R E E T

>7.5M (for SBD)

TOWER 1

TOWER 2

22600

12.60
LOBBY

12.60
LOBBY

COVERED
LANDSCAPE

COVERED
LANDSCAPE

LANDSCAPE
AREA

COVERED
LANDSCAPE

COVERED
LANDSCAPE

LANDSCAPE
AREA

LANDSCAPE
AREA

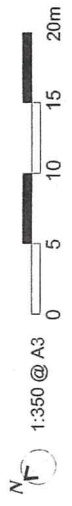
LEGEND

RESIDENTIAL LOBBY / STAIRCASE

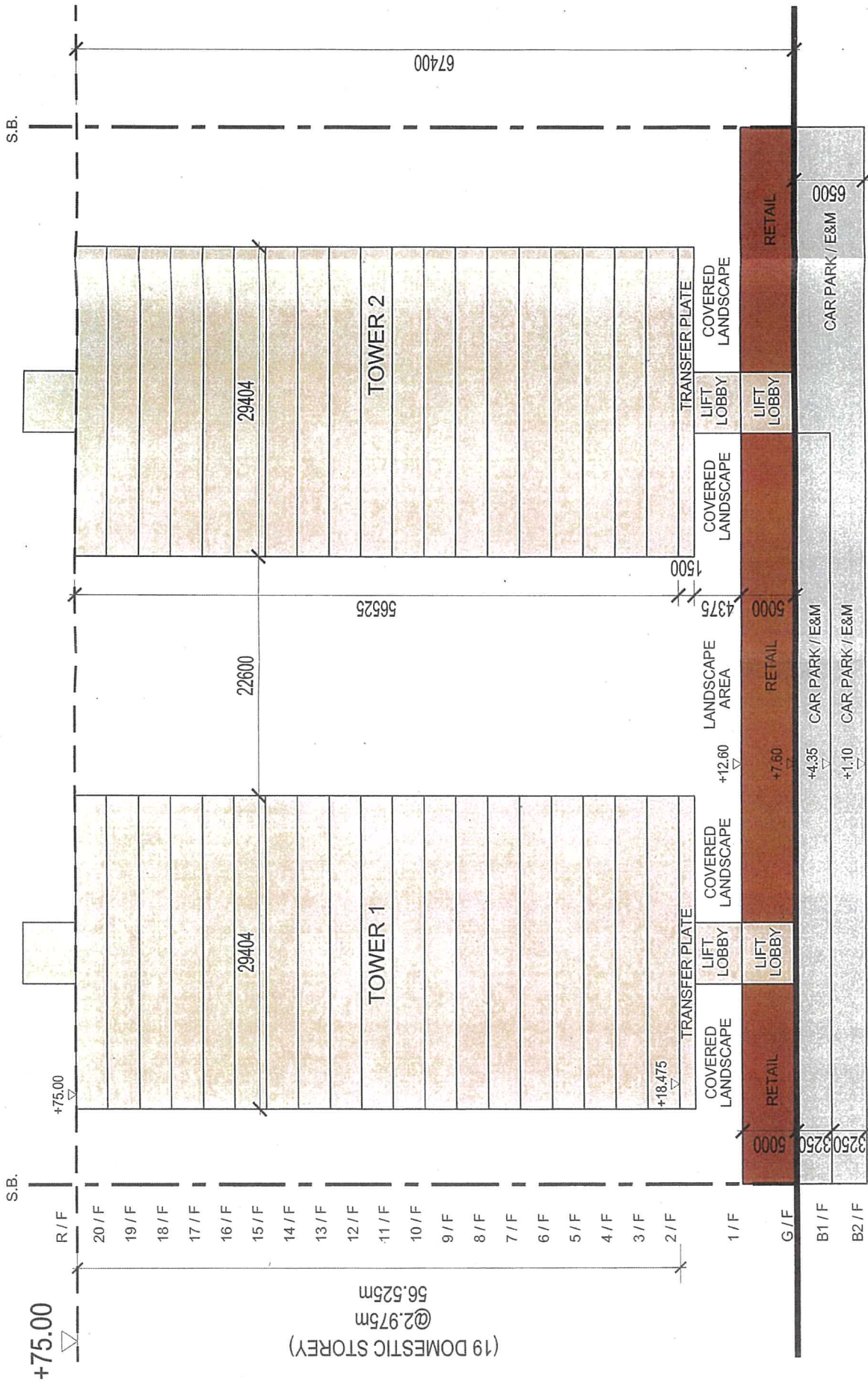
LANDSCAPE AREA

**LWK
+PARTNERS**

INDICATIVE LAYOUT PLAN - 1/F



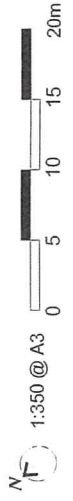
Proposed Residential Development at F.S.T.L. 97,
6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui



LEGEND

- RESIDENTIAL LOBBY / STAIRCASE
- RETAIL
- BASEMENT CARPARK

SCHEMATIC SECTION A-A

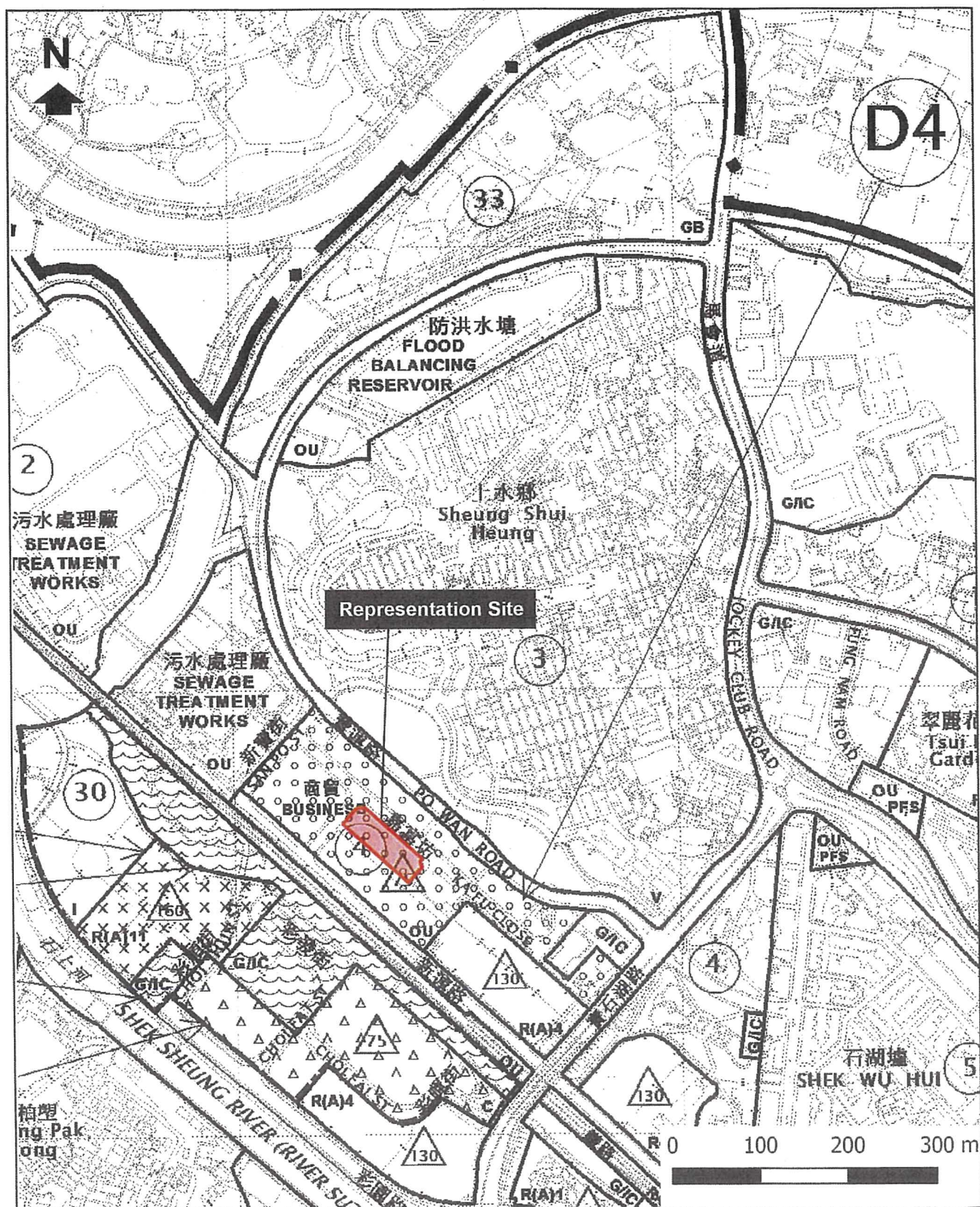


Proposed Residential Development at F.S.T.L. 97,
6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui

Written Representation in relation to Amendment Item D4 of Draft Fanling / Sheung Shui Outline Zoning Plan
No. S/FSS/25 on Rezoning of Park'N Shop Sheung Shui Fresh Food Distribution Centre from "Industrial" to
"Other Specified Uses" annotated Business Zone at 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui

Appendix 2

Extracts of OZP, Statutory Notes and Explanatory Statement



PLANNING LIMITED
規劃顧問有限公司

Base Plan: Draft Fanling/ Sheung Shui
Outline Zoning Plan No. S/FSS/25

Site Location Plan

Written Representation in relation to
Amendment Item D4 of Draft Fanling /
Sheung Shui Outline Zoning Plan No.
S/FSS/25 on Rezoning of Park 'N Shop
Sheung Shui Fresh Food Distribution
Centre from "Industrial" to "Other Specified
Uses" annotated Business Zone at 6 Ka Fu
Close, Sheung Shui Area 4, Sheung Shui

Date: 9 February 2022

OTHER SPECIFIED USES

For "Business" only

<i>Column 1 Uses always permitted</i>	<i>Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board</i>
<i>Schedule I: for open-air development or for building other than industrial or industrial-office building®</i>	
<p><i>Ambulance Depot</i> <i>Commercial Bathhouse/Massage Establishment</i> <i>Eating Place</i> <i>Educational Institution</i> <i>Exhibition or Convention Hall</i> <i>Government Use (Police Reporting Centre, Post Office only)</i> <i>Information Technology and Telecommunications Industries</i> <i>Institutional Use (not elsewhere specified)</i> <i>Library</i> <i>Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods^A)</i> <i>Off-course Betting Centre</i> <i>Office</i> <i>Place of Entertainment</i> <i>Place of Recreation, Sports or Culture</i> <i>Private Club</i> <i>Public Clinic</i> <i>Public Convenice</i> <i>Public Transport Terminus or Station</i> <i>Public Utility Installation</i> <i>Public Vehicle Park</i> <i>(excluding container vehicle)</i> <i>Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation</i> <i>Recyclable Collection Centre</i> <i>Religious Institution</i> <i>Research, Design and Development Centre</i> <i>School (excluding free-standing purpose- designed building and kindergarten)</i> <i>Shop and Services</i> <i>Training Centre</i> <i>Utility Installation for Private Project</i></p>	<p><i>Broadcasting, Television and/or Film Studio</i> <i>Cargo Handling and Forwarding Facility</i> <i>Government Refuse Collection Point</i> <i>Government Use (not elsewhere specified)</i> <i>Hotel</i> <i>Mass Transit Railway Vent Shaft and/or other Structure above Ground level other than Entrances</i> <i>Non-polluting Industrial Use (not elsewhere specified)</i> <i>Petrol Filling Station</i> <i>School (not elsewhere specified)</i> <i>Social Welfare Facility (excluding those involving residential care)</i> <i>Warehouse (excluding Dangerous Goods Godown)</i> <i>Wholesale Trade</i></p>

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

For "Business" only (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
<p align="center"><i>Schedule II: for industrial or industrial-office building[@]</i></p> <p><i>Ambulance Depot</i> <i>Arts Studio (excluding those involving direct provision of services or goods)</i> <i>Bus Depot</i> <i>Cargo Handling and Forwarding Facility (not elsewhere specified)</i> <i>Eating Place (Canteen only)</i> <i>Government Refuse Collection Point</i> <i>Government Use (not elsewhere specified)</i> <i>Information Technology and Telecommunications Industries</i> <i>Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods)</i> <i>Office (excluding those involving direct provision of customer services or goods)</i> <i>Public Convenience</i> <i>Public Transport Terminus or Station</i> <i>Public Utility Installation</i> <i>Public Vehicle Park (excluding container vehicle)</i> <i>Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation</i> <i>Recyclable Collection Centre</i> <i>Research, Design and Development Centre</i> <i>Shop and Services (Motor-vehicle Showroom on ground floor, Service Trades only)</i> <i>Utility Installation for Private Project</i> <i>Warehouse (excluding Dangerous Goods Godown)</i></p>	
	<p><i>Broadcasting, Television and/or Film Studio</i> <i>Cargo Handling and Forwarding Facility (Container Freight Station, free-standing purpose-designed Logistics Centre only)</i> <i>Industrial Use (not elsewhere specified)</i> <i>Mass Transit Railway Vent Shaft and/or other Structure above Ground level other than Entrances</i> <i>Off-course Betting Centre</i> <i>Office (not elsewhere specified)</i> <i>Petrol Filling Station</i> <i>Place of Recreation, Sports or Culture (not elsewhere specified)</i> <i>Private Club</i> <i>Shop and Services (not elsewhere specified) (ground floor only except Ancillary Showroom[#] which may be permitted on any floor)</i> <i>Vehicle Repair Workshop</i> <i>Wholesale Trade</i></p>

In addition, for building without industrial undertakings involving offensive trades or the use/storage of Dangerous Goods^Δ, the following use is always permitted

Office

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

For "Business" only (Cont'd)

In addition, the following uses are always permitted in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the uses are separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:

In addition, the following use may be permitted with or without conditions on application to the Town Planning Board in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the use is separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:

*Commercial Bathhouse/Massage Establishment
Eating Place
Education Institution
Exhibition or Convention Hall
Institutional Use (not elsewhere specified)
Library
Off-course Betting Centre
Office
Place of Entertainment
Place of Recreation, Sports or Culture
Private Club
Public Clinic
Religious Institution
School (excluding kindergarten)
Shop and Services
Training Centre*

Social Welfare Facility (excluding those involving residential care)

@ An industrial or industrial-office building means a building which is constructed for or intended to be used by industrial or industrial-office purpose respectively as approved by the Building Authority.

△ Dangerous Goods refer to substances classified as Dangerous Goods and requiring a licence for their use/storage under the Dangerous Goods Ordinance (Cap. 295).

Ancillary Showroom requiring planning permission refers to showroom use of greater than 20% of the total usable floor area of an industrial firm in the same premises or building.

Planning Intention

This zone is intended primarily for general business uses. A mix of information technology and telecommunications industries, non-polluting industrial, office and other commercial uses are always permitted in new "business" buildings. Less fire hazard-prone office use that would not involve direct provision of customer services or goods to the general public is always permitted in existing industrial or industrial-office buildings.

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

For "Business" only (Cont'd)

Remarks

- (a) *No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 5.0, and the maximum building height in terms of metres above Principal Datum as stipulated on the Plan or the plot ratio and the height of the existing building, whichever is the greater.*
- (b) *In determining the maximum plot ratio for the purposes of paragraph (a) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.*
- (c) *Where the permitted plot ratio as defined in Building (Planning) Regulations is permitted to be exceeded in circumstances as set out in Regulation 22(1) or (2) of the said Regulations, the plot ratio of the building on land to which paragraph (a) applies may be increased by the additional plot ratio by which the permitted plot ratio is permitted to be exceeded under and in accordance with the said Regulation 22(1) or (2), notwithstanding that the relevant maximum plot ratio specified in paragraph (a) above may thereby be exceeded.*
- (d) *Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio/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.*

(Please see next page)

Written Representation in relation to Amendment Item D4 of Draft Fanling / Sheung Shui Outline Zoning Plan No. S/FSS/25 on Rezoning of Park'N Shop Sheung Shui Fresh Food Distribution Centre from "Industrial" to "Other Specified Uses" annotated Business Zone at 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui

Appendix 3

Environmental Assessment

**Written Representation in relation to Amendment
Item D4 of Draft Fanling / Sheung Shui Outline
Zoning Plan No. S/FSS/25 on Rezoning of
Park'N Shop Sheung Shui Fresh Food Distribution
Centre from "Industrial" to "Other Specified Uses"
annotated "Business" Zone at 6 Ka Fu Close,
Sheung Shui Area 4, Sheung Shui**

Environmental Assessment (Revision 0)

Feb. 2022

<u>Date</u>	<u>Revision</u>	<u>Prepared by</u>	<u>Checked by</u>	<u>Authorised by</u>
<i>Feb 2022</i>	<i>Rev 0</i>	<i>Lily Chow</i>	<i>C. K. Chan</i>	<i>Paul Kau</i>



WSP (Asia) Limited

7/F One Kowloon
1 Wang Yuen Street
Kowloon Bay, Hong Kong

Tel +852 2579-8899
Fax +852 2856-9902
wsp.com

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Figure 4.2 Railway Track Segment

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Figure 4.4 Locations of Noise Sensitive Receivers (Road Traffic Noise Impact Assessment)

Figure 4.5 Locations of Noise Mitigation Measures (Road Traffic Noise Impact Assessment)

Figure 4.6 Locations of Fixed Noise Sources

APPENDIX

Appendix 2.1 Layout Plan

Appendix 3.1 Contours of Odour Concentrations of Shek Wu Hui Sewage Treatment Works

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Appendix 4.3 Predicted Road Traffic Noise Levels – AM (Worst Case Scenario)

1 INTRODUCTION

1.1 General

- 1.1.1 Kung Hei Investment Limited has commissioned WSP (Asia) Ltd to conduct an Environmental Assessment (hereinafter called "EA") to support the Written Representation in relation to Amendment Item D4 of Draft Fanling / Sheung Shui Outline Zoning Plan No. S/FSS/25 on Rezoning of Park'N Shop Sheung Shui Fresh Food Distribution Centre from "Industrial" to "Other Specified Uses" annotated "Business" Zone. This report would assess the environmental impact with respect to the re-development of Park'N Shop Sheung Shui Fresh Food Distribution Centre for a composite residential development at 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui (hereafter "the Project").
-

1.2 Objective of this Environmental Assessment (EA)

- 1.2.1 The aims of this EA comprise the following: -

- (a) Identify and describe elements of community and environment likely to be affected by the Project;
 - (b) Identify emission sources (including air quality, noise, water quality and waste management) and determine the significance of impacts on sensitive receivers and potential affected uses; and
 - (c) Propose mitigation measures to minimize pollution, environmental disturbance and nuisance during the construction phase and operational phase of the Project.
-

1.3 Structure of Report

- 1.3.1 This EA Report contains the following sections in addition to this introduction (Section 1):

- Section 2 presents a description of the Project;
- Section 3 presents the Air Quality Impact Assessment;
- Section 4 presents the Noise Impact Assessment;
- Section 5 presents Other Impact Assessments.

2 PROJECT DESCRIPTION

2.1 Project Background

- 2.1.1 The Project is located in 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui. It is mainly surrounded by industrial buildings (e.g. Cambridge Plaza, Kerry Warehouse (Sheung Shui), Sheung Shui Plaza and Alpha Appliances Building) and a car park. The area of the Project Site is approximately 3,041m².
- 2.1.2 The Subject Site currently falls within an area zoned "Other Specified Uses (Business)" "OU (B)" under the Draft Fanling / Sheung Shui Outline Zoning Plan No. S/FSS/25.
- 2.1.3 Nearby road networks include Ka Fu Close and Cheuk Wan Street. Location of the Project is shown in Figure 2.1.

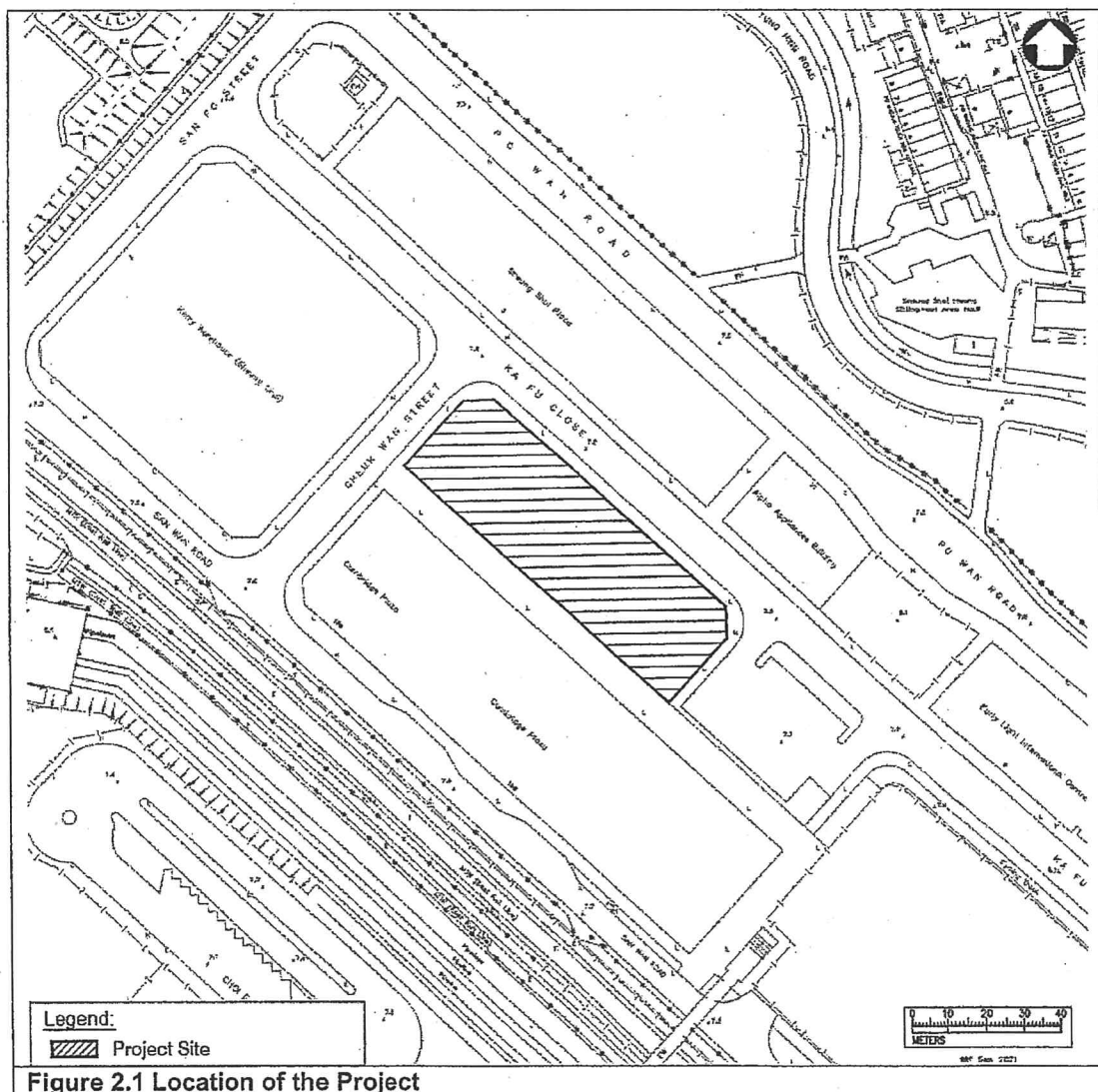


Figure 2.1 Location of the Project

- 2.1.4 An Environmental Assessment (EA) shall be prepared to ascertain the environmental acceptability of the Project.
- 2.1.5 The re-development of storage facilities is not classified as a designated project under the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499).

2.2 Indicative Development

- 2.2.1 The indicative development is a re-development of Parknshop Sheung Shui Fresh Food Distribution Centre with a domestic development with plot ratio (PR) of 5.0 and non-domestic commercial retail with PR 0.5 for a composite residential development.
- 2.2.2 The Indicative Development accommodates about 304 residential units. In addition, there will be associate facilities including commercial retail area, car park and E&M rooms housed in podium floors and basement (**Appendix 2.1**).

2.3 Development Schedule

- 2.3.1 The proposed development will be completed and in operation by Year 2027.

Table 2.1 Development Schedule

Development Parameters	Proposed Development
Application Site Area	About 3,041 m ²
Greenery Ratio	Not less than 20%
Site Coverage	
Tower Site Coverage	Approx. 27.7 %
No. of Blocks	2
No. of Storeys	19 storeys domestic 1 storey Residential Lobby 1 storey retail 2 storeys Basement car park
Building Height (main roof)	Approx. +75 mPD
Site Formation and Levels of Developments	
Underground Car Park	The lowest formation level: approx. +1.1 mPD
No. of Residential units	304

3 AIR QUALITY IMPACT ASSESSMENT

3.1 Introduction

3.1.1 This section presents the assessment of potential air quality impacts associated with the construction and operation phases of the Project. Dust generated from construction activities is the primary concern during the construction phase. Recommendations for proper mitigation measures have also been made, where necessary, to minimize the potential construction air quality impacts. During operation phase, no pollution sources associated with the Project would be anticipated.

3.2 Assessment Criteria and Guidelines

3.2.1 The assessment is carried out in accordance with the relevant criteria and standards as specified in the following legislation and guidelines for evaluating air quality impacts:

- Air Pollution Control Ordinance (APCO) (Cap. 311);
- Air Pollution Control (Construction Dust) Regulation;
- Air Pollution Control (Smoke) Regulation;
- Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation; and
- Hong Kong Planning Standards and Guidelines (HKPSG).

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

3.2.2 The principal legislation for the management of air quality is the APCO. It specifies AQOs which stipulate the statutory limits of air pollutants and the maximum allowable numbers of exceedance over specific periods.

3.2.3 The Air Pollution Control (Amendment) Ordinance 2021 (Commencement) Notice, which seeks to appoint January 1, 2022, as the day on which the Air Pollution Control (Amendment) Ordinance 2021 (the Amendment Ordinance) comes into operation, was approved by the Legislative Council on June 23, 2021. The Amendment Ordinance tightens three air quality objectives (AQOs), namely the 24-hour AQO for sulphur dioxide (SO₂) and the annual and 24-hour AQOs of fine suspended particulates (FSP/PM_{2.5}) stipulated in Schedule 5 to the Air Pollution Control Ordinance (APCO) (Cap. 311). The prevailing AQOs are listed in Table 3.1.

Table 3.1 Air Quality Objectives

Pollutant	Averaging Time	AQO concentration ^{II} (µg/m ³)	Allowable number of exceedance
Sulphur Dioxide (SO ₂)	10 minutes	500	3
	24 hour	50	3
Respirable Suspended Particulates (PM ₁₀)	24 hour	100	9
	Annual	50	Not Applicable
Fine Suspended Particulates (PM _{2.5})	24 hour	50	18 ^{III}
		50	35
	Annual	25	Not Applicable
Nitrogen Dioxide (NO ₂)	1 hour	200	18
	Annual	40	Not Applicable
Carbon Monoxide (CO)	1 hour	30,000	0
	8 hour	10,000	0

Pollutant	Averaging Time	AOO concentration ^[i] (µg/m ³)	Allowable number of exceedance
Ozone (O ₃)	8 hour	160	9
Lead	Annual	0.5	Not Applicable
Note: [i] All measurements of the concentration of 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 kPa [ii] 18 times of allowed exceedance is for government project.			

Air Pollution Control (Construction Dust) Regulation

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

3.2.5 Notifiable Works:

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

3.2.6 Regulatory Works:

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

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

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

- 3.2.8 The Air Pollution Control (Smoke) and Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulations come into effects to control the emissions from diesel powered engines and limited amount of diesel-powered mechanical equipment will be used on-site during construction phase.

Hong Kong Planning Standards and Guidelines (HKPSG) for Roads

- 3.2.9 Chapter 9 of the HKPSG stipulates the buffer distance requirements between the Air Sensitive Receivers (ASRs) of proposed development and the surrounding roads. The minimum buffer distances for different types of road are summarized in **Table 3.2** below.

Table 3.2 Required Minimum Buffer Distances between ASRs and Roads

Type of Road	Minimum Buffer Distance (m)
Trunk Road and Primary Distributor	>20
District Distributor	>10
Local Distributor	>5

3.3 Existing Ambient Air Quality

- 3.3.1 Existing air quality of the project area was determined through a thorough review of EPD's routine air quality monitoring data collected in between Year 2016 to 2020. The nearest EPD air quality monitoring station (AQMS) is Tai Po AQMS at Tai Po Government Offices Building at Ting Kok Road. The air quality monitoring data for Respirable and Fine Suspended Particulates, Nitrogen Dioxide, Sulphur Dioxide and Ozone are summarised in **Table 3.3**.
- 3.3.2 Most of the air pollutants meet the air quality objectives except for annual average concentration of Ozone in 2017-2020.

Table 3.3 EPD Annual Average Concentration at Tai Po Monitoring Station (2016-2020)

Pollutant	Averaging Time	Concentration Limits (µg/m³)	Concentration (µg/m³)					Remark
			2016	2017	2018	2019	2020	
Respirable Suspended Particulates (PM ₁₀) [i]	24-hour	100	74	82	69	65	58	10th highest conc.
	Annual	50	29	32	31	31	24	NA
Fine Suspended Particulates (PM _{2.5}) [i]	24-hour	75	55	55	47	47	38	10th highest conc.
	Annual	35	20	22	19	20	15	NA
Nitrogen Dioxide (NO ₂) [i]	1-hour	200	112	127	125	142	106	19th highest conc.
	Annual	40	33	39	36	36	30	NA
Sulphur Dioxide (SO ₂) [i]	10-minute	500	37	39	24	20	19	4th highest conc.
	24-hour	125	10	9	8	10	7	4th highest conc.
Ozone (O ₃) [i]	8-hour [ii]	160	147	181	167	197	165	10th highest conc.
Note: [i] Bolded concentrations indicate exceedance of the air quality objectives. [ii] Daily maximum running 8-hour								

3.4 Evaluation of Air Quality Impact During Operation Phase

3.4.1 There are expected of potential air quality impacts during operation phase due to vehicular emissions from surrounding roads and underground PVP.

3.4.2 The road type of Ka Fu Close and Cheuk Wan Street should be classified as Local Distributors and 5m of buffer distances, measured from the road kerbs of the road, shall be provided for the fresh air intake and active recreational uses of the project. All air sensitive uses of the proposed development will be located outside the buffer zone as shown in **Figure 3.1**.

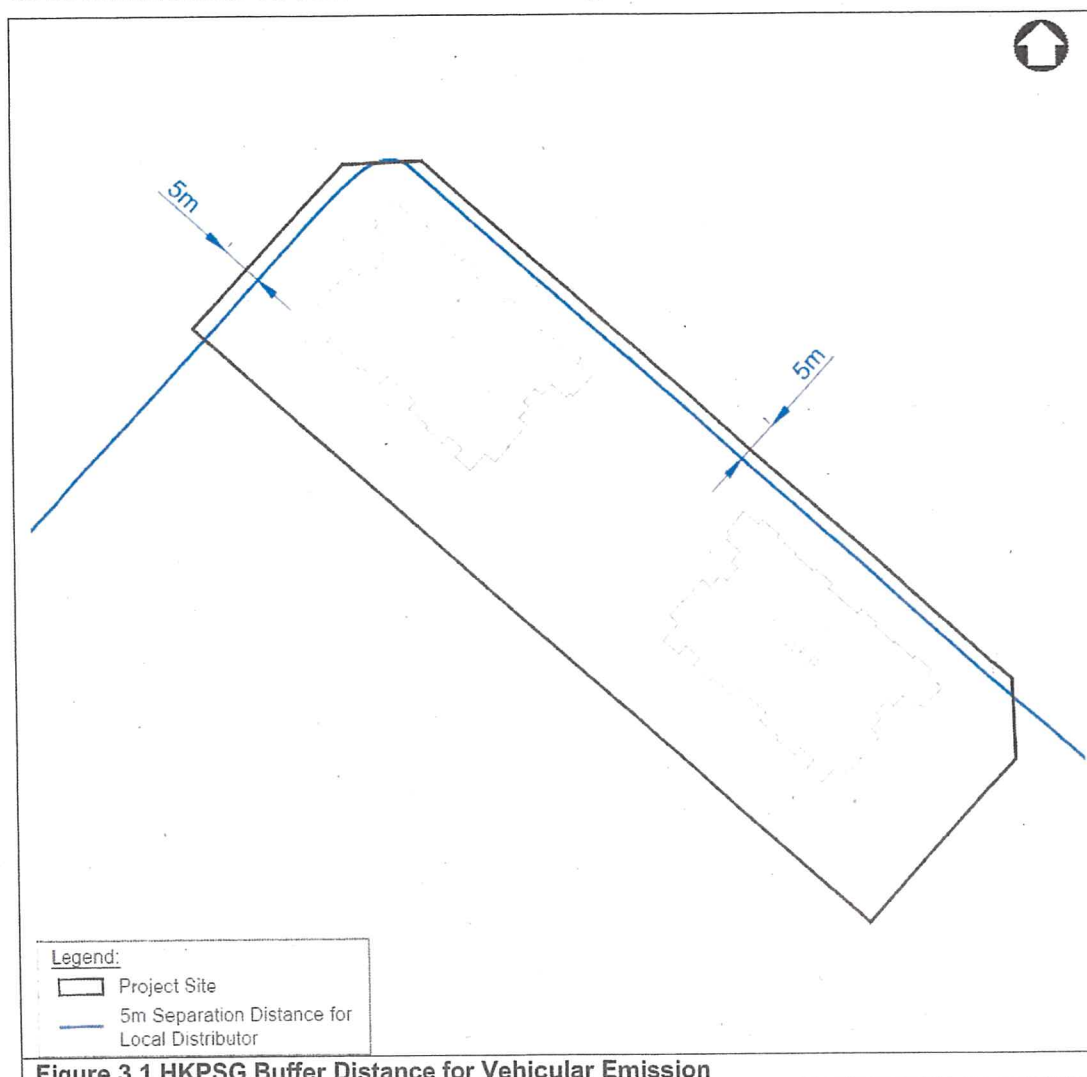


Figure 3.1 HKPSG Buffer Distance for Vehicular Emission

3.4.3 Desktop survey was conducted on 20 January 2022 to identify active chimney and odour within the Study Area. No chimneys were found within the 500m Study Area. Adverse air quality impact on and from the Project is not anticipated.

Odour Impact from Shek Wu Hui Sewage Treatment Works (SWHSTW)

3.4.4 According to the Final EIA Report for North East New Territories New Development Areas Planning and Engineering Study - Investigation of Agreement No. CE 61/2007 (CE), Shek Wu Hui Sewage Treatment Works is planned to undergo expansion. To determine the odour emission rates of the STW, an on-site odour measurement was conducted in September 2011 of different components inside the existing SWHSTW (before expansion). Since the treatment process of the planned STW Expansion is in general similar to that of the SWHSTW before expansion, the odour emission will be similar. As such, the 2011 odour emission measurement results for SWHSTW before expansion

have been adopted as the basis to estimate the odour emission rates of sources associated with the planned STW Expansion. Therefore, the result from the EIA is valid from 2011, where SWHSTW has not been expanded, to after the planned expansion.

- 3.4.5 Refer to the contours of odour concentrations of SWHSTW at ground level (1.5m above ground) and worst hit level (55m above ground) from the EIA Report (**Appendix 3.1**), the Project Site is not within the 50U non-compliance zone at 55m above the ground. No adverse odour impact within the Project Site is anticipated due to SWHSTW from 2011 to after the completion of the planned expansion.

3.5 Mitigation Measures During Operation Phase

- 3.5.1 Sufficient buffer distances are provided between the corresponding roads and the air sensitive uses. Therefore, no further mitigation measure is required.

4 NOISE IMPACT ASSESSMENT

4.1 Introduction

- 4.1.1 This section presents the assessment of potential noise impacts associated with the construction and operation phases of the Project. Noise generated from various construction activities is the primary concern during construction phase. Recommendations for proper mitigation measures have been made, where necessary, to minimize the potential construction noise impacts. Potential fixed noise source within the Project area is identified and the associated noise impact is evaluated in this section.

4.2 Environmental Legislation, Standards and Guidelines

Construction Phase

- 4.2.1 Legislation, Standards, Guidelines and Criteria relevant to the consideration of construction noise impact under this Study include the following:
- Noise Control Ordinance (NCO)
 - Technical Memorandum (TM) on Noise from Construction Work other than Percussive Piling (TM-GW)
 - TM on Noise from Percussive Piling (TM-PP)
 - TM on Noise on Construction Work in Designated Areas (TM-DA);
 - TM on Noise from Places other than Domestic Premises, Public Places or Construction Sites (TM-Places);
 - ProPECC PN 2/93 Environmental Protection Department Practice Note for Professional Persons: Noise from Construction Activities – Non-statutory Controls

General Construction Activities during Non-Restricted Hours

- 4.2.2 ProPECC PN 2/93 provides assessment criteria as well as requirements relating to construction noise not currently controlled under the NCO. The Practice Note also provides information on noise abatement measures. Noise impacts arising from general construction activities other than percussive piling during the daytime period (07:00-19:00 hours on any day not being a Sunday or general holiday) would be assessed against the noise standards tabulated in **Table 4.1** below. Practicable direct mitigation measures will be evaluated and exhausted to maximise the protection of NSRs.

Table 4.1 Noise Standards for Daytime Construction Activities

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

Note: The above noise standards apply to uses, which rely on opened windows for ventilation. The above standards shall be viewed as the maximum permissible noise levels assessed at 1 m from the external façade

Operation Phase

Railway Noise

- 4.2.3 Railway noise is controlled under the Noise Control Ordinance (NCO) and the subsidiary Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites (TM-IND) which also describes the appropriate technical principles and assessment procedures. Acceptable Noise Levels (ANL) is stipulated in TM-IND as the noise criteria and is dependent on the Area Sensitivity Rating (ASR) defined and the time period of the day. The ASR of the NSR is determined by the type of area containing it and the presence of any influencing factors (IF) such as industrial areas, major roads, etc.
- 4.2.4 The indicate development is located in an urban area and is directly affected by Industrial Estate. This represents ASR "C" with an ANL of 60dB(A) for the night-time (23:00 to 07:00 hours) and 70 dB(A) in the daytime and evening (07:00 to 19:00 hours, and 19:00 to 23:00 hours, respectively).
- 4.2.5 HKPSG provide the railway noise standards for planning residential development, which are summarised below:
- $L_{eq} (24 \text{ hr}) = 65 \text{ dB(A)}$ and
 - $L_{max} (23:00-07:00 \text{ hour}) = 85 \text{ dB(A)}$.

Road Traffic Noise

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

Table 4.2 Relevant Road Traffic Noise Standards for Planning Purposes

Uses	Road Traffic Noise Peak-Hour Traffic $L_{10}(1\text{hour})$ dB(A)
All domestic premises including temporary housing accommodation, offices	70
Educational institutions including kindergartens, child care centres and all other where unaided voice communication is required	65
Hospitals, clinics, - diagnostic rooms - wards convalescences and residential care homes for the elderly	55

Notes: (i) The above standards apply to uses which rely on opened windows for ventilation.
(ii) The above standards should be viewed as the maximum permissible noise levels assessed at the external façade.

Fixed Noise Source

- 4.2.8 Fixed noise source impact arising from existing noise source is controlled under the NCO and shall comply with the ANLs laid down in the Table 2 of the TM-Places. For a given ASR, the ANL, in dB(A), is given by **Table 4.3**.

Table 4.3 Acceptable Noise Level for Fixed Plant Noise

Time Period	Area Sensitivity Rating		
	A	B	C
Day-time (0700 to 1900 hours)	60	65	70
Evening (1900 to 2300 hours)	60	65	70
Night-time (2300 to 0700 hours)	50	55	60

Note:

(i) The above standards apply to uses which rely on opened windows for ventilation

(ii) The above standards should be viewed as the maximum permissible noise levels assessed at 1m from the external facade

- 4.2.9 The Project Site is surrounded by low to medium buildings, including Cambridge Plaza, Kerry Warehouse (Sheung Shui), Sheung Shui Plaza and Alpha Appliances Building. Refer to Table 1 of the TM-Places, the site is considered as "area other than those above" and it is not affected by any IF. An Area Sensitive Rating of "B" is assigned for the site. The ANL in $L_{eq}(30min)$ dB(A) regarding to the ASR for both daytime and night-time are shown in Table 4.4 below.

Table 4.4 Noise Criteria for Fixed Noise Source Impact Assessment

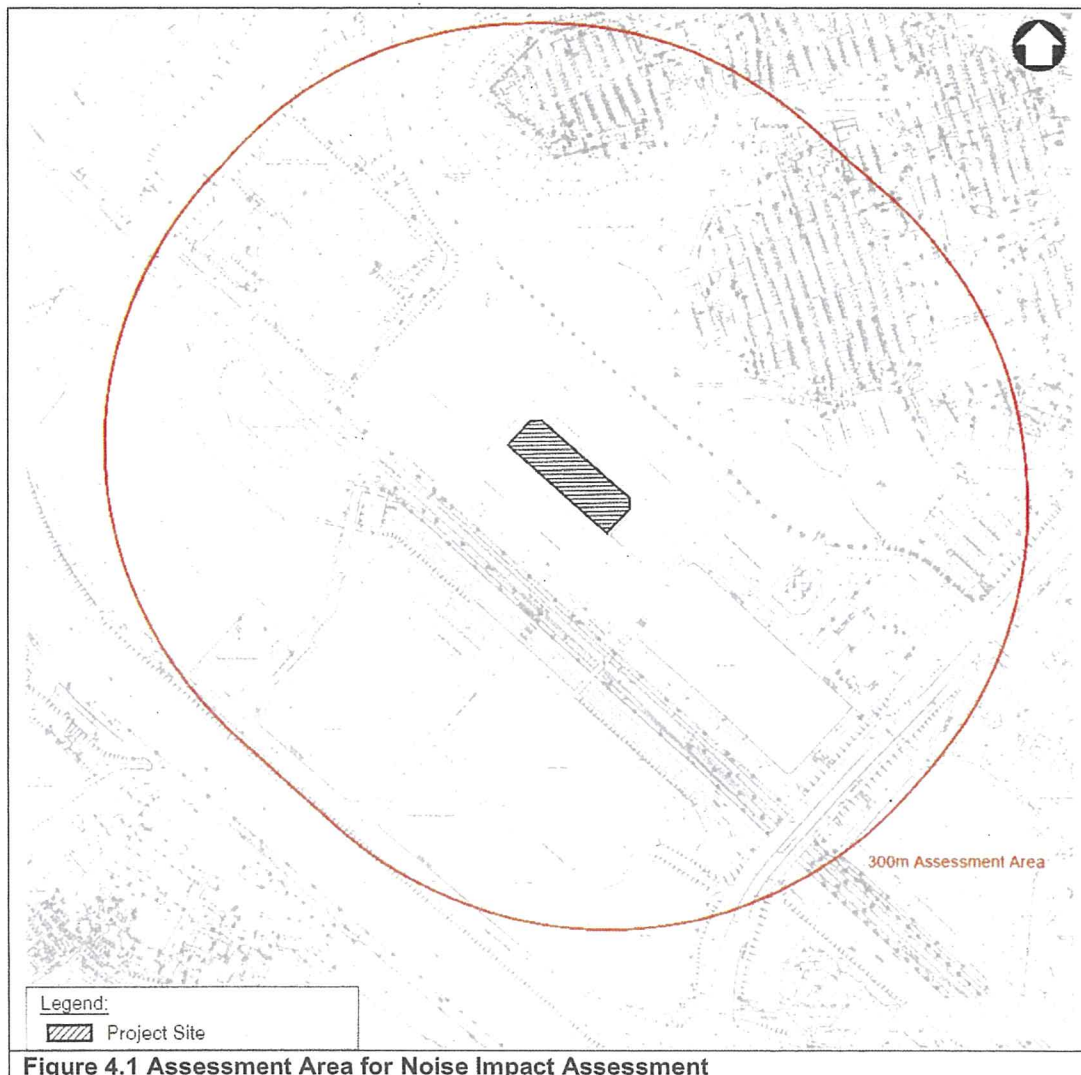
Area Sensitivity Rating	Time Period	ANL, $L_{eq}(30min)$, dB(A)
B	Day and evening time (0700 – 2300 hours)	65
B	Night-time (2300 – 0700 hours)	55

Note:

In any event, the ASRs and the ANLs adopted in this report are only indicative and they are used for assessment only. It should be noted that noise from fixed noise sources is controlled under section 13 of the Noise Control Ordinance. Therefore, the ASRs and ANLs determined in this report shall not prejudice the Noise Control Authority's discretion to determine noise impact due to fixed noise sources on the basis of prevailing legislation and practices being in force and taking account of contemporary conditions/ situations of adjoining land uses. The assessment of noise impacts due to fixed noise sources in this report shall not bind the Noise Control Authority in the context of law enforcement against any of the noise from fixed noise sources being assessed.

4.3 Assessment Area and Noise Sensitive Receivers

- 4.3.1 The Assessment Area is defined as within 300 m of the site boundary for noise impact assessment. This Assessment Area is identified and shown in **Figure 4.1**.



4.4 Operational Noise Impact Assessment

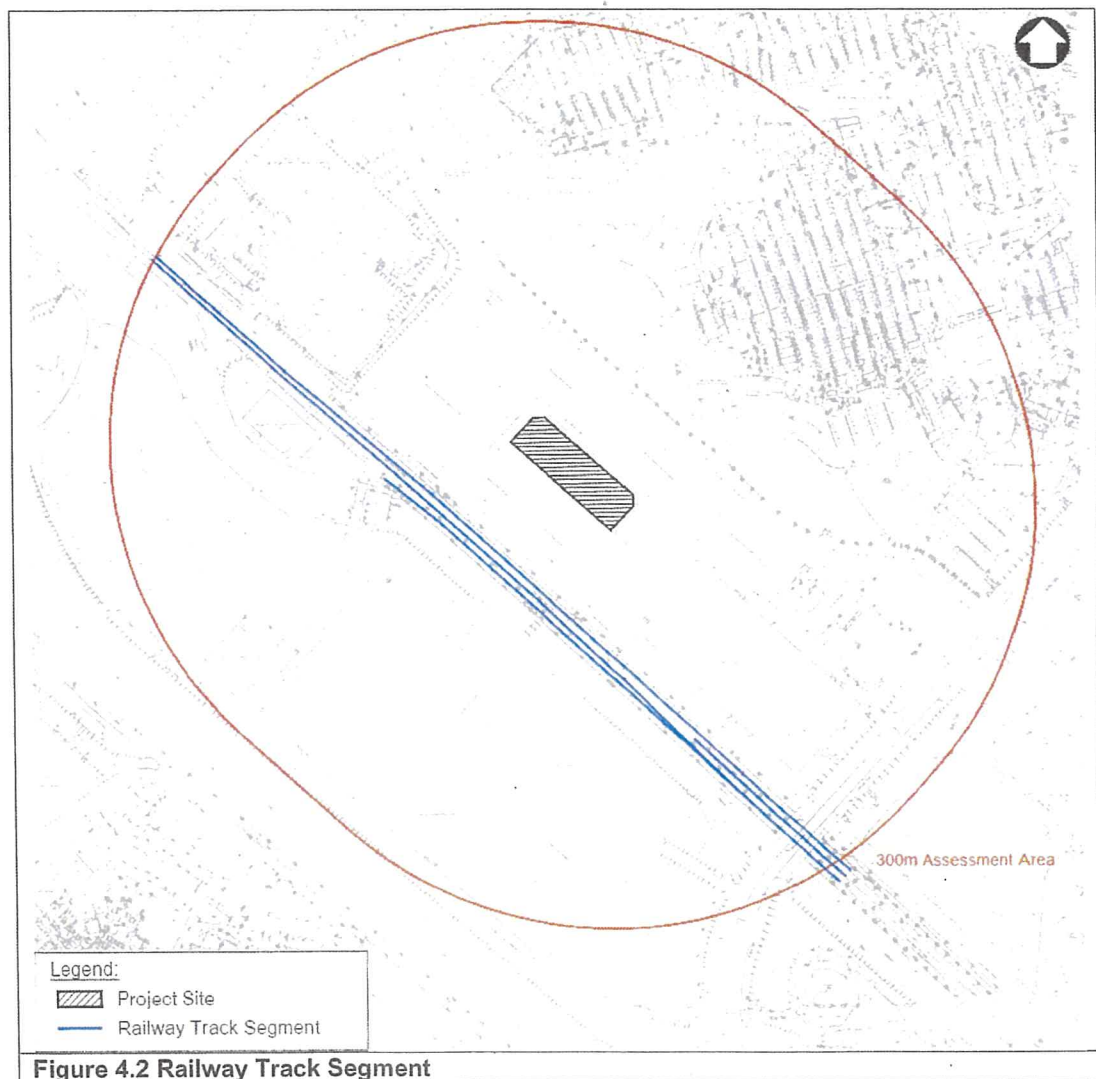
Railway Noise

4.4.1 Identification of Noise Sources

- 4.4.1.1 **Table 4.5** shows the frequencies of the East Rail Line passenger train adopted for Railway Noise Impact Assessment for Electric Multiple Unit (EMU) between Sheung Shui & Lo Wu (SS & LW) and Sheung Shui & Lok Ma Chau (SS & LMC), as well as Through Train between Sheung Shui & Lo Wu. **Figure 4.2** shows the alignment of the concerned railway track segments.

Table 4.5 Train Frequency adopted for Railway Noise Impact Assessment

Period	Train Frequency for Both Directions (trains per hour)			
	EMU between SS & LW	EMU between SS & LMC	Through Train between SS & LW	Total
Daytime (Peak) (07:00 – 20:00 hours)	18	12	1	31
Night-time (06:00 – 07:00 hours & 20:00 – 01:00 hours of the next day)	14	10	1	25
Assumed Daily	228	156	14	398



4.4.2 Assessment Methodology

- 4.4.2.1 The average sound exposure levels used for the indicative development is listed in **Table 4.6** below. Distance correction has been considered in the below noise levels.

Table 4.6 Measured Sound Exposure Levels (Average)

Train Type	EMU	Through Train
SEL, dB(A) (Average)	84.3	88.0

4.4.2.2 For ordinary assessment based on the reference SEL, the $L_{eq(30\text{ min})}$ level during the night-time period can be determined by accounting the following factors:

- Distance correction (C_D) [$C_D = 10 \times \log(D_{ref}/D)$] where D_{ref} is slant distance during measurement,
- View angle correction (C_A) [$C_A = 10 \times \log(\text{view angle at NSR} / \text{view angle at noise measurement microphone})$, i.e. view angle at noise measurement microphone is 180 degree
- Poor track correction [+3dB(A)] to account for potential deterioration in train operating conditions such as wheel/rail wearing varying with time
- Conversion from SEL to $L_{eq(30\text{ min})}$ during night-time (i.e. $SEL + 10 \log(n/\text{assessment period e.g. 1800 sec})$ where n = number of trains within the assessment period.
- Barrier correction (C_{bar}) (based on Maekawa's Approach to take into account barrier effect using path difference) is applied on the track side barrier as well as the building in between.

4.4.2.3 It is envisaged that the most critical time of the day in terms of assessment is the hour between 0600 and 0700 hours in the night-time period, when the specified noise criterion is the most stringent and in the peak hour train frequency. The night-time noise criterion is 60 dB(A) while that for the daytime is 70 dB(A). If the predicted $L_{eq(30\text{ min})}$ noise levels during night-time with the peak hour train frequency could meet the relevant noise criterion, no adverse noise impact is envisaged with respect to other applicable standards under the normal conditions.

Train Frequency Correction

4.4.2.4 In comparing the calculation of the predicted noise level of different time period (i.e. day and evening period, night-time period and $L_{eq(24\text{ hr})}$) of same noise sensitive receiver, the only difference is correction of the conversion of the SEL to L_{eq} (i.e. $10 \log(N/T)$ where N is the total number of events and T is the seconds of the event). From general acoustic point of view, doubling the train frequency will have an increment of 3 dB(A) of the noise level. According to **Table 4.5**, the train frequency in day & evening is higher than that in night-time. The correction of the no. of events for daytime is $10 \times \log(31/(60 \times 60)) = -21$ dB(A) while that for the night-time period is $10 \times \log(25/(60 \times 60)) = -22$ dB(A). Therefore, the predicted $L_{eq(30\text{ mins})}$ of daytime period will be 1 dB(A) larger than that of the $L_{eq(30\text{ mins})}$ of night-time. However, the noise criteria for $L_{eq(30\text{ mins})}$ of daytime and evening time period is 70 dB(A); while that of the night-time period is 60 dB(A), i.e. there is 10 dB(A) more between the noise criteria of daytime and evening time period and the night-time period. Therefore, if the predicted noise level at the NSR can comply with the night-time criteria, the relevant day and evening noise criteria can also be complied. It is because that the increment of the noise level in the daytime and evening period (+ 1 dB(A)) is less than that of the noise criteria (+ 10 dB(A)).

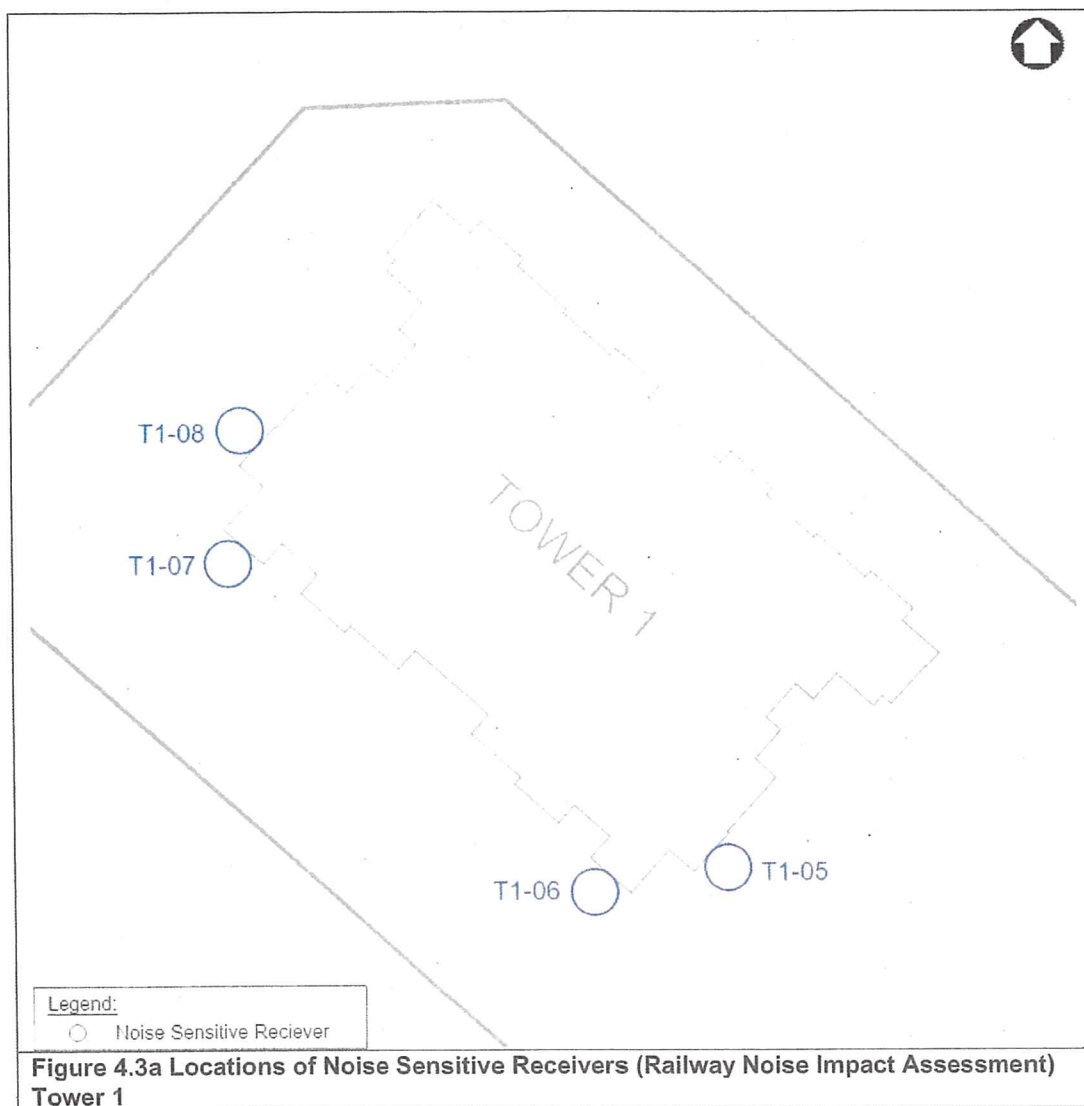
4.4.2.5 For $L_{eq(24\text{ hr})}$, the calculation of noise criteria is 5 dB(A) more than that of the night-time. Based on the train frequency listed in **Table 4.5**, the correction of converting the SEL to $L_{eq(30\text{ min})}$ of night-time period is -22 dB(A) (i.e. $10 \times \log(25/(60 \times 60))$) while that to $L_{eq(24\text{ hr})}$ is -23 dB(A) (i.e. $10 \times \log(398/(60 \times 60 \times 24))$). There is only slight larger in the correction for $L_{eq(24\text{ hr})}$. The increment of the noise level due to the change of the correction for $L_{eq(24\text{ hr})}$ in comparing with the $L_{eq(30\text{ min})}$ of night-time period is 1 dB(A). Therefore, the predicted $L_{eq(24\text{ hr})}$ will be 1 dB(A) larger than that of the $L_{eq(30\text{ min})}$ of night-time but the noise criteria for $L_{eq(24\text{ hr})}$ is 5 dB(A) more than that of the night-time period. Therefore, the predicted $L_{eq(24\text{ hr})}$ will comply with the relevant standard if the predicted noise level at night-time period complies with the relevant noise standard.

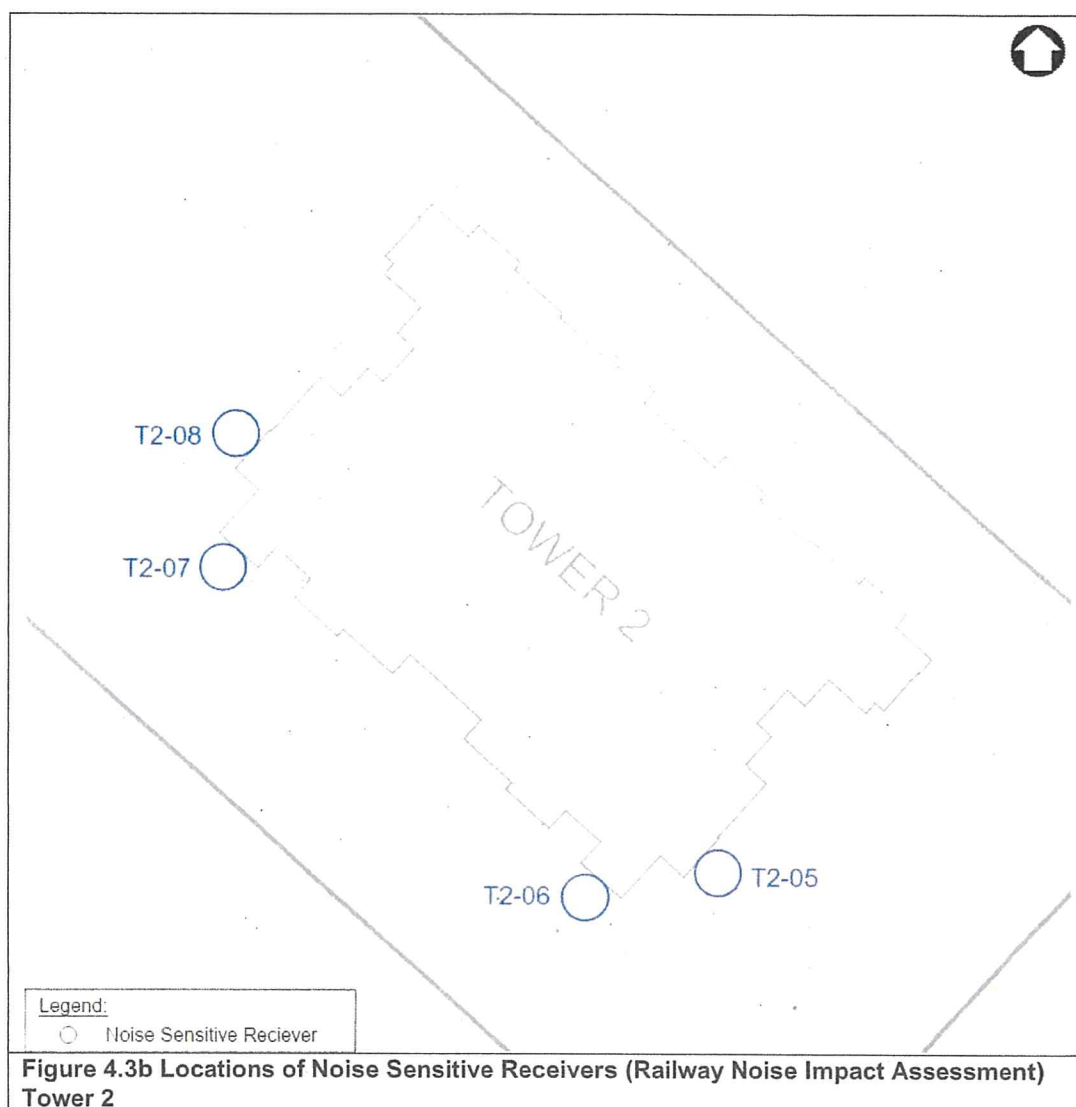
4.4.2.6 For L_{max} , with reference to the measurement results when the train travelled at near track to the proposed development, the highest level of L_{max} 79dB(A) was acquired. Therefore, it is expected that the L_{max} at the proposed development shall fully comply to the HKPSG's noise criterion of L_{max} at 85 dB(A).

Noise Sensitive Receivers

4.4.3.1 Representative Noise Sensitive Receivers (NSRs) for the indicative development are identified. The locations of NSRs are illustrated in **Figure 4.3**. Assessment points are assigned to be 1m

away from the openable window on the facade of the noise sensitive uses (e.g. living/dining room, and bedrooms) of residential dwellings and at 1.2m above floor slab.





4.4.4 Evaluation of Noise Impact

- 4.4.4.1 The potential railway noise impacts at the identified NSRs are evaluated. It is found that the maximum railway noise levels at NSRs is 57 dB(A) during night-time, which complies with the noise criteria under the Noise Control Ordinance, adverse railway noise impact at the future residents of the indicative development is not anticipated.
- 4.4.4.2 The predicted railway noise levels at NSRs are summarized in **Table 4.7**. Detailed results are provided in **Appendix 4.1**.

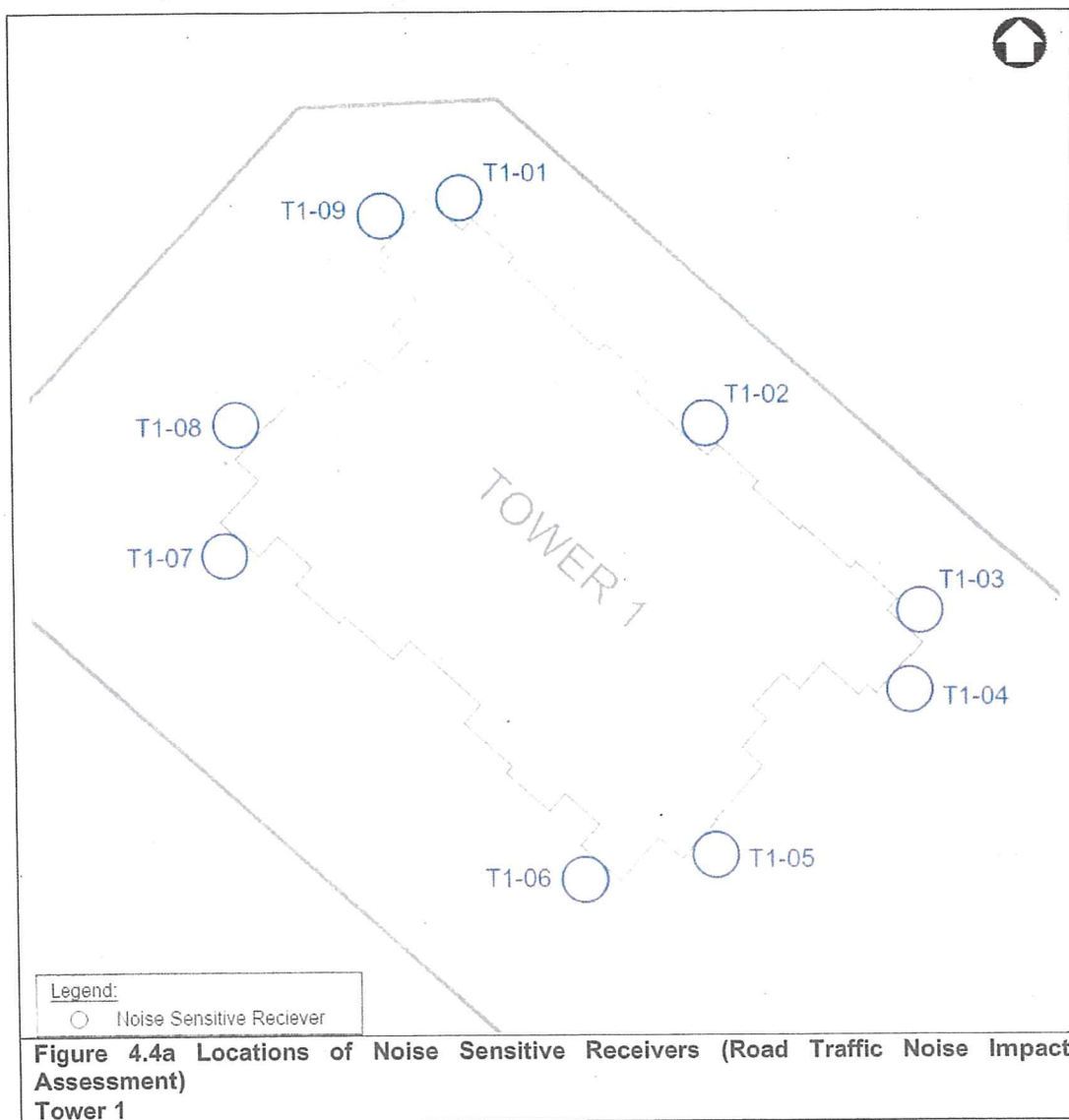
Table 4.7 Summary of Predicted Railway Noise Levels (Unmitigated)

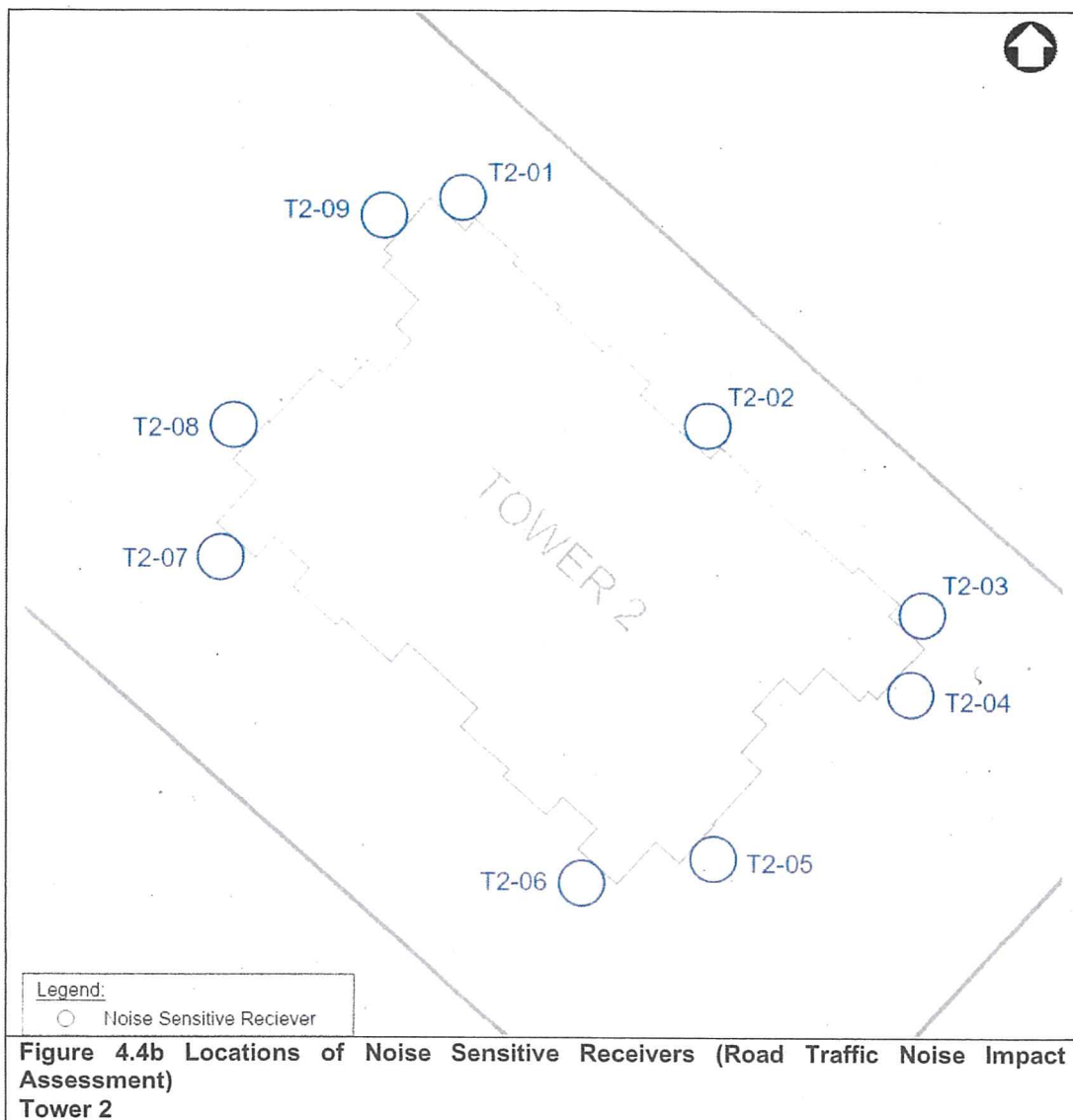
Tower	Noise Criteria, dB(A)	Max. Predicted Noise Levels, L_{eq} (30min.), dB(A)
Tower 1	60	57
Tower 2	60	54

Road Traffic Noise

4.4.5 Noise Sensitive Receivers

- 4.4.5.1 Representative Noise Sensitive Receivers (NSRs) for the indicative development are identified. The locations of NSRs are illustrated in **Figure 4.4**. Assessment points are assigned to be 1m away from the openable window on the facade of the noise sensitive uses (e.g. living/dining room, and bedrooms) of residential dwellings and at 1.2m above floor slab.





4.4.6 Evaluation of Noise Impact

4.4.6.1 The assessment was based on the peak hour traffic flow for the maximum projected traffic conditions within 15 years upon full occupancy of the indicative development in Year 2027. Therefore, the projected peak traffic forecast for Year 2042 traffic data were adopted in the assessment. The peak hour traffic flow data is presented in **Appendix 4.2**.

Unmitigated Scenario

4.4.6.2 The calculation of basic noise levels are under CRTN and are summarized in the below **Table 4.8**. Detailed results are provided in **Appendix 4.3**.

Table 4.8 Summary of Predicted Road Traffic Noise Levels (Unmitigated)

Tower	Noise Criteria, dB(A)	Max. Predicted Noise Levels, L ₁₀ (1hr.), dB(A)
Tower 1	70	73
Tower 2	70	74

- 4.4.6.3 Noise exceedances against the noise criterion $L_{10}(1 \text{ hour}) 70\text{dB(A)}$ as stipulated in HKPSG are found. Noise mitigation measures will be required to alleviate the potential traffic noise impacts.

Mitigated Scenario – Residential Dwelling

- 4.4.6.4 The following mitigation measures are proposed for mitigating the road traffic noise impacts. The locations of mitigation measures are shown in **Figure 4.5**.

a) Acoustic Windows (Baffle Type)

- 4.4.6.5 Acoustic windows (Baffle Type) shall be provided to the affected rooms. Locations of the acoustic windows are shown in Figure 4.5.

- 4.4.6.6 The working principle of an acoustic window is to reduce the noise level perceived by residents inside the room but would not significantly change the noise level at 1m from facade as compared with the scenario with a conventional window. The noise reduction offered by the acoustic window is determined by comparing the noise level in a room with the acoustic window with that in a similar room, if not the same room, with a conventional window. The mitigated noise level at 1m from facade of the acoustic window is equivalent to the predicted noise level at 1m from facade of a conventional window minus the noise reduction.

- 4.4.6.7 The design of the acoustic window for this project has made reference to the Practice Note on Application of Acoustic Window (Baffle Type) in Planning Residential Developments against Road Traffic Noise Impact (V1.0), published by EPD. Tentative acoustic window configurations and schedule can be found in Table 5.3. These configurations will be maintained as the minimum provision for the design of the acoustic windows.

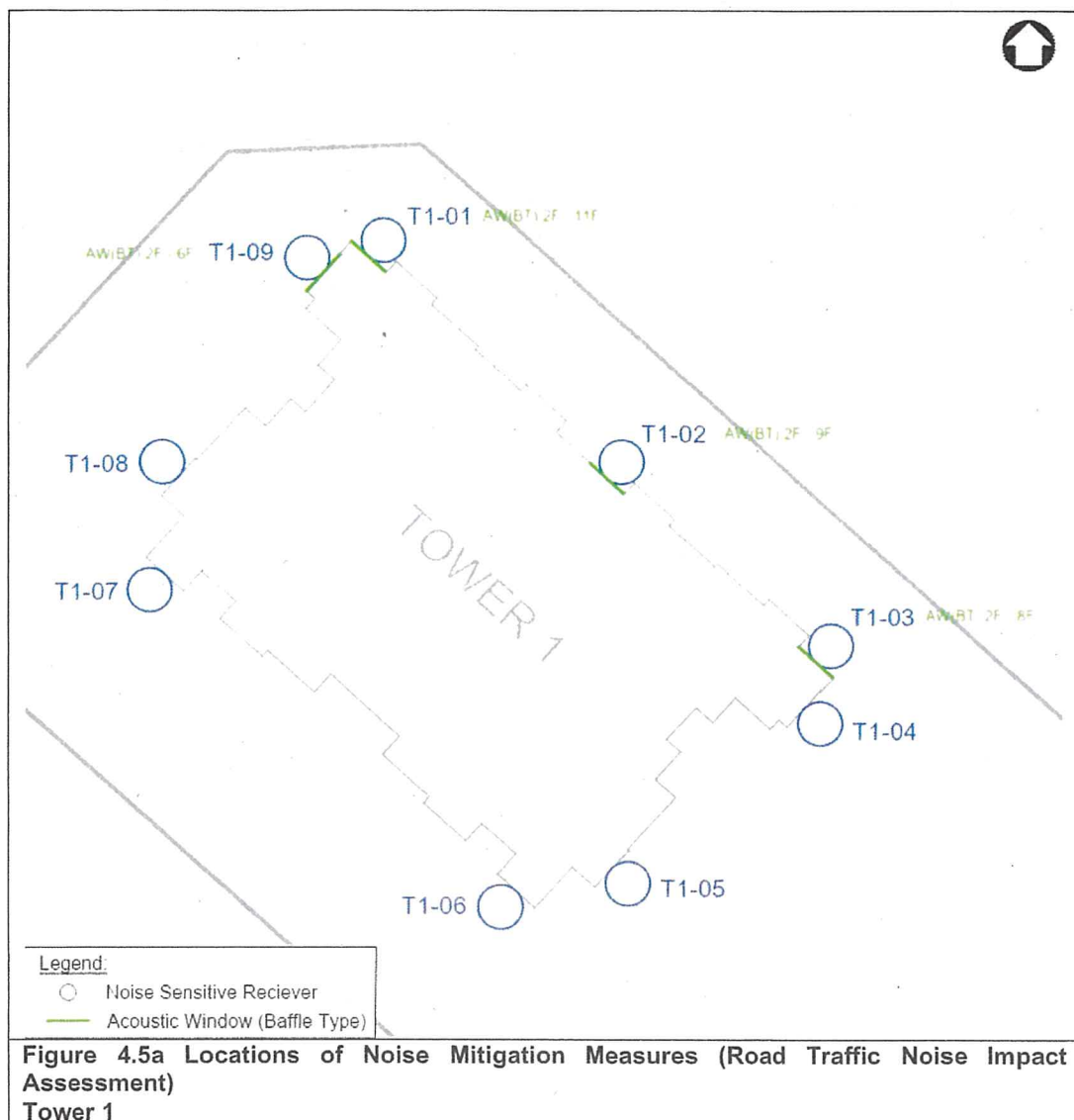
- 4.4.6.8 The design of the acoustic window consists of an openable side-hung window at the outer side and a sliding panel at the inner side. The sliding panel should be slid to the side of the openable window under noise mitigation mode for the proposes of natural ventilation and noise reduction. It is recommended that the sliding panel shall be slid to the mentioned position all the time for noise reduction purposes. An instruction of acoustic window operation will be provided for the future users. Adequate ventilation will be provided in the noise mitigation mode of operation of the acoustic windows as the design of the proposed acoustic windows will meet the relevant natural ventilation requirement under the Building (Planning) Regulations. According to the Practice Note on Lighting and Ventilation Requirements - Performance-based Approach (APP-130) issued by the Buildings Department, for optimum performance with the inner sliding glass panel in a closed position, the air gap should have a length of not less than 100mm and a width between 100mm and 175mm. The length and width of the air gap of the proposed acoustic window also meet these conditions.

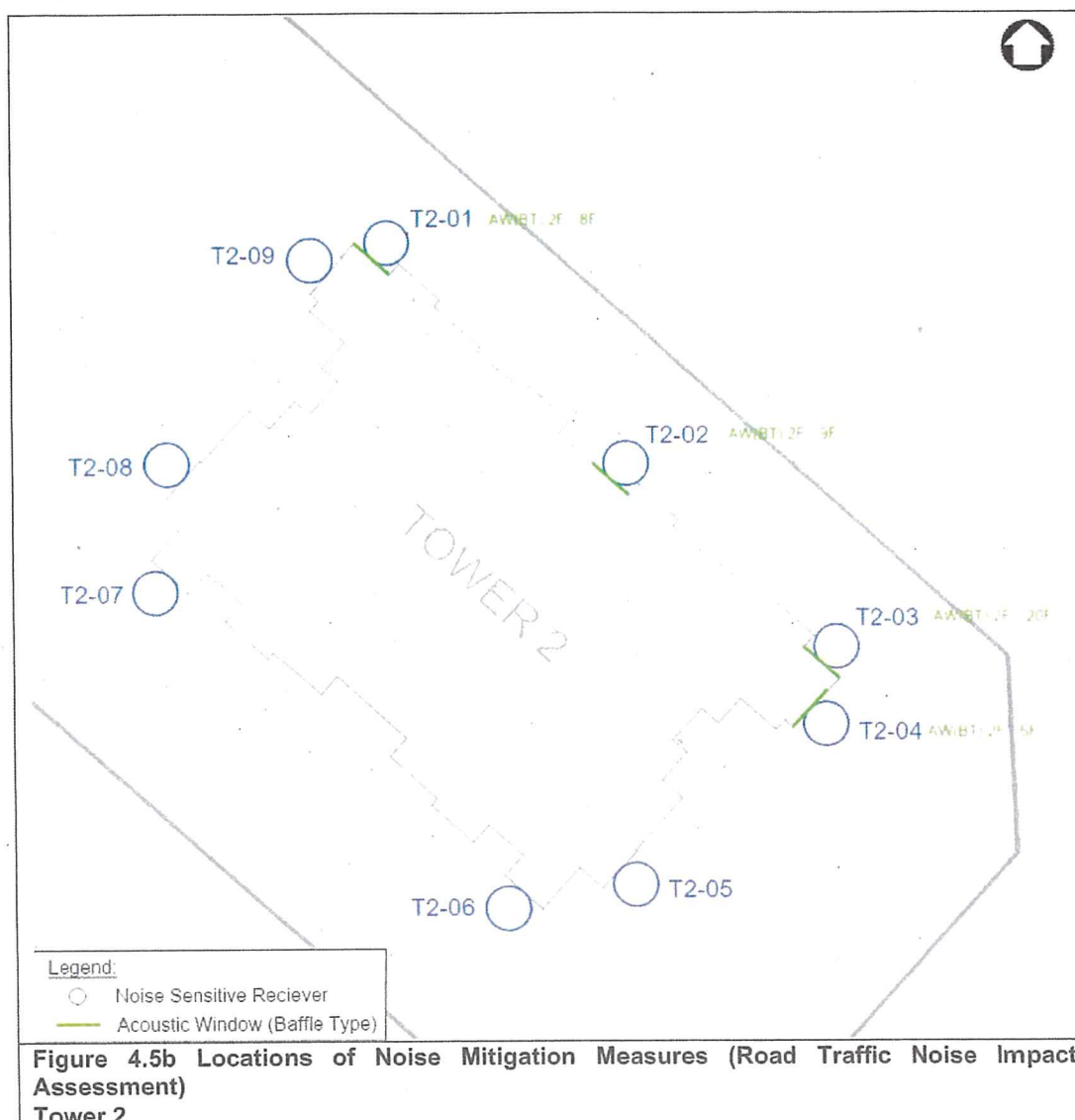
Table 4.9 Tentative Configurations of Acoustic Window (Baffle Type) of 8m² room

Room Dimensions (mm)	Inner Window Opening (mm)	Outer Window Opening (mm)	Window Overlapping Length (mm)	Gap Width between Window Panels (mm) (1)	Sound Absorptive Material (2)	Targeted Noise Reduction
3200 (W) x 2500 (D) x 3400 (H)	870 (H) x 580 (W)	870 (H) x 600 (W)	100	100	Top and both side of window frame	6 dB(A)

Note:

- 1) For optimum performance, the air gap should have a pane-to-pane length of not less than 100mm and a width between 100mm and 175mm, with the inner sliding glass panel in a closed position as required in PNAP APP-130. The window pane shall be at least 6mm in thickness





4.4.6.9 The predicted road traffic noise levels at NSRs under mitigated scenario are summarized in **Table 4.10**. Detailed noise results are shown in **Appendix 4.3**. With implementation of proposed mitigation measures, adverse road traffic noise impact at the future residents of the indicative development is not anticipated.

Table 4.10 Summary of Predicted Road Traffic Noise Results (Mitigated Scenario)

Tower	Noise Criterion L ₁₀ (1 hour), dB(A)	Predicted Maximum L ₁₀ (1 hour), dB(A)	No. of Dwellings with Noise Exceedance	Compliance Rate (%)
T1	70	70	0	100
T2	70	70	0	100

Fixed Noise Source

4.4.7 Evaluation of Noise Impact

- 4.4.7.1 Existing fixed noise sources were identified based on the desktop study to verify and investigate the noise emission and operation mode of identified sources as shown in **Figure 4.6**. The existing fixed noise sources are blocked by Kerry Warehouse (Sheung Shui) or Cambridge Plaza with limited line of sight.



Figure 4.6 Locations of Fixed Noise Sources

5 OTHER ENVIRONMENTAL IMPACTS

5.1 Introduction

- 5.1.1 For the previous application, other environmental impacts including construction air & noise, water quality, waste management and land contamination impact assessment has also been considered. The implication on the aforementioned environmental impacts for this application is the same as the previous application as both applications are rezoning applications. The change in layout and use of this application comparing to the previous application would not affect the implication on the three impact assessments. Results and conclusions of construction air & noise, water quality, waste management and land contamination impact assessment for the previous application remains valid for this application.

Appendix 2.1
Layout Plan

3

H.F.

KA FU CLOSE

10012

1:9

1:8

CHEUK WAN STREET

10400

TOWER 1

75.00

19

29404

22600

12.60

TOWER 2

75.00

19

29404

A

LEGEND

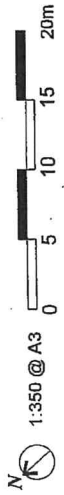
N RESIDENTIAL STOREYS (EXCLUDING G/F, 1/F AND BASEMENT LEVELS)

RESIDENTIAL TOWERS

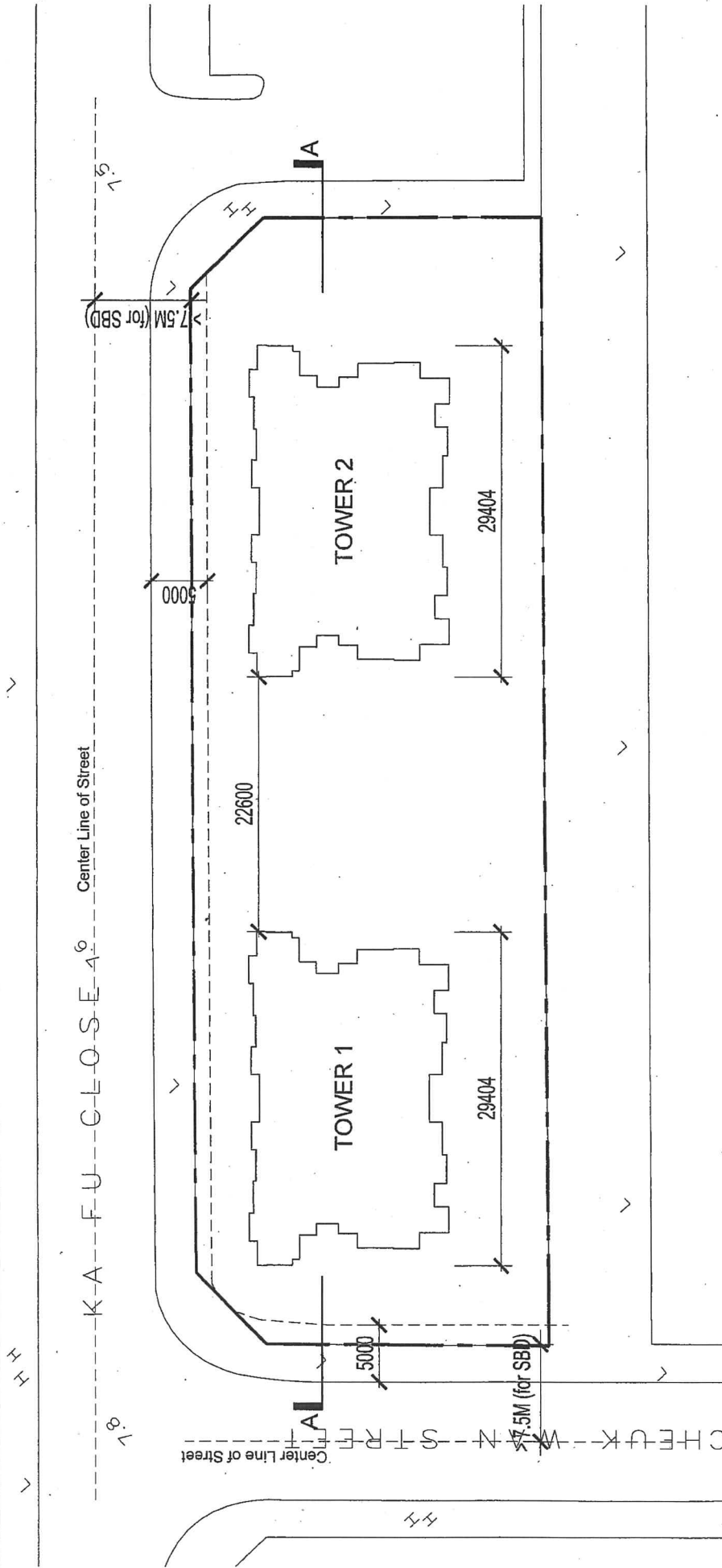
1/F PODIUM

LWK
+PARTNERS

INDICATIVE BLOCK PLAN



Proposed Residential Development at F.S.S.T.L. 97,
6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui

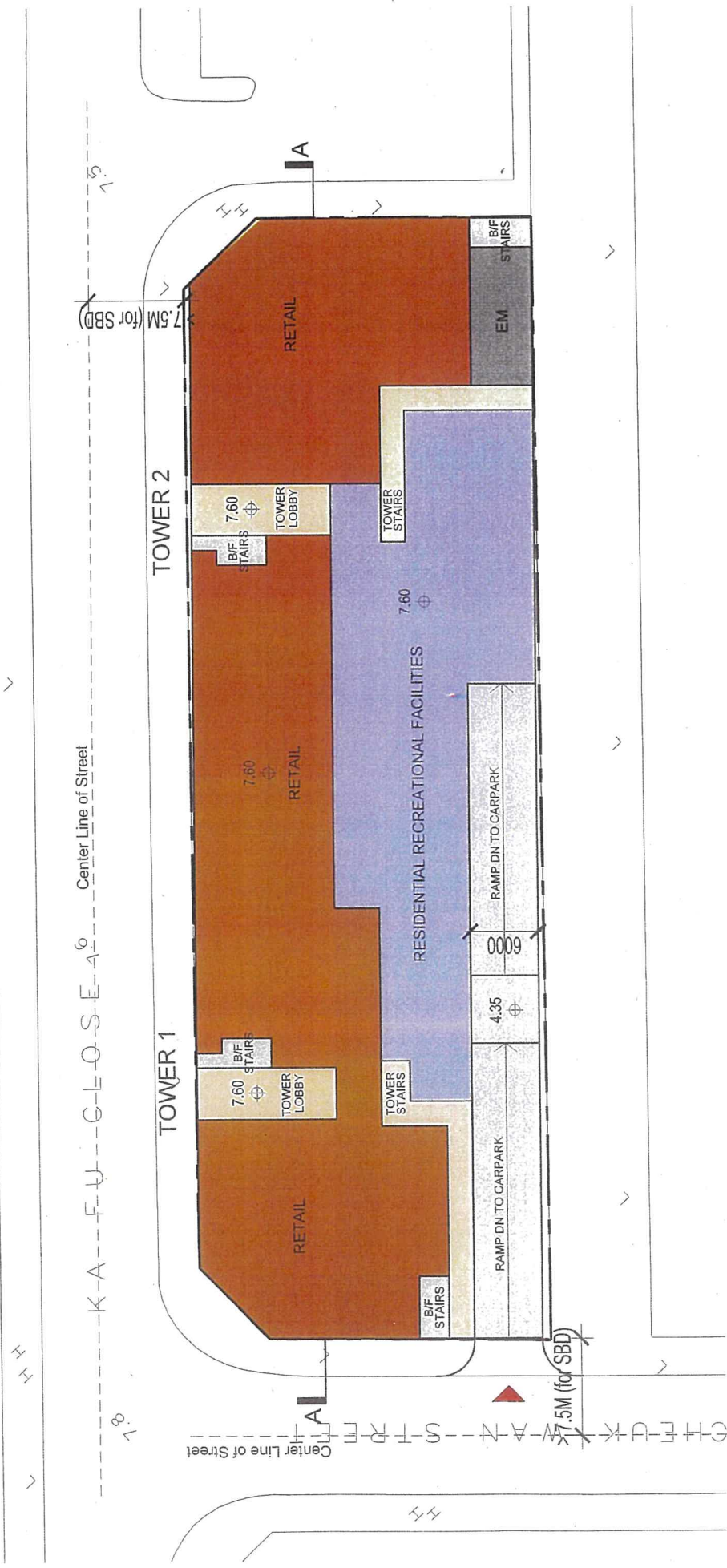


LEGEND
RESIDENTIAL FLOOR

TYPICAL FLOOR PLAN

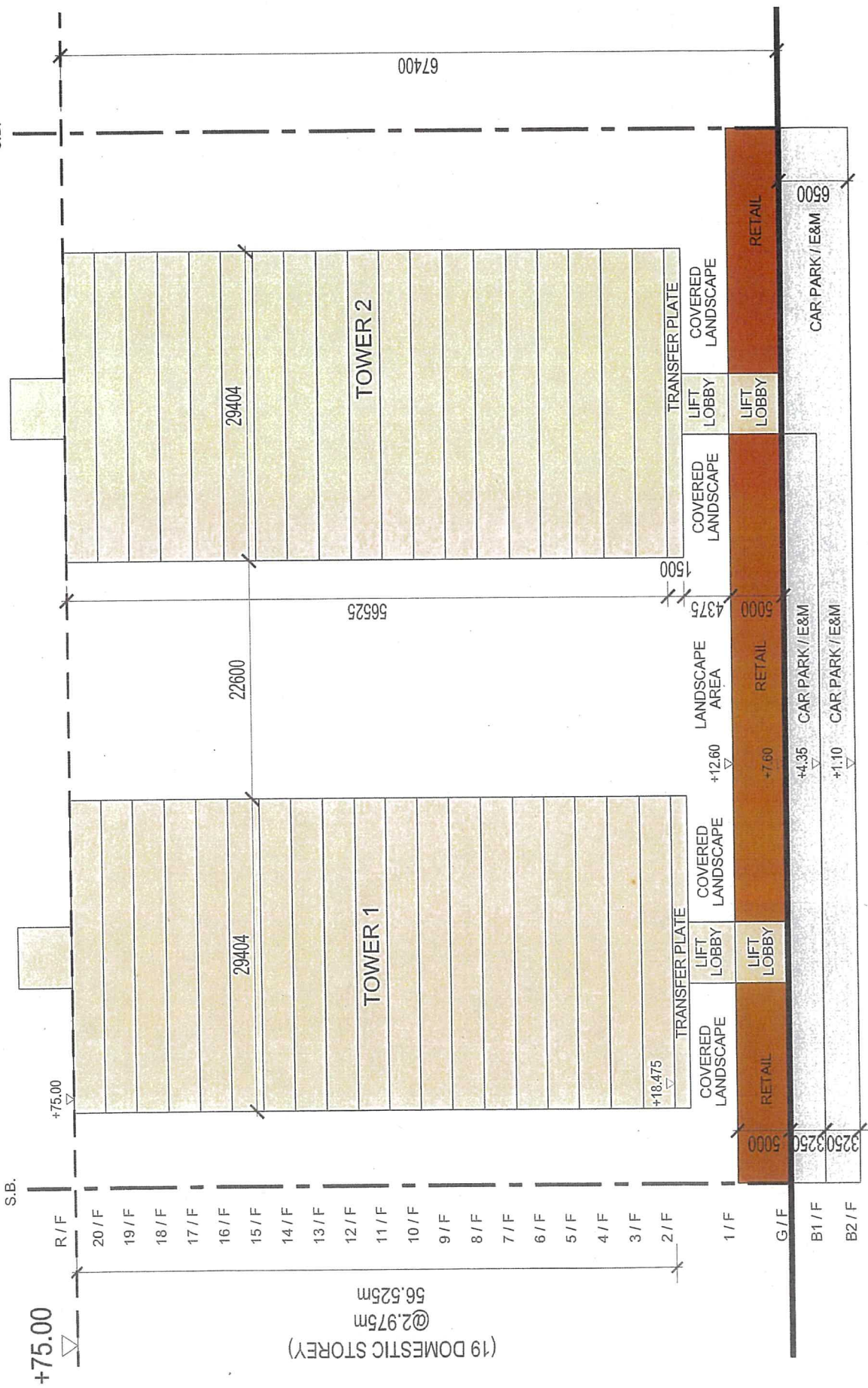


Proposed Residential Development at F.S.T.L. 97,
6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui



LEGEND

- RESIDENTIAL LOBBY / STAIRCASE
- RETAIL
- RESIDENTIAL RECREATIONAL FACILITIES
- E&M
- RUN-IN/OUT
- CARPARK ACCESS



1:350 @ A3
0 5 10 15 20m
N

Proposed Residential Development at F.S.T.L. 97,
6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui

Appendix 3.1
Contours of Odour Concentrations of Shek Wu Hui Sewage
Treatment Works

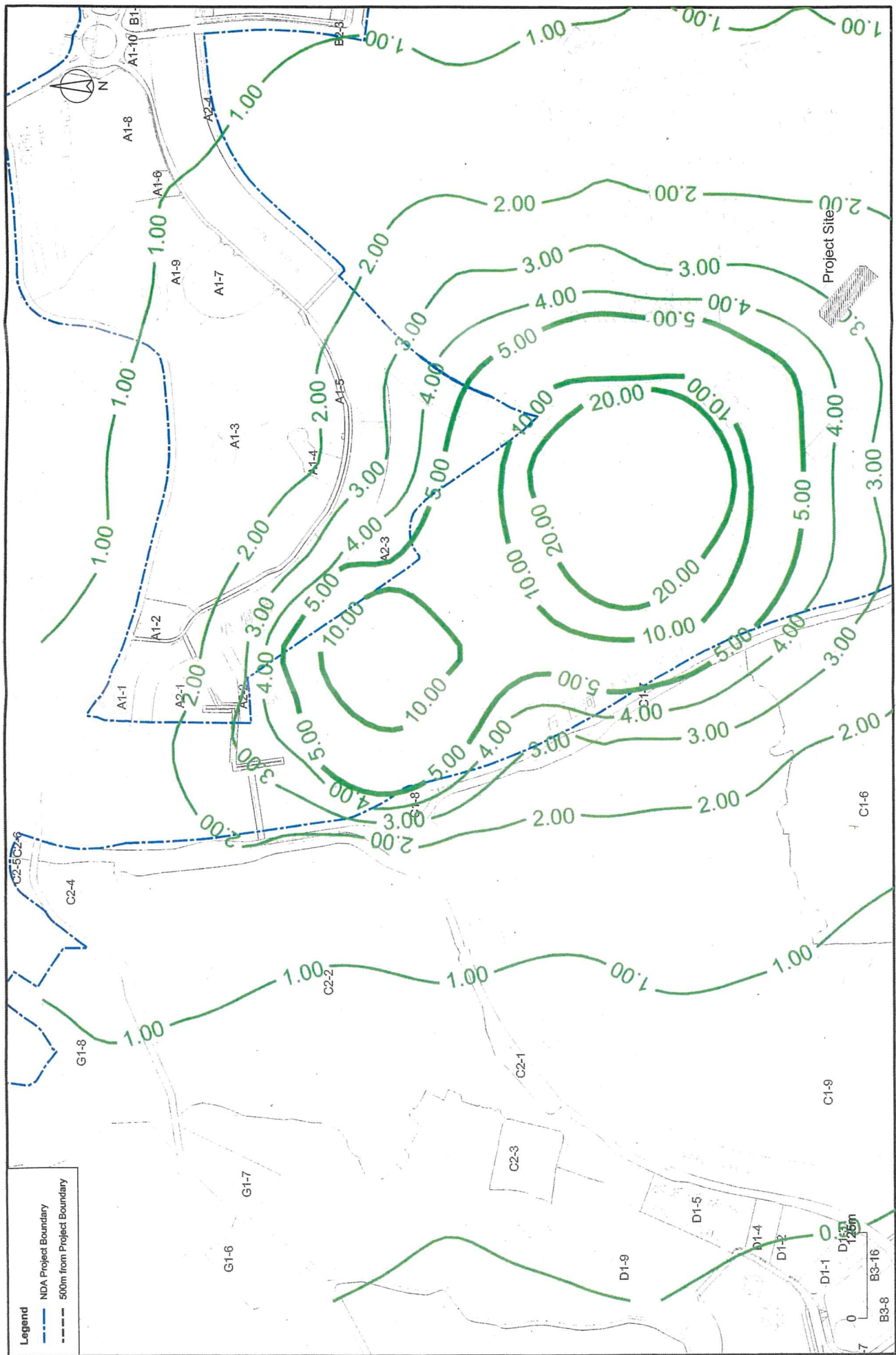


Figure 3.55b Rev.		Drawing No.		Date		04/13		Approved		ST		1:5000 on A3		D	
D FIFTH ISSUE C FOURTH ISSUE B THIRD ISSUE A SECOND ISSUE - FIRST ISSUE		Drawn Date		Checked Date		Scale		Description		Rev.		1:5000 on A3		D	
Job Title Agreement No. CE 61/2007 (CE) North East New Territories New Development Areas Planning and Engineering Study - Investigation		Drawing Title Contours of Cumulative Odour Concentration at 55m above Ground of FLN NDA		Date 04/13		Checked Date		Scale 1:5000 on A3		Description 1:5000 on A3		Rev.		D	
ARUP		規劃署 PLANNING DEPARTMENT		土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT		CEDD		0		125m		250m		0	

Appendix 4.1

Predicted Railway Noise Levels

Result Summary (Detail) - Base Case - Tower 1 to Tower 2

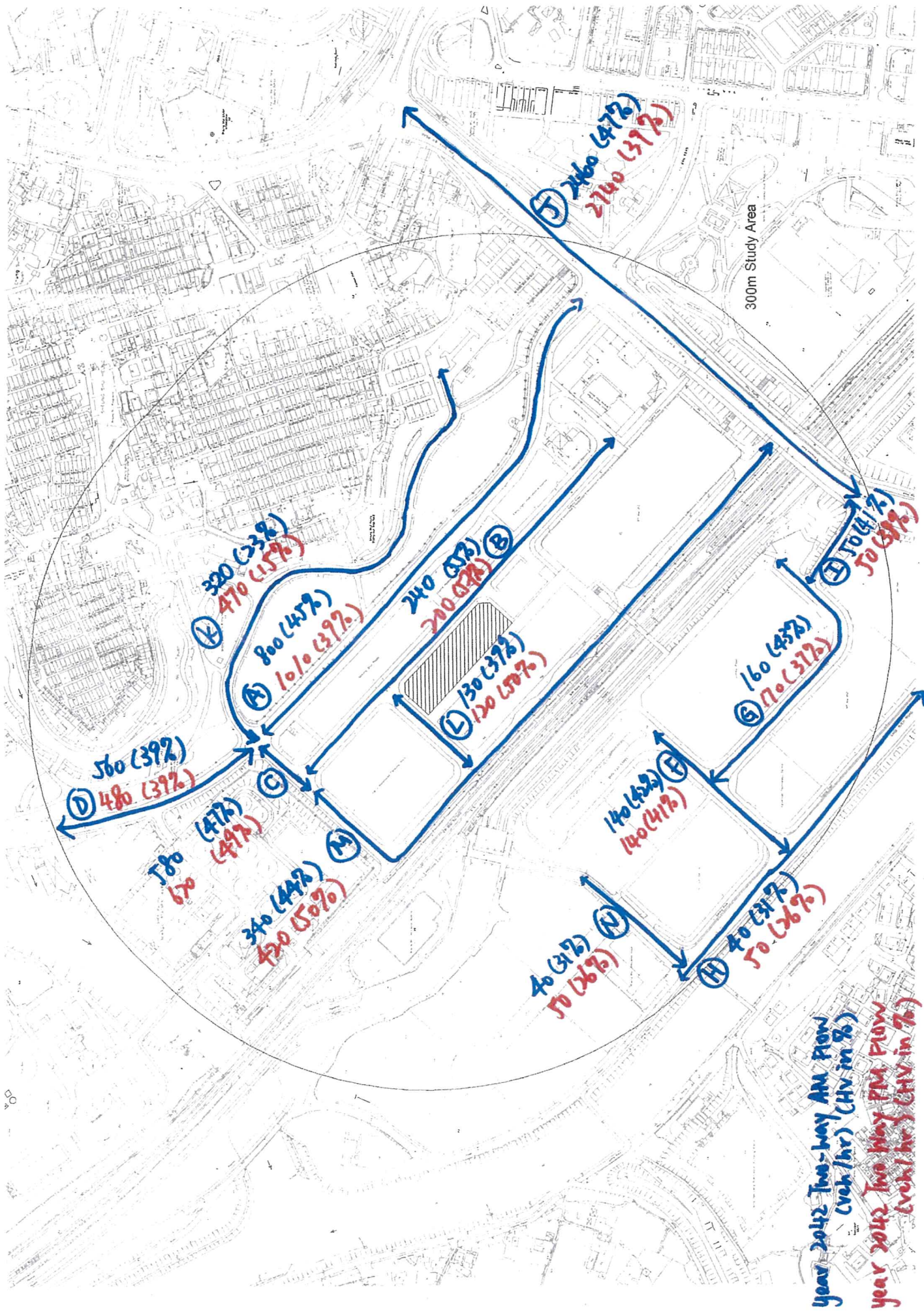
GBP Floor	m	Tower 1					Tower 2				
		T1-05	T1-06	T1-07	T1-08	T2-05	T2-06	T2-07	T2-08		
2F	19.7	42	42	42	51	43	42	42	42		
3F	22.6	42	42	42	51	43	42	42	42		
4F	25.6	42	42	42	51	43	42	42	42		
5F	28.6	42	42	42	51	43	42	42	42		
6F	31.6	42	42	42	50	43	42	42	42		
7F	34.6	42	42	43	51	43	42	42	42		
8F	37.5	42	42	44	51	44	43	42	42		
9F	40.5	42	43	47	51	44	44	43	42		
10F	43.5	42	44	51	52	46	45	43	42		
11F	46.4	43	46	54	53	47	47	45	42		
12F	49.4	44	49	54	54	48	47	46	43		
13F	52.4	45	51	54	55	49	48	47	43		
14F	55.4	45	52	55	55	50	49	48	45		
15F	58.4	46	53	55	55	51	50	49	46		
16F	61.3	47	53	55	55	51	51	50	47		
17F	64.3	47	53	55	55	52	52	51	48		
18F	67.3	48	54	56	55	52	53	52	49		
19F	70.2	50	54	56	55	52	54	53	50		
20F	73.2	51	55	57	56	53	54	54	51		
Max Noise Level, dB(A)		51	55	57	56	53	54	54	51		
No. of Exceedance Per NSR		0	0	0	0	0	0	0	0		

Legend	
Exceeded Hong Kong Planning Standard Guidelines' Standard of 60 dB(A)	

/ Non-residential unit

* The assessment point is located at 1m in front of the most exposed part of an openable window for ventilation at a habitable room (NSRs) and 1.2m above the floor level of individual floors of the residential towers of the proposed development.

Appendix 4.2
Peak Traffic Flow Data and Road Link



Appendix 4.3

Predicted Road Traffic Noise Levels – AM (Worst Case Scenario)

Result Summary (Detail) - Base Case (am) - Tower 1 to Tower 2

		Tower 1									Tower 2									
GBF Floor	*mPD,m	T1-01	T1-02	T1-03	T1-04	T1-05	T1-06	T1-07	T1-08	T1-09	T2-01	T2-02	T2-03	T2-04	T2-05	T2-06	T2-07	T2-08	T2-09	
2F	19.7	74	73	73	70	59	59	64	69	72	73	73	74	71	68	65	60	58	70	
3F	22.6	73	73	73	70	61	59	65	69	72	73	73	73	71	68	65	60	61	70	
4F	25.6	73	72	72	70	64	59	65	69	71	72	72	73	71	68	65	60	64	70	
5F	28.6	72	72	72	69	65	60	65	69	71	72	72	72	71	69	65	61	55	69	
6F	31.6	72	71	71	69	65	60	65	68	71	71	71	72	70	69	65	61	65	69	
7F	34.6	72	71	71	69	65	60	65	68	70	71	71	72	70	68	65	62	65	69	
8F	37.5	71	71	71	68	65	61	64	68	70	71	71	71	70	68	65	62	65	68	
9F	40.5	71	71	70	68	65	61	64	68	70	70	71	71	70	69	66	63	65	68	
10F	43.5	71	70	70	68	65	62	64	67	69	70	70	71	70	69	66	63	65	68	
11F	46.4	71	70	70	68	65	63	65	67	69	70	70	71	70	69	66	64	64	68	
12F	49.4	70	70	70	68	65	63	65	67	69	70	70	71	70	69	66	64	64	67	
13F	52.4	70	70	70	68	65	63	65	67	69	70	70	71	70	69	66	64	64	67	
14F	55.4	70	70	70	68	65	63	65	67	69	70	70	71	70	69	66	64	64	67	
15F	58.4	70	70	70	68	65	63	65	67	69	70	70	71	70	69	66	64	64	67	
16F	61.3	70	70	70	68	65	63	65	67	69	70	70	71	70	69	67	64	64	67	
17F	64.3	70	70	70	68	65	63	65	67	68	70	70	71	70	69	67	64	64	67	
18F	67.3	70	69	70	68	65	63	65	67	68	70	70	71	70	69	67	64	64	67	
19F	70.2	70	69	70	68	65	63	65	67	68	70	70	71	70	69	67	64	64	67	
20F	73.2	70	69	70	68	65	63	65	67	68	70	70	71	70	69	67	64	64	67	
Max Noise Level, dB(A)		74	73	73	70	65	63	65	69	72	73	73	74	71	69	67	64	65	70	
No. of Exceedance Per NSR		10	8	7	0	0	0	0	0	5	7	8	19	4	0	0	0	0	0	

Legend
Exceeded Hong Kong Planning Standard Guidelines' Standard of 70 dB(A)

/ Non-residential unit

* The assessment point is located at 1m in front of the most exposed part of an openable window for ventilation at a habitable room (NSRs) and 1.2m above the floor level of individual floors of the residential towers of the proposed development.

Result Summary (Detail) - Mitigated Case (am) - Tower 1 to Tower 2

GBF Floor	*mPD,m	Tower 1									Tower 2								
		T1-01	T1-02	T1-03	T1-04	T1-05	T1-06	T1-07	T1-08	T1-09	T2-01	T2-02	T2-03	T2-04	T2-05	T2-06	T2-07	T2-08	T2-09
2F	19.7	70	70	70	70	59	59	64	69	70	70	70	70	70	68	65	60	58	70
3F	22.6	70	70	70	70	61	59	65	69	70	70	70	70	70	68	65	60	61	70
4F	25.6	70	70	70	70	64	59	65	69	70	70	70	70	70	68	65	60	64	70
5F	28.6	70	70	70	69	65	60	65	69	70	70	70	70	70	69	65	61	65	69
6F	31.6	70	70	70	69	65	60	65	68	70	70	70	70	70	69	65	61	65	69
7F	34.6	70	70	70	69	65	60	65	68	70	70	70	70	70	68	65	62	65	69
8F	37.5	70	70	70	68	65	61	64	68	70	70	70	70	70	68	65	62	65	68
9F	40.5	70	70	70	68	65	61	64	68	70	70	70	70	70	69	66	63	65	68
10F	43.5	70	70	70	68	65	62	64	67	69	70	70	70	70	69	66	63	65	68
11F	46.4	70	70	70	68	65	63	65	67	69	70	70	70	70	69	66	64	64	68
12F	49.4	70	70	70	68	65	63	65	67	69	70	70	70	70	69	66	64	64	67
13F	52.4	70	70	70	68	65	63	65	67	69	70	70	70	70	69	66	64	64	67
14F	55.4	70	70	70	68	65	63	65	67	69	70	70	70	70	69	66	64	64	67
15F	58.4	70	70	70	68	65	63	65	67	69	70	70	70	70	69	67	64	64	67
16F	61.3	70	70	70	68	65	63	65	67	69	70	70	70	70	69	67	64	64	67
17F	64.3	70	70	70	68	65	63	65	67	68	70	70	70	70	69	67	64	64	67
18F	67.3	70	69	70	68	65	63	65	67	68	70	70	70	70	69	67	64	64	67
19F	70.2	70	69	70	68	65	63	65	67	68	70	70	70	70	69	67	64	64	67
20F	73.2	70	69	70	68	65	63	65	67	68	70	70	70	70	69	67	64	64	67
Max Noise Level, dB(A)		70	70	70	70	65	63	65	69	70	70	70	70	70	69	67	64	65	70
No. of Exceedance Per NSR		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Legend	
Acoustic Window (Baffle Type)	AW(BT)

/ Non-residential unit

* The assessment point is located at 1m in front of the most exposed part of an openable window for ventilation at a habitable room (NSRs) and 1.2m above the floor level of individual floors of the residential towers of the proposed development.
Remark: The predicted noise levels are not the actual noise levels at the external façade after the application of innovative noise mitigation measures (acoustic window/door). These predicted noise levels are the equivalent noise levels at 1m from the external façade after accounting the reduction in noise levels inside the room offered by the proposed noise mitigation measures.

Written Representation in relation to Amendment Item D4 of Draft Fanling / Sheung Shui Outline Zoning Plan No. S/FSS/25 on Rezoning of Park'N Shop Sheung Shui Fresh Food Distribution Centre from "Industrial" to "Other Specified Uses" annotated Business Zone at 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui

Appendix 4

Traffic Impact Assessment

**Written Representation in Relation to Amendment Item
D4 of Draft Fanling/ Sheung Shui Outline Zoning Plan No.
S/ FSS/25 on Rezoning of Park' N Shop Sheung Shui
Fresh Food Distribution Centre from "Industrial" to
"Other Specified Uses" annotated Business Zone at 6 Ka
Fu Close, Sheung Shui Area 4, Sheung Shui"**

Traffic Impact Assessment

January 2022



CTA Consultants Limited

志達顧問有限公司



1. INTRODUCTION

1.1 Background

1.1.1 CTA Consultants Limited was commissioned as the traffic consultant to prepare a Traffic Impact Assessment (TIA) study for the written representation in relation to Amendment Item D4 of Draft Fanling/ Sheung Shui Outline Zoning Plan No. S/FSS/25 on Rezoning of Park' N Shop Sheung Shui Fresh Food Distribution Centre from "Industrial" to "Other Specified Uses" annotated business zone at 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui from "industrial" to "Residential (Group E)". Location of the indicative development is shown in **Figure 1.1**.

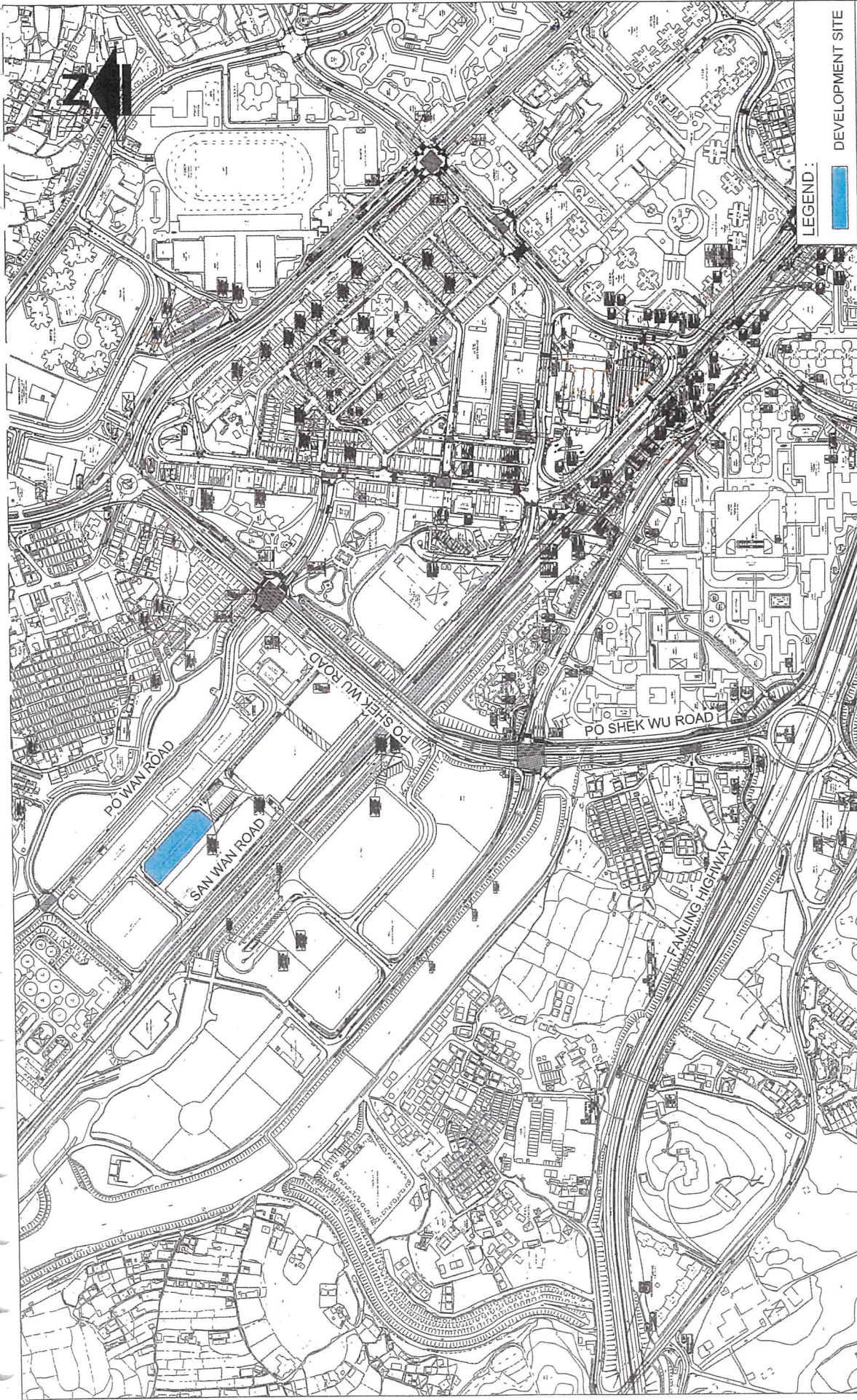
1.1.2 The total site area of the indicative development is approximately 3,041 m². The indicative development is scheduled for completion by 2027 tentatively.

1.1.3 This TIA study is to examine the impact of the traffic generated by the development on the existing and planned road networks in the near vicinity. Any deficiency would be identified and improvement proposals would be recommended if necessary to resolve any foreseeable problem.

1.2 Study Objectives

1.2.1 The main objectives of the study are as follows:

- i) to assess the existing traffic conditions in the vicinity of the development;
- ii) to forecast traffic demands on the adjacent road network in the design year 2030;
- iii) to estimate the likely traffic generated by the indicative development;
- iv) to assess the impacts of traffic generated by the indicative development on the adjacent road network; and
- v) to recommend improvement measures, if necessary, to alleviate any traffic problems on the road network



LEGEND:
 DEVELOPMENT SITE

PROJECT TITLE:
 Traffic Review of Rezoning of PNS Sheung Shui Fresh Food Distribution Centre

DRAWING TITLE:

SITE LOCATION PLAN

FIGURE NO.:

1.1

PROJECT NO.:

22007HK

SCALE:

1 : 6200 @A4

DATE:

14 JAN 2022



2. THE DEVELOPMENT

2.1 Development

2.1.1 The application site consists of residential and commercial uses, giving a total development site area of approximately 3,041 m².

2.1.2 The development parameters of the indicative development are summarized in **Table 2.1**.

Table 2.1 Development Parameters of the Development

Parameters	Development Parameters	
Development Site Area	About 3,041 m ²	
Plot Ratio for Domestic	Domestic Plot Ratio: 5 Non-domestic Plot Ratio: 0.5	
Domestic GFA (m ²)	About 15,205 m ²	
Non-domestic GFA (m ²)	About 1520.5 m ²	
No. of Blocks	2	
No. of Flats	GFA (m ²)	No. of Flats
	Total	<u>304</u>

2.1.3 It is anticipated that the indicative development will be completed by 2027 tentatively.

2.2 Internal Transport Facilities Provisions of Indicative Development

2.2.1 According to the requirements stipulated in the latest Hong Kong Planning Standards and Guidelines (HKPSG), the internal transport facilities provision for the indicative development is summarized in **Table 2.2**.



Table 2.2 Internal Transport Facilities Provision for Residential and Commercial Uses Required under HKPSG

Indicative Development	Parking requirement				Loading/ unloading requirement	
	Parking car parking space (5m x 2.5m)				Visitor parking space (5m x 2.5m)	Loading/ unloading bay for goods vehicles (11m x 3.5m)
Private Residential Block No. 2 No. flats: 304 Average flat size= 50m ² Plot ratio: 5	GPS (1 car space per 4-7 flats)	R1 40<FS ≤70	R2 Outside 500m radius of rail station	R3 2.00<PR≤ 5.00	1-5 visitor spaces for development more than 75 unit per block or as determined by authority	1bay for every 800 units, or min, 1 bay for each block or as determined by authority
	44-76	1.2	1.00	1.00	5	2
	Parking requirement =GPS x R1 x R2 x R3 =53-92					
Commercial GFA: 1520.5m ²	1 car space per 150-300m ²				/	1 loading/unloading bay for goods vehicles for every 800 to 1200m ² , or part thereof GFA.
	6-11					2
Total Parking provision (Residential + Commercial)	82				5	4



3. THE EXISTING TRAFFIC CONDITIONS

3.1 Existing Road Network

3.1.1 The existing road network in the vicinity of the indicative development is shown in **Figure 3.1**. The indicative development is mainly accessed by Ka Fu Close.

3.1.2 Ka Fu Close is a single 2-lane 2-way local road, connecting with Cheuk Wan Street and San Po Street.

3.1.3 Cheuk Wan Road is a 2-lane 2-way local road, connecting with Ka Fu Close and San Wan Road. It provides the access for the indicative development.

3.1.4 San Po Street is a 3-lane 2-way local road, connecting with Po Wan Road, Ka Fu Close, San Wan Road and Sheung Shui Tung Hing Road.

3.2 Public Transport Provisions

3.2.1 Road-based public transport services are operating at the vicinity of the subject site.

3.2.2 Details of Franchised Bus and GMB routes operating in the vicinity of the 500m catchment area of the application site are summarized in the below **Table 3.1** and **Figure 3.2**.

Table 3.1 Road-Based Public Transport Services in the Vicinity

Service	Route	Origin - Destination	Frequency (min)
Franchised Buses	73K	Sheung Shui - Man Kam To	10-30 ⁽¹⁾ ; 20-30 ⁽²⁾⁽³⁾
	79K	Sheung Shui - Ta Kwu Ling (Tsung Yuen Ha)	20-30 ⁽¹⁾ ; 20-30 ⁽²⁾ ; 30 ⁽³⁾
	270S	Tsim Sha Tsui East - Fanling (Luen Wo Hui)	0045; 0110; 0135; 0200; 0230
	673P	Sheung Shui - Central (Rumsey Street)	0640; 0700; 0730; 0800; 0830 ⁽¹⁾⁽²⁾
	N373	Central - Fanling (Luen Wo Hui)	30
	373	Central (Hong Kong Station) - Sheung Shui	0710 ⁽⁴⁾ ; 20 ⁽⁵⁾
	77K	Yuen Long (Fung Cheung Road) - Sheung Shui	20-30 ⁽¹⁾⁽²⁾ ; 20-30 ⁽³⁾
GMB	59K	Lin Ma Hang - Sheung Shui Station	15-30

(1) Weekday only

(2) Saturday only

(3) Holiday only

(4) Saturday (except public holidays)

(5) Monday to Friday (except public holidays)

3.2.3 A bus stop is located at Po Shek Wu Road. It is adjacent to the indicative development, providing bus services towards Fanling, Central and Sheung Shui.

3.2.4 For GMB service, about 50m apart from the subject site, is located at Po Shek Wu Road, providing minibus service towards Sheung Shui station.

3.3 Critical Junctions

3.3.1 As shown in **Figure 3.1**, **SIX** junctions were identified to be critical for assessment of traffic impact due to the indicative development. They are listed in below **Table 3.2** and their existing junction layout arrangements are shown in **Figures 3.3 to 3.8** respectively.

Table 3.2 Identified Critical Junctions

Ref.	Junction	Type	Figure No.
Junction A	Ka Fu Close/ Cheuk Wan St	Priority	3.3
Junction B	San Po Street/ Ka Fu Close	Priority	3.4
Junction C	Po Wan Road/ San Po Street/ Sheung Shui Ting Hing Road	Signal	3.5
Junction D	Po Wan Road/ Po Shek Wu Road	Roundabout	3.6
Junction E	Po Shek Wu Road/ Choi Yuen Road	Signal	3.7
Junction F	Po Shek Wu Road/ Fan Kam Road/ Fanling Highway	Roundabout	3.8

3.3.2 In order to establish the existing traffic condition in the above-mentioned critical junctions, traffic survey in the form of manual classified count was conducted in January 2022. The survey was conducted during the morning and evening peak periods of a typical weekday. Analysis of the observed traffic data indicates that the AM and PM peak hour flows occurred from 07:30 to 09:30 and from 16:30 to 18:30 respectively.

3.3.3 Due the COVID-19, the surveyed traffic flows may be less that of the normal conditions. Therefore, additional surveys are carried at the ATC Core station 5003 (at Fanling Highway) to find out the "corrected" factor. **Table 3.3** gives the surveyed results as compared to the 2018 survey data at the ATC Core station 5003.



Table 3.3 Derivation of COVID-19 Factor

		South Bound (veh/hr)		North Bound (veh/hr)		Total
		AM Peak	PM Peak	AM Peak	PM Peak	
Data -ATC Core Station 5003 (Year 2018)		3,555	3,590	3,685	3,785	-
Growth Factor Flow from 2018 to 2022 #		3,699	3,736	3,835	3,939	15,209
Surveyed Flow	Normal weekday	3,165	3,265	3,000	2,945	12,375
COVID-19 Factor						<u>1.23</u>

- Note (1): The growth factor = 1% (please refer to Section 4.2.7)*
(2): ATC 2019 not adopted due to the traffic flows may affected by public meetings and social events in Year 2019

3.3.4 The COVID-19 Factor of 1.23 is then applied to the surveyed traffic flows to give the COVID-19 corrected surveyed traffic flows shown in **Figure 3.9** for the use in the later section of this report.

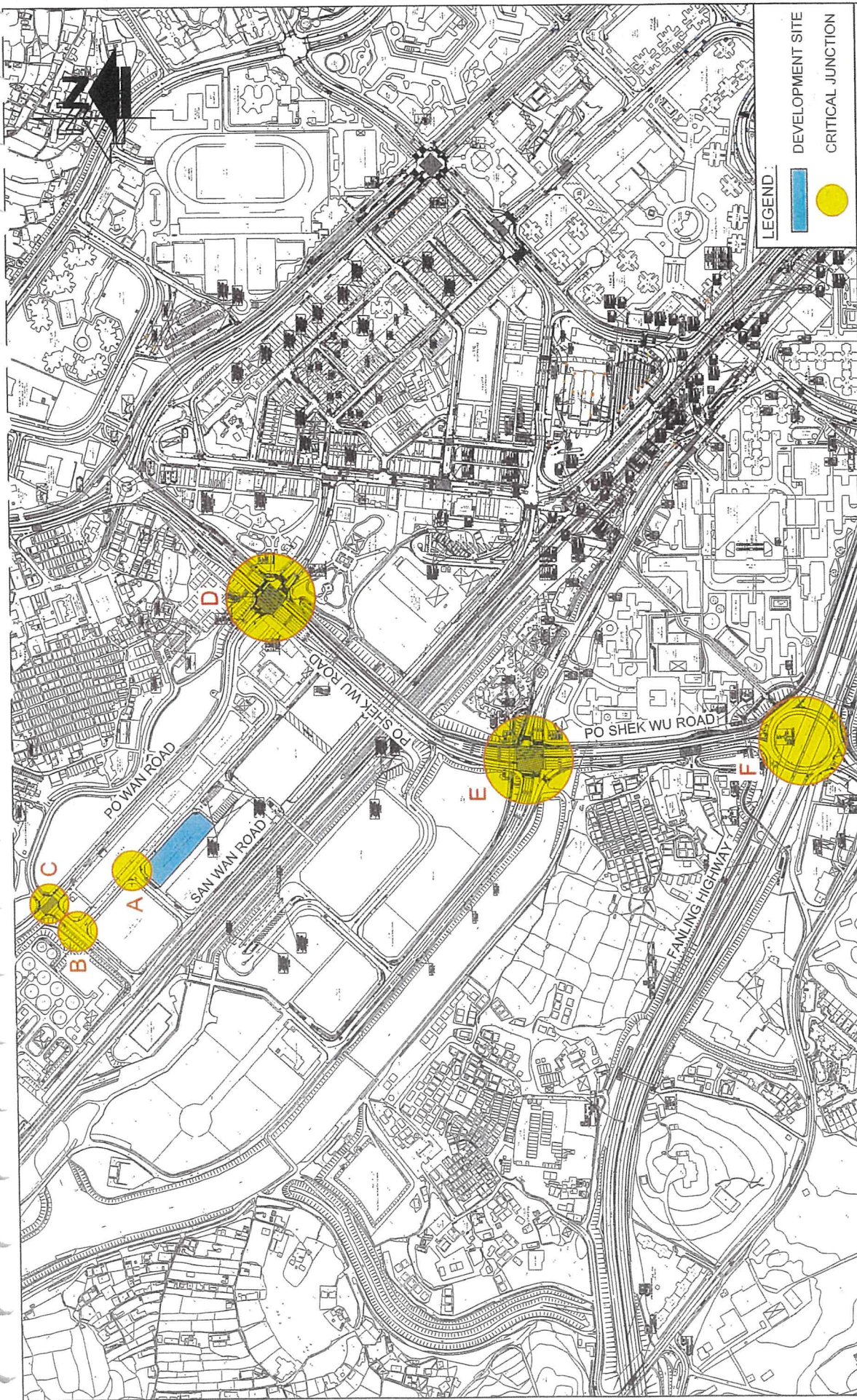
3.3.5 Existing operational performance of the critical junctions are listed in **Table 3.4** below.

Table 3.4 Operational Performance of Identified Critical Junctions in 2022

Ref.	Junction	Method of Control	Year 2022	
			RC/RFC ⁽¹⁾	
			AM Peak	PM Peak
A	Ka Fu Cl/ Cheuk Wan St	Priority	0.11	0.09
B	San Po Street/ Ka Fu Close	Priority	0.29	0.28
C	Po Wan Road/ San Po Street/ Sheung Shui Ting Hing Road	Signal	43%	50%
D	Po Wan Road/ Po Shek Wu Road	Signal	21%	23%
E	Po Shek Wu Road/ Choi Yuen Road	Signal	42%	47%
F	Po Shek Wu Road/ Fan Kam Road/ Fanling Highway	Roundabout	0.66	0.71

- Note: (1) RC = Reserve Capacity*
RFC = Ratio of Flow to Capacity for Priority Junction

3.3.6 The assessment results in **Table 3.4** indicate that all junctions are at present operating with an ample capacities.



PROJECT TITLE

Traffic Review of Rezoning of PNS Sheung Shui Fresh Food Distribution Centre

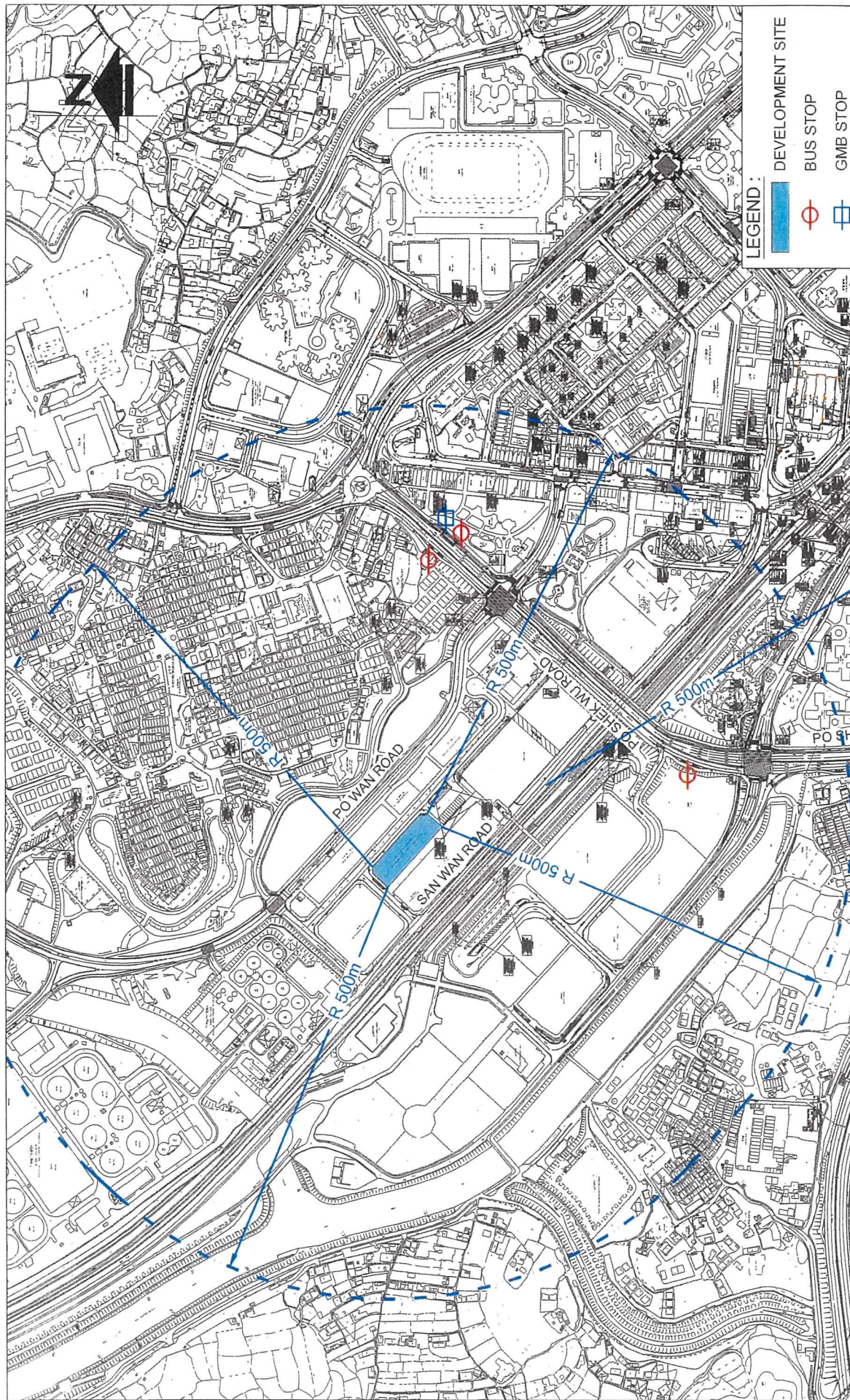
DRAWING TITLE

EXISTING ROADS AND IDENTIFIED KEY JUNCTIONS

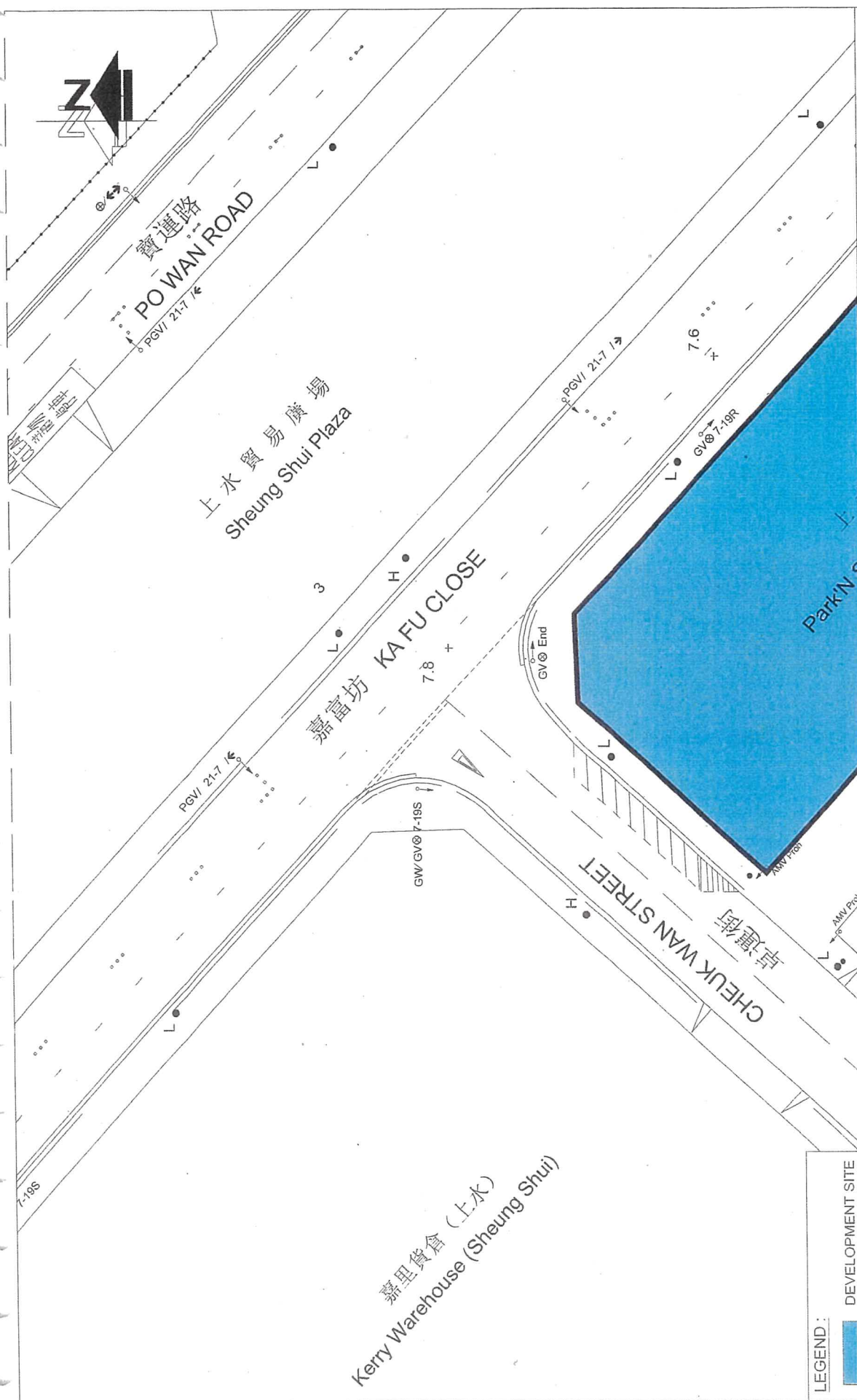
FIGURE NO.: 3.1

PROJECT NO.: 22007HK

SCALE: 1 : 6200 @A4
DATE: 14 JAN 2022



<p>FIGURE NO.: 3.2</p>	<p>PROJECT TITLE: Traffic Review of Rezoning of PNS Sheung Shui Fresh Food Distribution Centre</p>		
<p>PROJECT NO.: 22007HK</p>	<p>DRAWING TITLE: PUBLIC TRANSPORT SERVICES</p>		
<p>SCALE: 1 : 6200 @A4</p>	<p>DATE: 27 JAN 2022</p>	<p>PROJECT NO.: 22007HK</p>	



LEGEND :
 DEVELOPMENT SITE

FIGURE NO.:	3.3
PROJECT NO.:	22007HK
SCALE:	1 : 500 @A4
DATE:	27 JAN 2022

PROJECT TITLE:	Traffic Review of Rezoning of PNS Sheung Shui Fresh Food Distribution Centre
DRAWING TITLE:	EXISTING JUNCTION LAYOUT OF KA FU CLOSE / CHEUK WAN STREET (A)

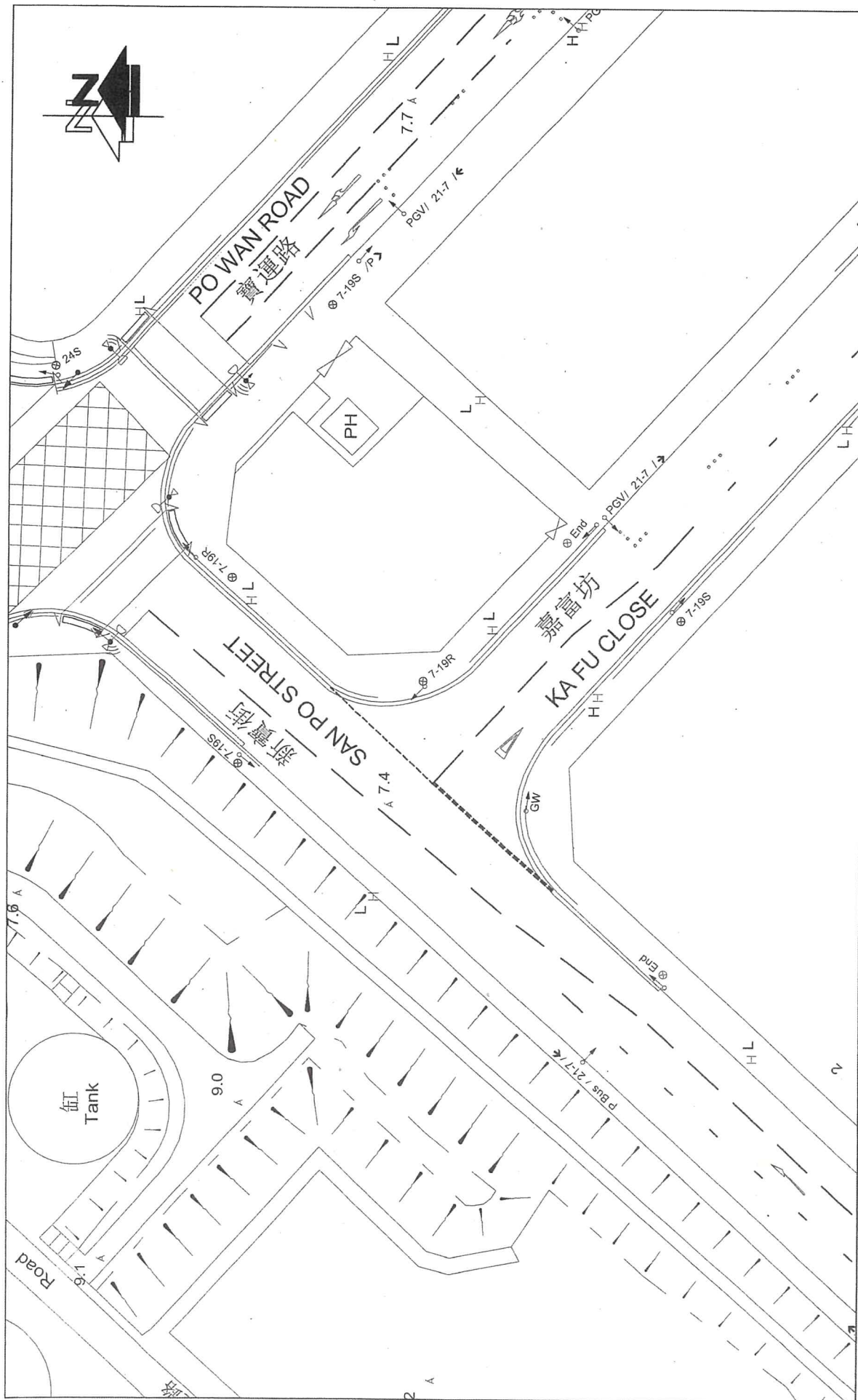



FIGURE NO.: 3.4		PROJECT TITLE: Traffic Review of Rezoning of PNS Sheung Shui Fresh Food Distribution Centre	
PROJECT NO.: 22007HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF KA FU CLOSE / SAN PO STREET (B)	
SCALE: 1 : 500 @A4	DATE: 27 JAN 2022	 司公限有問顧達志 CTA Consultants Limited	

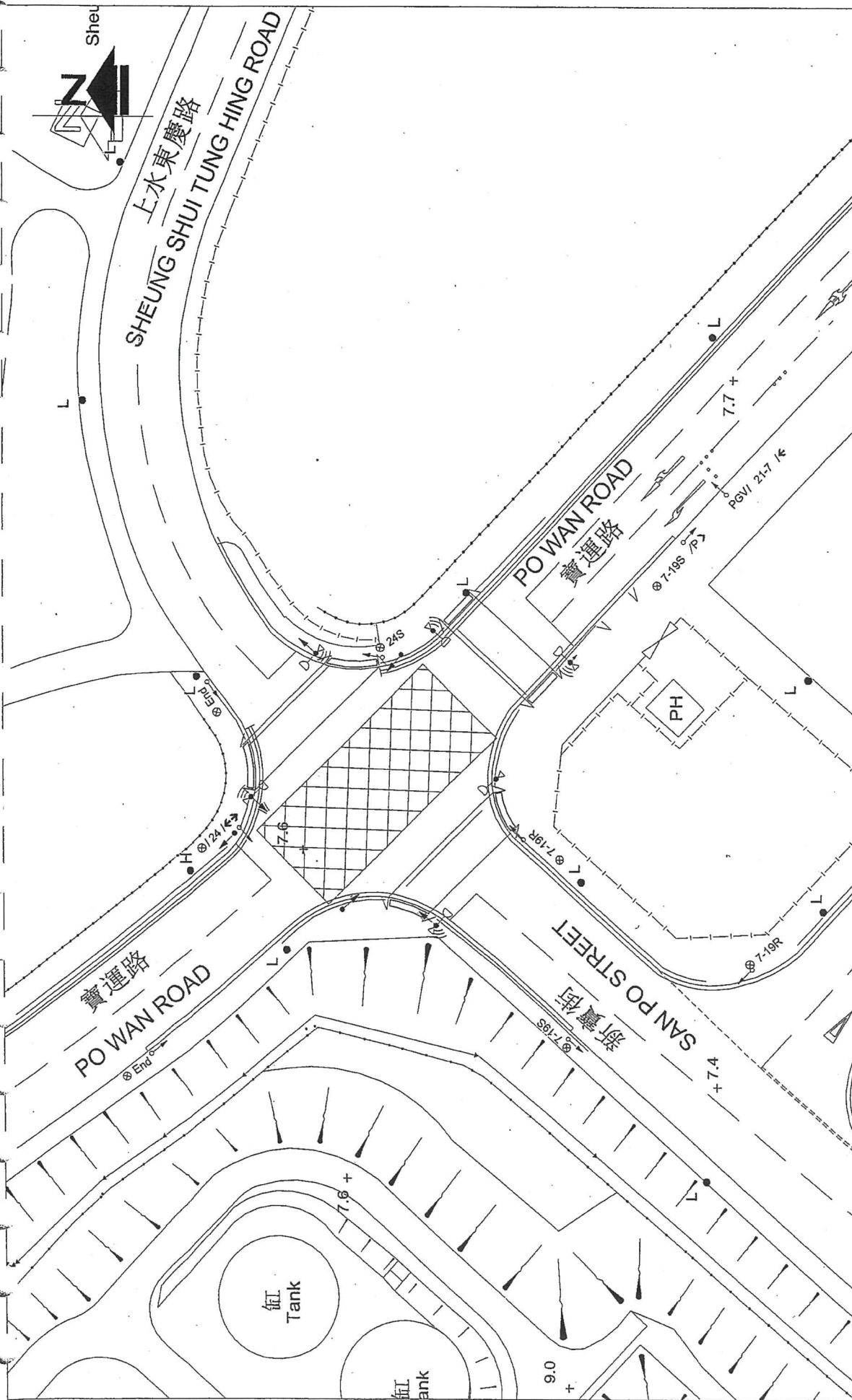


FIGURE NO.:

3.5

PROJECT TITLE:

Traffic Review of Rezoning of PNS Sheung Shui Fresh Food Distribution Centre

PROJECT NO.:

22007HK

DRAWING TITLE:

EXISTING JUNCTION LAYOUT OF

SCALE:

1 : 500 @A4

DATE:

27 JAN 2022

PO WAN ROAD / SAN PO STREET / SHEUNG SHUI TUNG HING ROAD (C)



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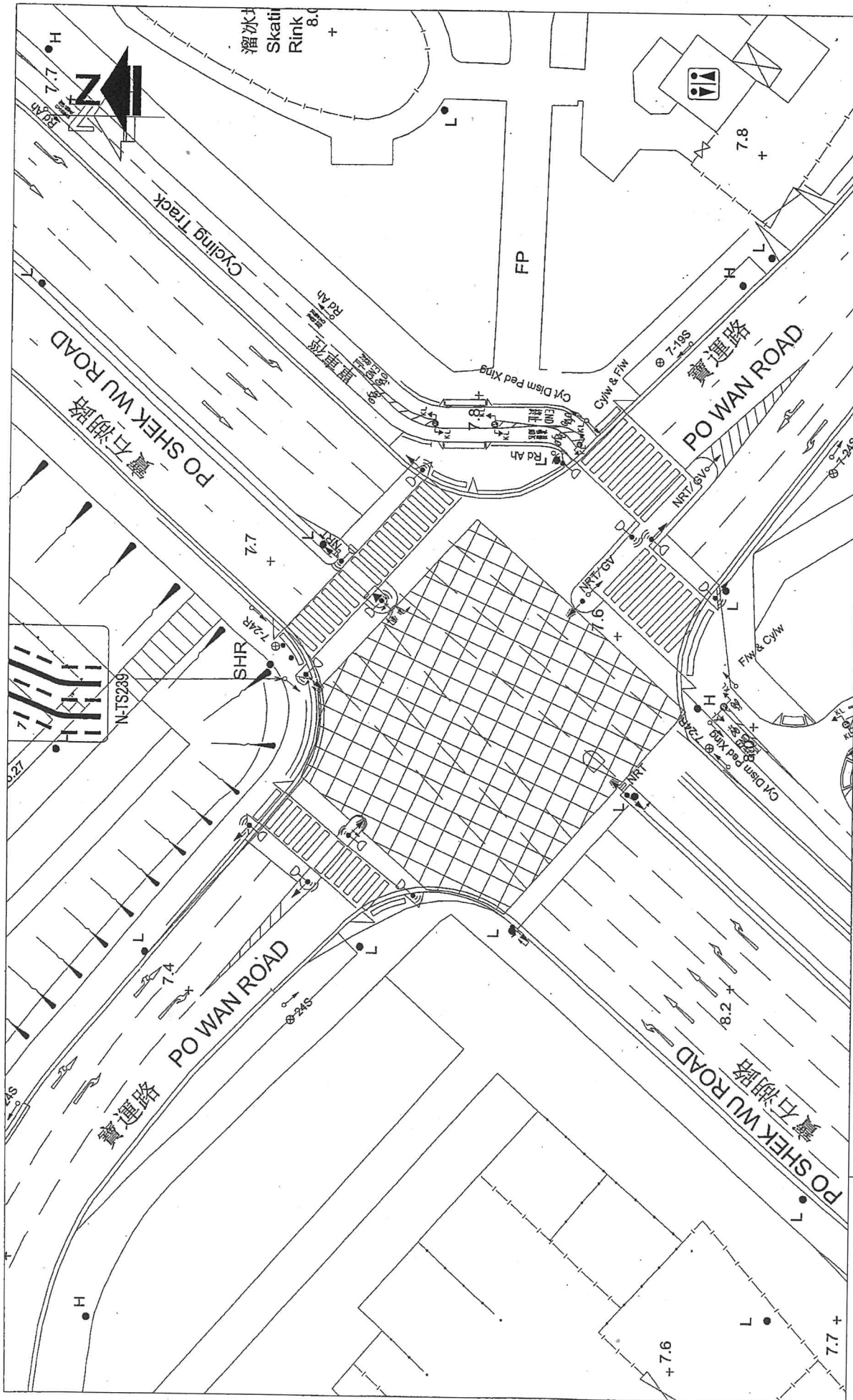



FIGURE NO.: 3.6		PROJECT TITLE: Traffic Review of Rezoning of PNS Sheung Shui Fresh Food Distribution Centre	
PROJECT NO.: 22007HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF PO WAN ROAD / PO SHEK WU ROAD (D)	
SCALE: 1:500 @A4	DATE: 27 JAN 2022	 CTA Consultants Limited 志達顧問有限公司	

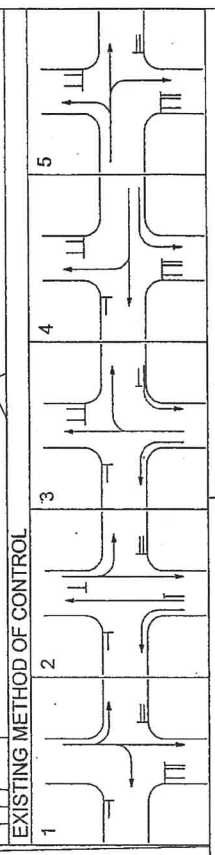
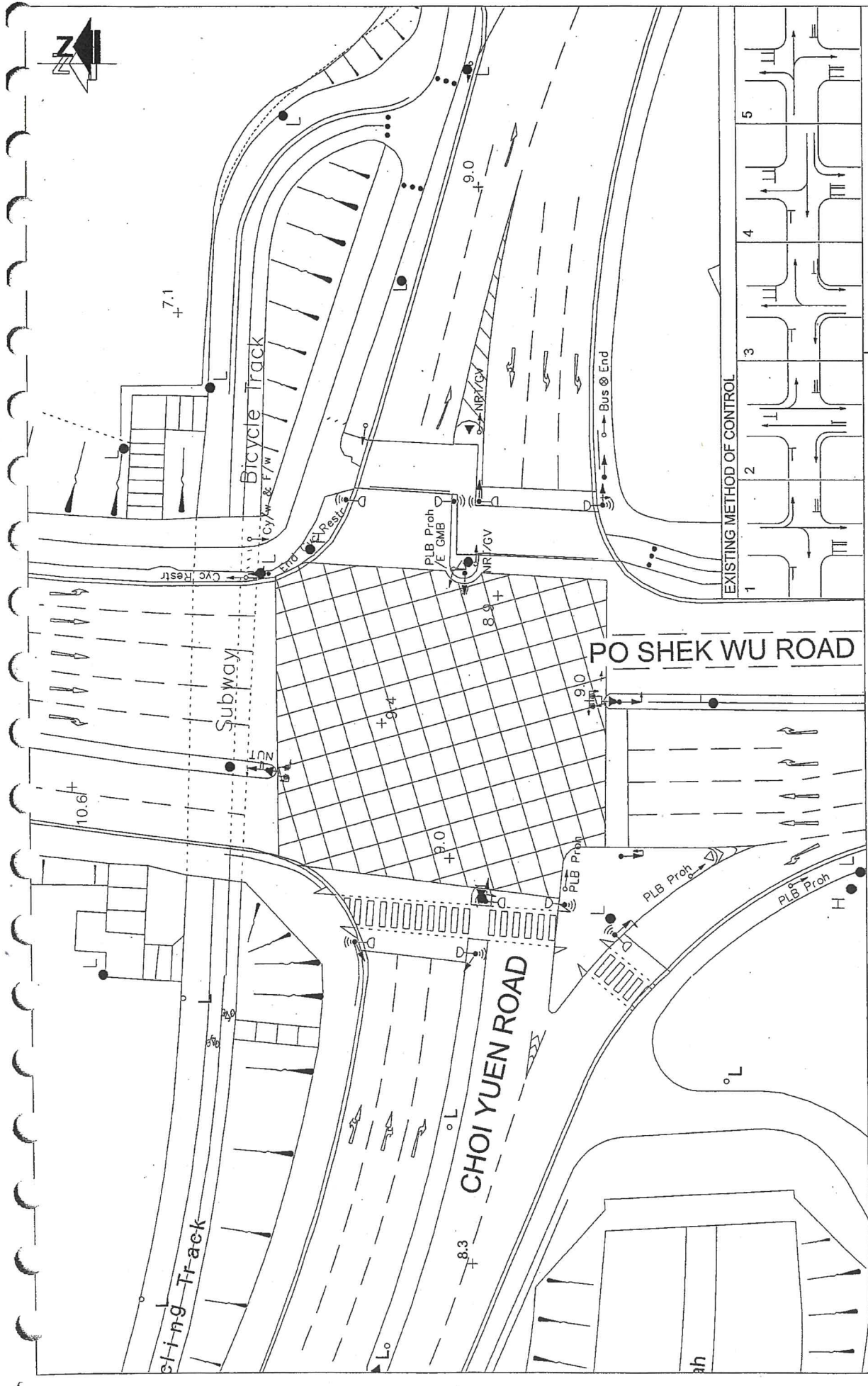

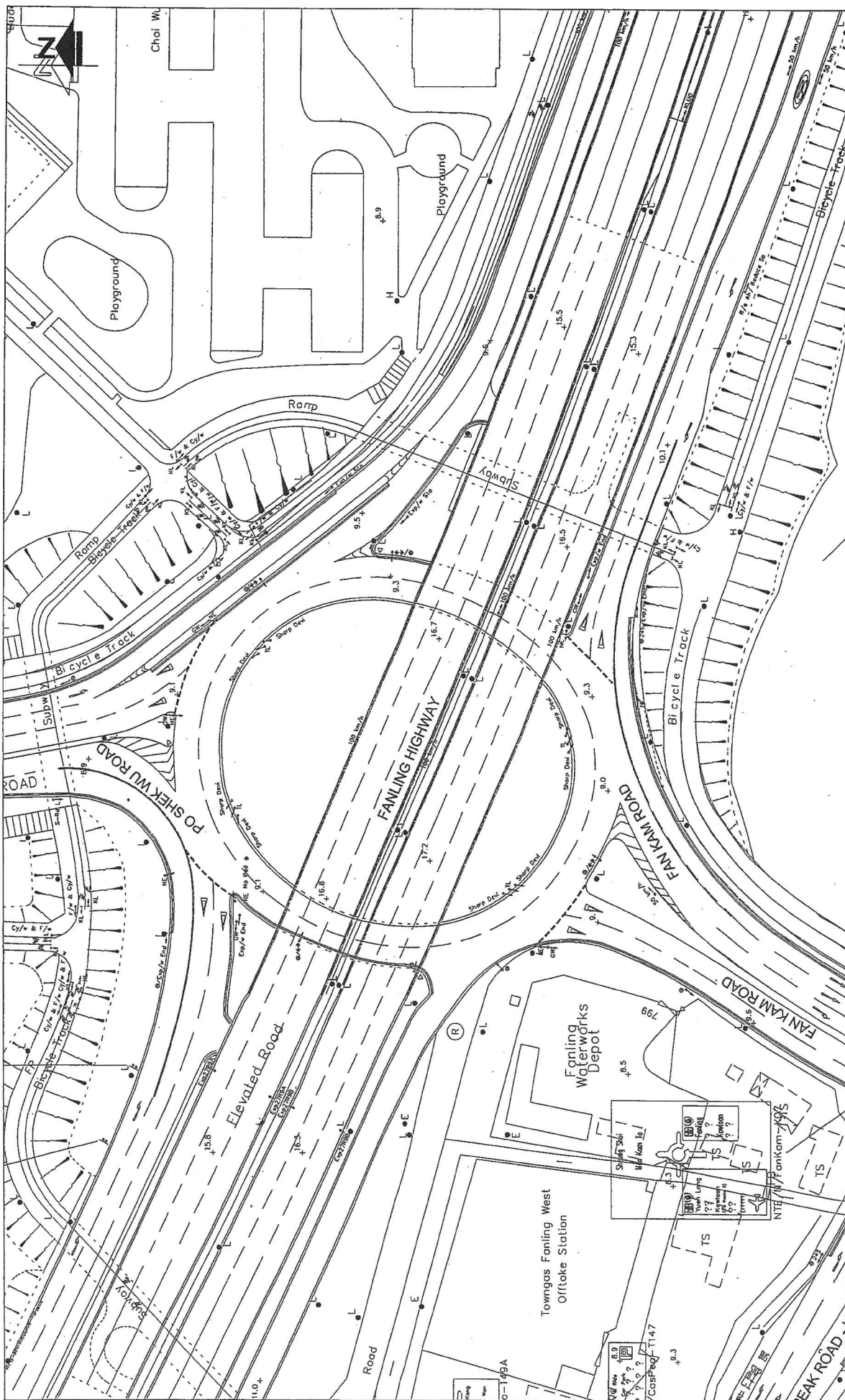


FIGURE NO.: 3.7		PROJECT TITLE: Traffic Review of Rezoning of PNS Sheung Shui Fresh Food Distribution Centre	
PROJECT NO.: 22007HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF PO SHEK WU ROAD / CHOI YUEN ROAD (E)	
SCALE: 1 : 500 @A4	DATE: 26 JAN 2022		



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<p>FIGURE NO.: 3.8</p>		<p>PROJECT TITLE: Traffic Review of Rezoning of PNS Sheung Shui Fresh Food Distribution Centre</p>	
<p>PROJECT NO.: 22007HK</p>		<p>DRAWING TITLE: EXISTING JUNCTION LAYOUT OF FANLING HIGHWAY / FAN KAM ROAD / PO SHEK WU ROAD (F)</p>	
<p>SCALE: 1 : 1000 @A4</p>	<p>DATE: 26 JAN 2022</p>	<p>CTA Consultants Limited 志達顧問有限公司</p>	

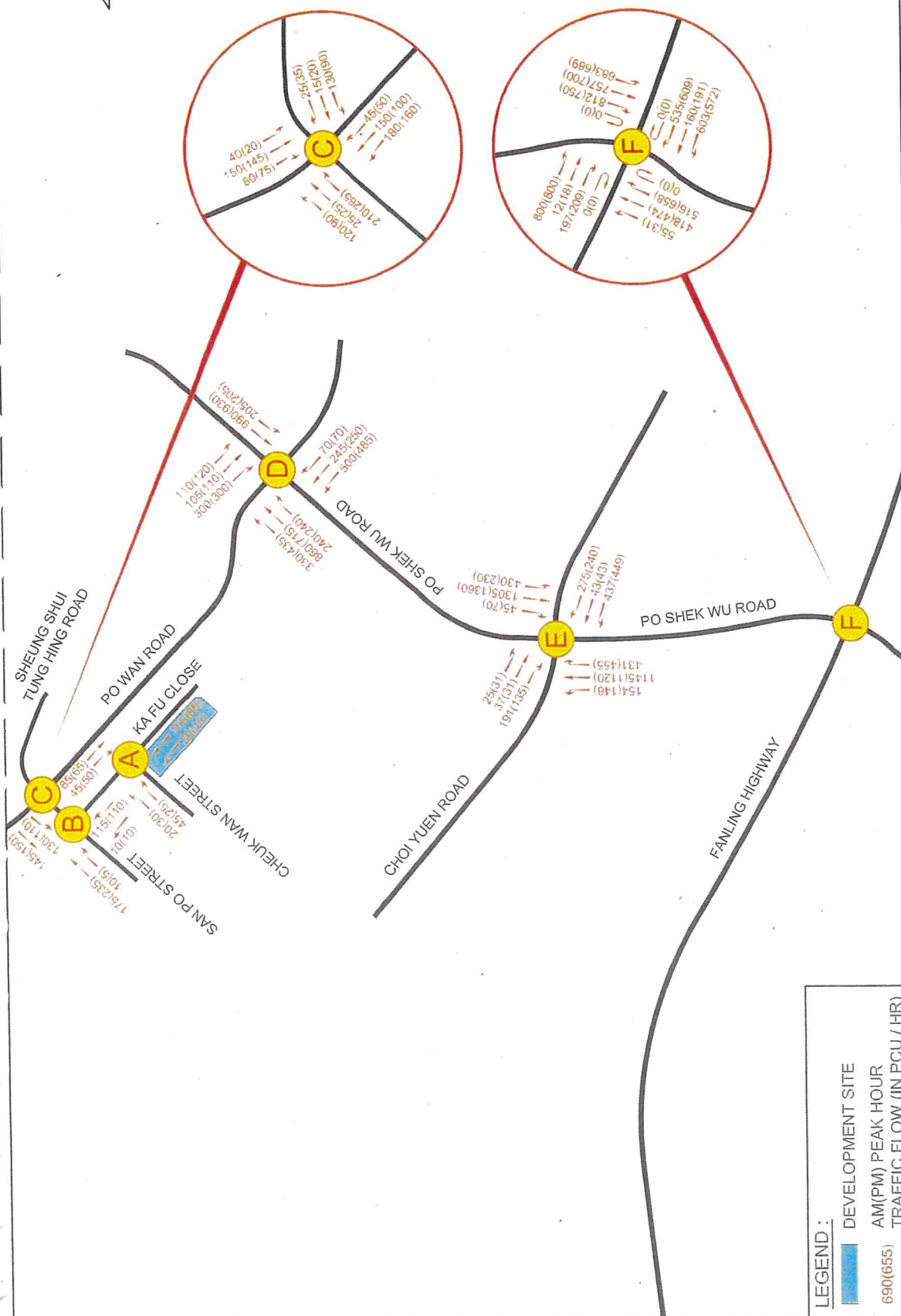


FIGURE NO.: 3.9

PROJECT TITLE: Traffic Review of Rezoning of PNS Sheung Shui Fresh Food Distribution Centre

PROJECT NO.: 22007-HK

DRAWING TITLE: 2022 OBSERVED TRAFFIC FLOWS

SCALE: N. T. S. @A4

DATE: 09 FEB 2022



4. THE FUTURE TRAFFIC CONDITIONS

4.1 Design year

- 4.1.1 It is anticipated that the indicative development will be completed by 2027 tentatively. In order to assess the impact of the development related traffic on the local road network, it is necessary to forecast the traffic flows for 2030, the adopted design year (3 years beyond completion year). This is also the strategic study year currently adopted by the Hong Kong Government for the overall long-term planning of Hong Kong's transport system.

4.2 Future Junction Layout

- 4.2.1 The following junction improvement works have been indicative and will be carried out by either by government or other parties:
- **Figure 4.1** Junction D - Po Wan Road/ Po Shek Wu Road
 - **Figure 4.2** Junction E - Po Shek Wu Road/ Choi Yuen Road
 - **Figure 4.3** Junction F - Po Shek Wu Road/ Fan Kam Road/ Fanling Highway

- 4.2.2 The assessment of the critical junctions will base on the indicative junction arrangement.

4.3 Reference Traffic Flows

- 4.3.1 To estimate the 2030 reference traffic flows (without the indicative development) in the local road network, an appropriate growth factor has to be identified for the area in the first instance. The following approaches have been adopted in order to derive a growth factor in this district.

Historical Trend

- 4.3.2 Numerous of traffic count stations are located in the vicinity of the indicative development. The traffic counts reported in the Annual Traffic Census (ATC), which is published by Transport Department, over a period of five years, i.e. 2013 to 2018 are summarized in **Table 4.1**.



Table 4.1 Historical Traffic Data from Annual Traffic Census (ATC)

ATC Station	Road Name	Annual Average Daily Traffic (AADT)						Avg. Annual Growth Rate
		2013	2014	2015	2016	2017	2018	
5204	Fanling Highway (Slip Roads to & from Fan Kam Rd INT – Slip Roads to & from So Kwun Po INT)	83,410	73,030	76,410*	80,720*	80,140*	77,280	-1.52%
6080	Sam Wan Road	3,500	3,460	3,440*	3,580*	3,680	3,660	0.90%
5251	Choi Yuen Rd	17,460	16,610	16,480	17,160	16,890	18,700	1.38%
6042	Po Wan Rd	5,100	5,050*	5,010*	5,210*	5,440	5,080	-0.08%
6018	Po Shek Wu Rd	32,860	32,650*	34,160*	36,090*	36,210	36,460	2.10%
TOTAL		142,330	130,800	139,230	139,320	142,360	141,180	-0.16%

Note: *AADT estimated by Growth factor

**Data of Year 2019 was not adopted as they may affected by the public meetings and processions in 2019

***Data of Year 2020 was not adopted as they may affected by the COVID-19 in 2020

2016-Based TPEDM planning data

- 4.3.3 Reference has also been made to the "2016-Based TPEDM planning data" published by Planning Department for years 2021 and 2026. The average annual growth rates in terms of population and employment from 2021 to 2026 are shown in Table 4.2.

Table 4.2 2016-based Population and Employment Growth from 2021 to 2026

Fanling / Sheung Shui			
Data	Year		Average Annual Growth Rate
	2021	2026	
Population	258,250	270,900	+0.96%
Employment	62,200	65,500	+1.04%
Total	320,450	336,400	+0.98%

- 4.3.4 From Table 4.2, it is found that the average annual growth rates of population and employment in Fanling/ Sheung Shui from year 2021 to 2026 are +0.98% per annum.



Adopted Growth Rate

- 4.3.5 A.A.D.T. of ATC indicates that the traffic flows in the local road network have an increasing trend with annual growth rate of -0.16% during past years from 2013 to 2018.
- 4.3.6 Whilst, the 2016-based TPEDM planning data indicates that the population and employment in Fanling/ Sheung Shui are expected to change with annual growth rate of +0.98% from 2021 to 2026.
- 4.3.7 For a conservative approach, the annual growth rate of +1.0% p.a. is adopted, which represents the strategic growth of traffic on the main roads in Sheung Shui. It is deemed sufficient to allow any unexpected future growth as a result of some changes related to land use or redevelopment in the area.

4.4 Traffic Generations of Adjacent New Developments

- 4.4.1 In order to fully reflect the growth traffic, trip generation of the future vicinity developments have been considered. The planned development parameters in Sheung Shui are shown in Figure 4.4 and detailed in Table 4.3.

Table 4.3 Adjacent New Developments of the Subject Site

Site No.	Development	Use
A	Indicative Houses at D.D.92 and adjoining Government Land, Kwu Tung South, Sheung Shui, N.T.	Houses
B	Private Residential Development at Various Lots in D.D. 92	Private Residential
C	Private Residential Development at Lot No.4076 in D.D. 91	Private Residential
D	Public Housing Development at Fanling Area 36 Phase 4 (Ching Ho Extension)	Public Housing
E	Indicative Housing Site at Po Shek Wu Road, Sheung Shui	Subsidized Sale Flat
F	Indicative Public Housing Development Sites 1 & 2 in Sheung Shui Areas 4 and 30	Public Rental Housing
G	Indicative Public Housing Development in Ching Hiu Road (Site B in S/FSS/25)	Public Rental Housing
H	Indicative Public Housing Development in Tai Tau Leng (Site C in S/FSS/25)	Public Rental Housing
I	Indicative Public Housing Development in Choi Shun Street (Site D in S/FSS/25)	Public Rental Housing



4.4.2 The estimation on trip generations and attractions of the adjacent residential development is based on its submitted TIA report or lease requirements. Table 4.4 shows the summary of the trip rates of the adjacent planned residential developments.

Table 4.4 Adopted Trip Generations and Attractions of Adjacent Developments

Site No.	Development	Parameters	Units	Adopted Trips			
				AM Peak		PM Peak	
				Gen.	Att.	Gen.	Att.
A	Indicative Houses at D.D.92 and adjoining Government Land, Kwu Tung South, Sheung Shui, N.T.	37 Houses	pcu/hr/flat	0.3276	0.2407	0.2233	0.3097
			pcu/hr	12	9	8	11
B	Private Residential Development at Various Lots in D.D. 92 ⁽¹⁾	1,147 flats	pcu/hr/flat	107	75	94	159
C	Private Residential Development at Lots No. 4076 in D.D. 91	15,840 m ² to 26,400 m ² GFA	pcu/hr/flat ⁽³⁾	0.0718	0.0425	0.0286	0.037
			pcu/hr	32	19	13	16
D	Public Housing Development at Fanling Area 36 Phase 4 (Ching Ho Extension)	772 flats	pcu/hr/flat ⁽²⁾	0.0622	0.0426	0.0297	0.0401
			pcu/hr	48	33	23	31
		Retail 2,600 m ²	pcu/hr/100 sqm GFA	0.2296	0.2434	0.3100	0.3563
			pcu/hr	6	6	8	9
E	Indicative Housing Site at Po Shek Wu Road, Sheung Shui ⁽¹⁾	1,850 flats	pcu/hr	115	79	55	74
		Retail: 3,000 m ² GFA	pcu/hr	7	7	9	11
		Kindergarten: 767 m ² GFA	pcu/hr	30	30	30	30
F	Indicative Public Housing Development in Sheung Shui Areas 4 and 30 (Site 1) ⁽¹⁾	2,088 flats	pcu/hr	56	52	41	47
		Retail: 395 m ² GFA	pcu/hr	1	1	2	2
		Kindergarten (6 classrooms) and Welfare facilities (8,710 m ² GFA)	pcu/hr	30	30	30	30
	Indicative Public Housing Development in Sheung Shui Areas 4 and 30 (Site 2) ⁽¹⁾	1,556 flats	pcu/hr	42	39	31	38
		Retail: 700 m ² GFA	pcu/hr	2	2	3	3
G	Indicative Public Housing Development in Ching Hiu Road (Site B in OZP no. S/FSS/25)	About 620 flats	pcu/hr/flat ⁽²⁾	0.0622	0.0426	0.0297	0.0401
			pcu/hr	39	26	18	25
		Kindergarten and Welfare facilities	pcu/hr ⁽⁴⁾	30	30	30	30
H	Indicative Public Housing Development in Tai Tau Leng (Site C1 in OZP no. S/FSS/25) ⁽⁵⁾	About 3,300 flats	pcu/hr/flat ⁽²⁾	0.0622	0.0426	0.0297	0.0401
			pcu/hr	205	141	98	132
		Kindergarten and Welfare facilities	pcu/hr ⁽⁴⁾	30	30	30	30
I	Indicative Public Housing Development in Choi Shun Street (Site D1 & 2 in OZP no. S/FSS/25) ⁽¹⁾	PRH/SSF (2,663 flats)	pcu/hr	166	113	71	96
		Primary School	pcu/hr	6	28	6	0
		PVP (70 Spaces)	pcu/hr	13	16	16	11
Total for Site F and I			Pcu/hr	316	281	200	227
Overall Total				977	766	616	785



- Note: (1) According to their TIA.
(2) Trip rate of average flat size 50 m² for subsidized housing is adopted.
(3) Assume Total GFA 26,400 m², average flat size 60 m² and 440 flats.
(4) Reference from TIA of Indicative Public Housing Development in Sheung Shui Areas 4 and 30.
(5) Target completion year of Site H (i.e. Site C1 in OZP no. S/FSS/25) is 2032/33 which is beyond our design year and therefore will not be considered in this assessment.
(6) There is no detailed parameter, target completion year or TIA for Site D3 & D4 in OZP no. S/FSS/25. It is assumed beyond our design year and will not be considered in this assessment.

Table 4.5 Traffic Flow of the Existing Development

Year 2022			
AM Peak		PM Peak	
Generation	Attraction	Generation	Attraction
320	253	374	279

Table 4.6 Net Growth of the Traffic Flow of Adjacent Planned and Existing Developments

	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Committed planning developments (F and I)	316	281	200	227
Existing development	320	253	374	279
Net Growth	<u>-4</u>	<u>28</u>	<u>-174</u>	<u>-25</u>
For the sake of conservative approach, These were assumed	<u>28</u>	<u>28</u>	<u>28</u>	<u>28</u>

4.4.3 The reference traffic of local road network is derived following the equation below:

$$\begin{array}{rclcl}
 \text{2030 Reference} & & & & \\
 \text{Flows (Without} & = & \text{2022} & \times & \text{Adopted} \\
 \text{Indicative} & & \text{Observed} & & \text{Growth Factor} \\
 \text{Development)} & & \text{Flows} & & \text{(I)} \\
 & & & & \text{(i.e. +1.0\% p.a.} \\
 & & & & \text{for 8 years)} \\
 & & & + & \text{Net Increase in} \\
 & & & & \text{Traffic Flows of} \\
 & & & & \text{Adjacent Planned} \\
 & & & & \text{Developments}
 \end{array}$$

4.4.4 The 2030 reference traffic flows are presented in Figure 4.5.



4.5 Traffic Generations and Attractions of Indicative Development

4.5.1 To estimate the traffic generation and attraction of the indicative development, reference has been made to the trip generation rates as stipulated in Volume 1 Chapter 3 Appendix C Table 1 of T.P.D.M. published by Transport Department.

4.5.2 For conservative approach, interpolation with respect to average flat size and upper limit of the trip rates are adopted for the indicative development. The adopted trip rates are summarized in Table 4.7 below.

Table 4.7 Adopted Trip Rates of Indicative Development

Indicative Development	Adopted trip Rates (in pcu/hr/unit)			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Private Housing 304 units, 50m ² avg. flat size	0.093*	0.069*	0.038*	0.038*

* Note: Interpolation w.r.t. average flat size is adopted.

4.5.3 Based on the adopted trip rates listed in Table 4.7 and the indicative development parameters in Table 2.1, the trip generation and attraction of the indicative development are estimated and summarized in below Table 4.8.

Table 4.8 Estimated Trip Generations and Attractions of Indicative Development

Indicative Development (in pcu/hr)	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
304units, 50m ² avg. flat size	<u>28</u>	<u>21</u>	<u>12</u>	<u>12</u>

4.6 Design Traffic Forecasts

4.6.1 The traffic generated from the indicative development was then assigned to the road network. After that, the development traffic flows were then superimposed onto the 2030 reference traffic flows (without indicative development) as illustrated diagrammatically in Figure 4.5 to derive the 2030 design traffic forecasts (with indicative development).

$$\begin{array}{lcl}
 \text{2030 Design Flows} & & \\
 \text{(with indicative} & = & \text{2030 Reference Flows} \\
 \text{developments)} & & \text{(without Indicative} \\
 & & \text{Development)} \\
 & + & \text{Indicative} \\
 & & \text{Development} \\
 & & \text{Traffic}
 \end{array}$$

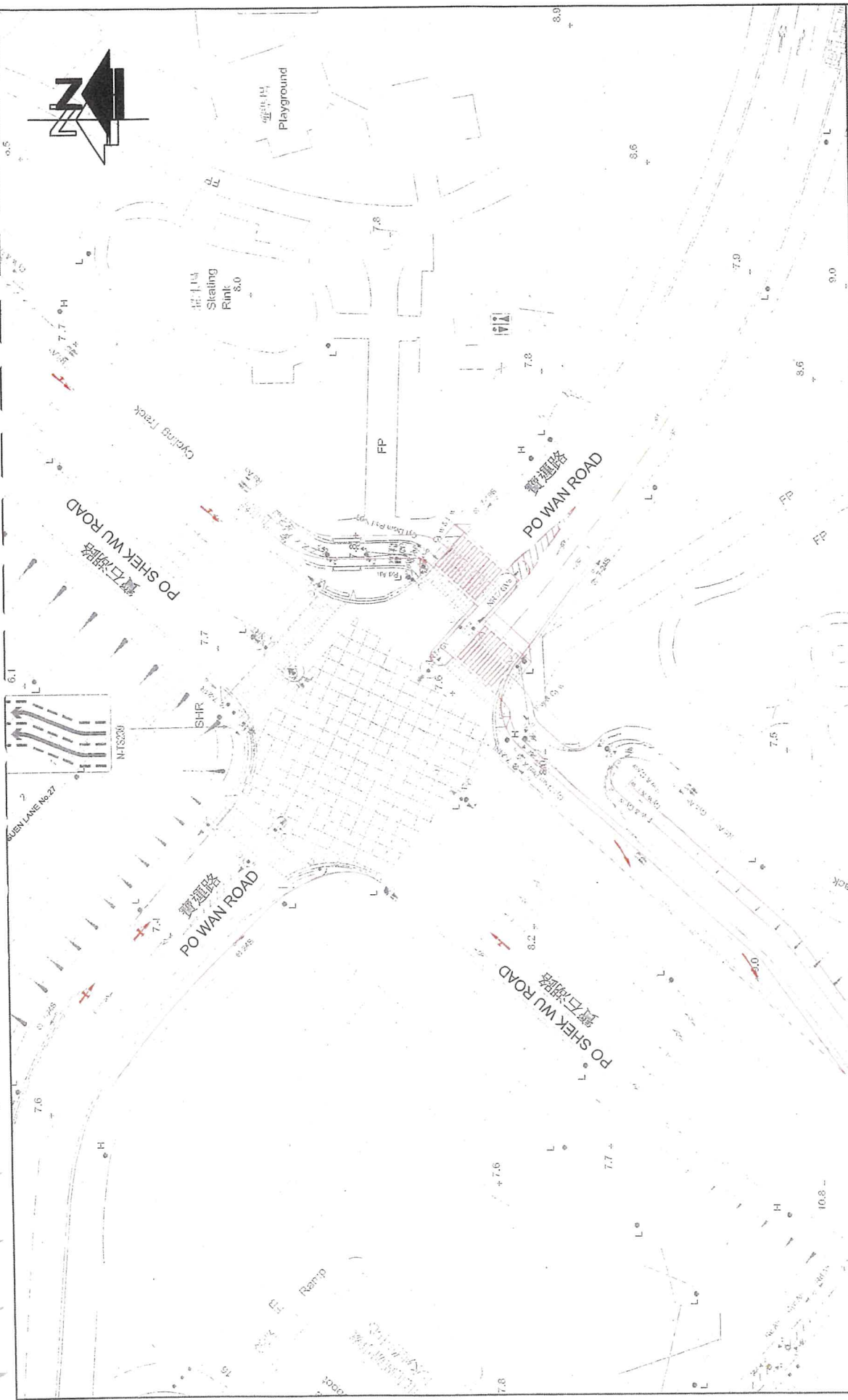


4.6 Design Traffic Forecasts

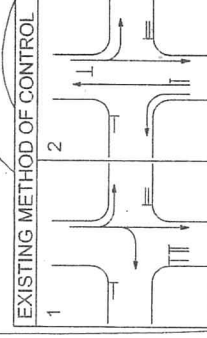
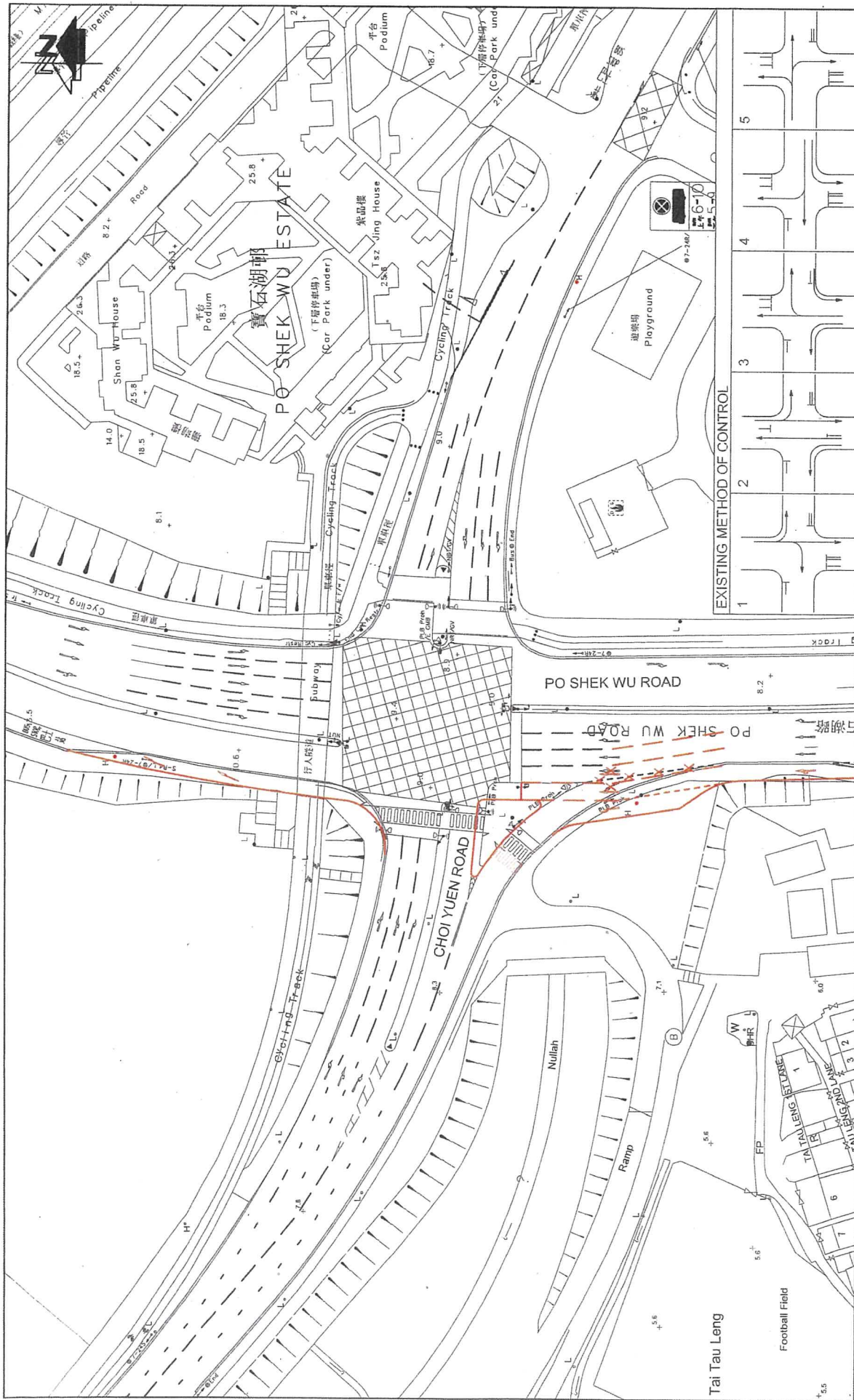
- 4.6.1 The traffic generated from the indicative development was then assigned to the road network. After that, the development traffic flows were then superimposed onto the 2030 reference traffic flows (without indicative development) as illustrated diagrammatically in **Figure 4.5** to derive the 2030 design traffic forecasts (with indicative development).

$$\begin{array}{l} \text{2030 Design Flows} \\ \text{(with indicative} \\ \text{developments)} \end{array} = \begin{array}{l} \text{2030 Reference Flows} \\ \text{(without Indicative} \\ \text{Development)} \end{array} + \begin{array}{l} \text{Indicative} \\ \text{Development} \\ \text{Traffic} \end{array}$$

- 4.6.2 The 2030 AM and PM peak design traffic flows (with indicative development) are shown in **Figure 4.6**.



<p>FIGURE NO.: 4.1</p>	<p>PROJECT TITLE: Traffic Review of Rezoning of PNS Sheung Shui Fresh Food Distribution Centre</p>	<p>CTA Consultants Limited 志達顧問有限公司</p>
<p>PROJECT NO.: 22007HK</p>	<p>DRAWING TITLE: PROPOSED JUNCTION LAYOUT OF PO WAN ROAD / PO SHEK WU ROAD (D)</p>	
<p>SCALE: 1 : 750 @A4</p>	<p>DATE: 09 FEB 2022</p>	



<p>FIGURE NO.: 4.2</p>	<p>PROJECT TITLE: Traffic Review of Rezoning of PNS Sheung Shui Fresh Food Distribution Centre</p>		
<p>PROJECT NO.: 22007HK</p>	<p>DRAWING TITLE: PROPOSED IMPROVEMENT LAYOUT OF PO SHEK WU ROAD / CHOI YUEN ROAD (E) (CARRIED OUT BY CEDD IN KNP PROJECT)</p>		
<p>SCALE: 1 : 1000 (IN A4 SIZE)</p>	<p>DATE: 09 FEB 2022</p>	<p>CTA Consultants Limited 志達顧問有限公司</p>	

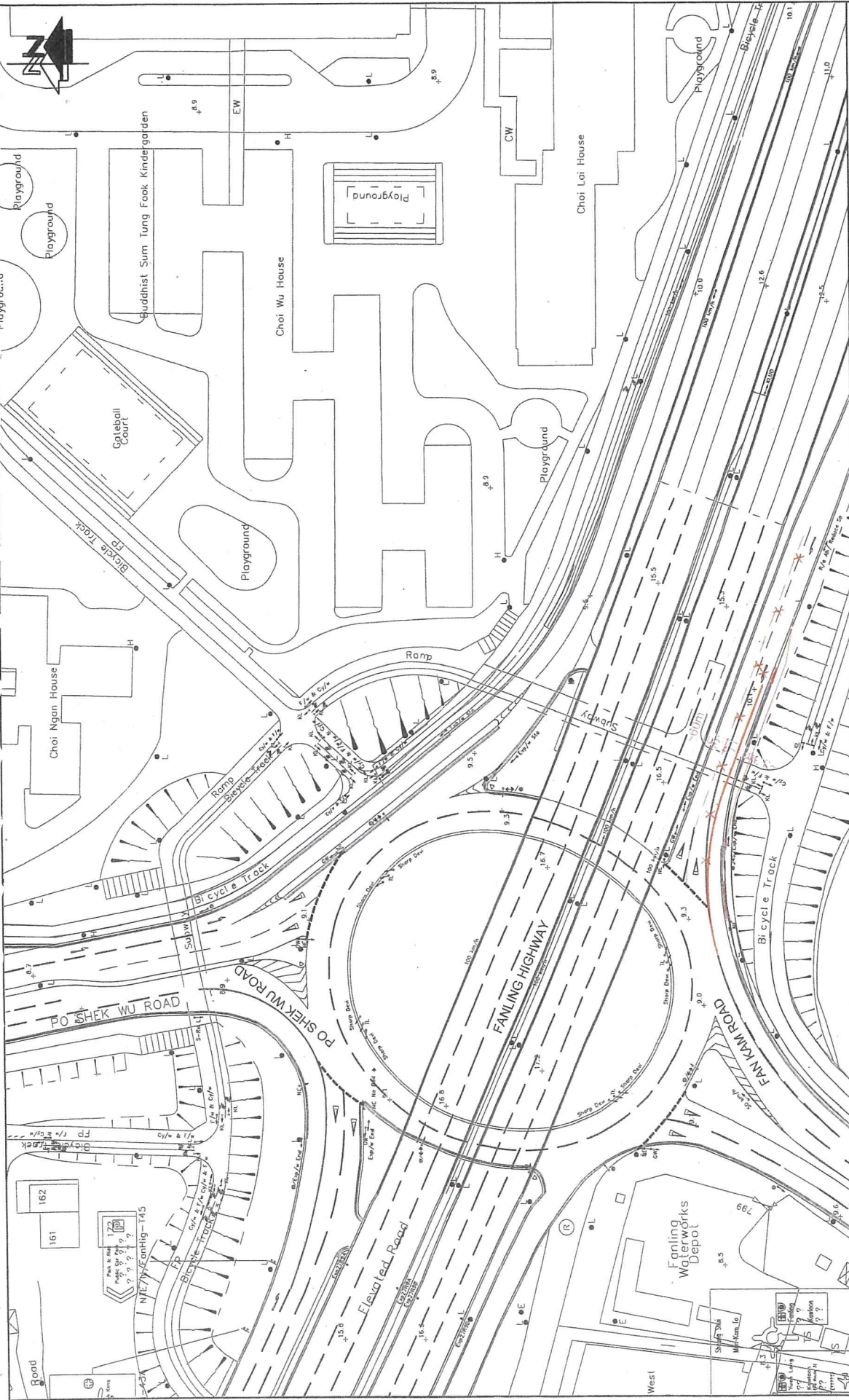


FIGURE NO.:

4.3

PROJECT TITLE:

Traffic Review of Rezoning of PNS Sheung Shui Fresh Food Distribution Centre

PROJECT NO.:

22007HK

DRAWING TITLE:

PROPOSED JUNCTION LAYOUT OF
FANLING HIGHWAY / FAN KAM ROAD / PO SHEK WU ROAD (F)
(CARRIED OUT BY CEDD IN KNP PROJECT)

SCALE:

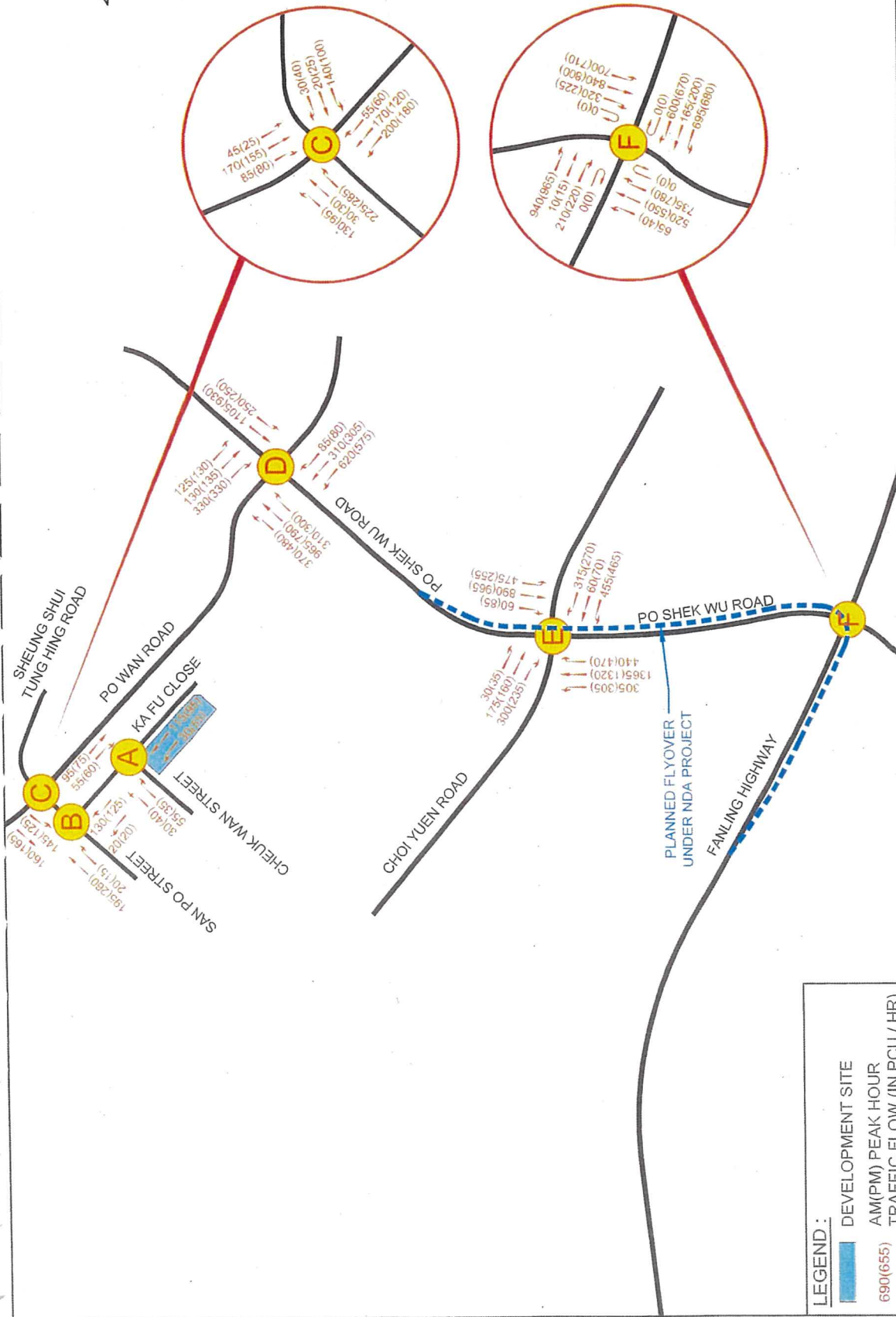
1 : 1100
(IN A4 SIZE)

DATE:

09 FEB 2022



<p>FIGURE NO. 4.4</p>		<p>PROJECT TITLE:</p>	
<p>PROJECT NO.: 22007HK</p>		<p>Traffic Review of Rezoning of PNS Sheung Shui Fresh Food Distribution Centre</p>	
<p>SCALE: 1 : 1100 @A4</p>		<p>DRAWING TITLE:</p>	
<p>DATE: 28 JAN 2022</p>		<p>FUTURE ADJACENT DEVELOPMENT AT SHEUNG SHUI</p>	



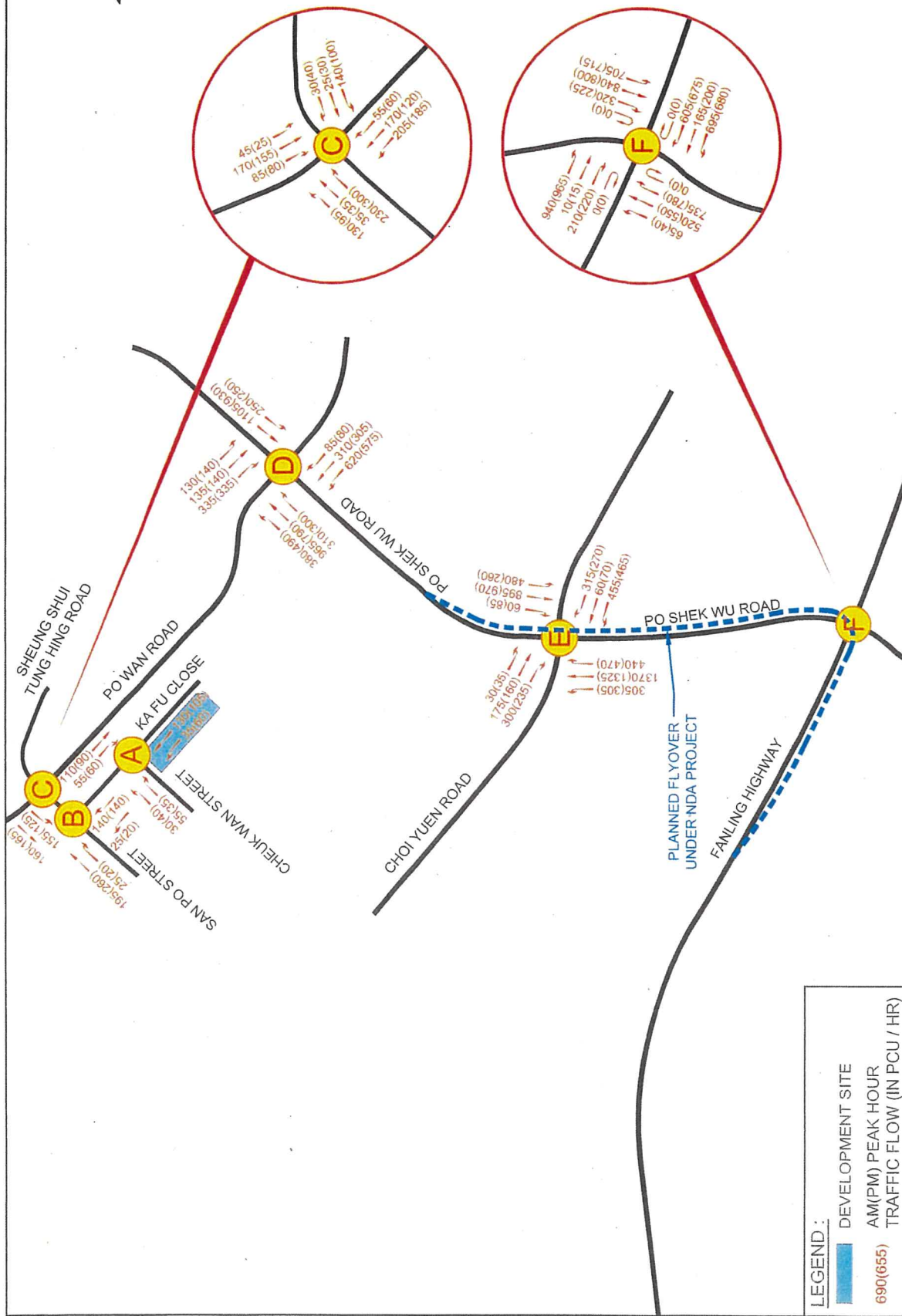


FIGURE NO.:	4.6	PROJECT TITLE:	Traffic Review of Rezoning of PNS Sheung Shui Fresh Food Distribution Centre		
PROJECT NO.:	22007HK	DRAWING TITLE:	2030 DESIGN TRAFFIC FLOWS		
SCALE:	N. T. S. @A4	DATE:	09 FEB 2022		



5. TRAFFIC IMPACT ASSESSMENT

5.1 Operational Assessment

5.1.1 To assess the traffic impact due to the indicative development, capacity analysis of the identified critical junctions for both the reference and design scenarios in 2030 has been carried out. The results are summarized in Table 5.1.

Table 5.1 Operational Performance of Identified Critical Junctions in 2030

Ref.	Junction	Method of Control	Year 2030 RC/DFC ⁽¹⁾			
			Reference Scenario (Without the Indicative Development)		Design Scenario (With the Indicative Development)	
			AM Peak	PM Peak	AM Peak	PM Peak
Junction A	Ka Fu Cl/ Cheuk Wan St	Priority	0.14	0.12	0.14	0.12
Junction B	Po Wan Road/ San Po Street/ Sheung Shui Tung Hing Road	Priority	0.35	0.34	0.39	0.38
Junction C	San Po Street/ Ka Fu Cl	Signalized	29%	37%	28%	34%
Junction D (Modified)	Po Wan Road/ Po Shek Wu Road	Signalized	17%	21%	16%	19%
Junction E (Modified)	Shek Wu Road/ Choi Yuen Road	Signalized	42%	45%	41%	44%
Junction F (Modified)	Po Shek Wu Road/ Fan Kam Road/ Fanling Highway	Roundabout	0.63	0.66	0.63	0.66

Note: (1) RC = Reserve Capacity
RFC = Ratio of Flow to Capacity for Priority Junction

5.1.2 The assessment results in Table 5.1 indicate that all junctions will operate with an amply capacities.



6. SUMMARY AND CONCLUSION

6.1 Summary

- 6.1.1 The total site area of the indicative development is 3041 m². The domestic GFA about 15205 m² is indicative and is expected to be completed by 2027 tentatively.
- 6.1.2 Manual count traffic survey was conducted in the surrounding road network of the indicative development in order to study the existing traffic conditions. Current operational performance of the critical junctions has been assessed and the results indicated that all the identified critical junctions are at present operating with an ample capacities.
- 6.1.3 Year 2030 traffic forecasts have been derived from the observed traffic flows and applied an appropriate growth rate (i.e. +1.0%) with due considerations of the latest Annual Traffic Census (ATC) as published and TPEDM planning data published by Government.
- 6.1.4 Junction Improvement scheme carried out by CEDD under Kwu Tung North and Fanling North New Development Area (NDA) Project has been indicative. Po Shek Wu Interchange Improvement which provides a flyover to allow the right turning traffic from Po Shek Wu Road southbound to Fanling Highway westbound to bypass the existing Junction E (Shek Wu Road/ Choi Yuen Road) and Junction F (Po Shek Wu Road/ Fan Kam Road/ Fanling Highway). Local widening to Junction D is also indicative. This would greatly improve the junction performance in future.
- 6.1.5 Assessment of operational performance of the critical junctions indicates that all critical junctions and links will still operate within their capacities in both reference and design scenarios in year 2030.

6.2 Conclusion

- 6.2.1 In conclusion, the traffic impact assessment study has demonstrated that the traffic generated by the development under Re-zoning Application would not cause significant traffic impact to the local and can be absorbed by the nearby road network in the vicinity.
- 6.2.2 Therefore, the indicative residential development at Sheung Shui Lot No. 2 is considered acceptable in traffic engineering point of view.



Appendix 1

Junction Calculation Sheets



Junctions 8							
PICADY 8 - Priority Intersection Module							
Version: 8.0.5.523 [19102,19/06/2015]							
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Path: \\PROJSRV\Project\CTA Consultants Limited\CTA - Project\22007HK - TCS for Rezoning of PNS Sheung Shui Fresh Food Distribution Centre\CAL\2022-02-07

Report generation date: 9/2/2022 14:49:33

- » Junction A - 2022 Existing, AM
- » Junction A - 2022 Existing, PM
- » Junction A - 2030 Reference, AM
- » Junction A - 2030 Reference, PM
- » Junction A - 2030 Design, AM
- » Junction A - 2030 Design, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Junction A - 2022 Existing								
Stream B-AC	0.12	6.53	0.11	A	0.09	5.94	0.08	A
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.09	7.10	0.08	A	0.10	7.20	0.09	A
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Junction A - 2030 Design								
Stream B-AC	0.16	6.86	0.14	A	0.13	6.28	0.12	A
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.11	7.37	0.10	A	0.12	7.44	0.11	A
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Junction A - 2030 Reference								
Stream B-AC	0.16	6.78	0.14	A	0.13	6.25	0.12	A
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.11	7.31	0.10	A	0.12	7.43	0.11	A
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2022 Existing, AM" model duration: 8:00 - 9:30

"D2 - 2022 Existing, PM" model duration: 8:00 - 9:30

"D3 - 2030 Reference, AM" model duration: 8:00 - 9:30

"D4 - 2030 Reference, PM" model duration: 8:00 - 9:30

"D5 - 2030 Design, AM" model duration: 8:00 - 9:30

"D6 - 2030 Design, PM" model duration: 8:00 - 9:30

Run using Junctions 8.0.5.523 at 9/2/2022 14:49:29



File summary

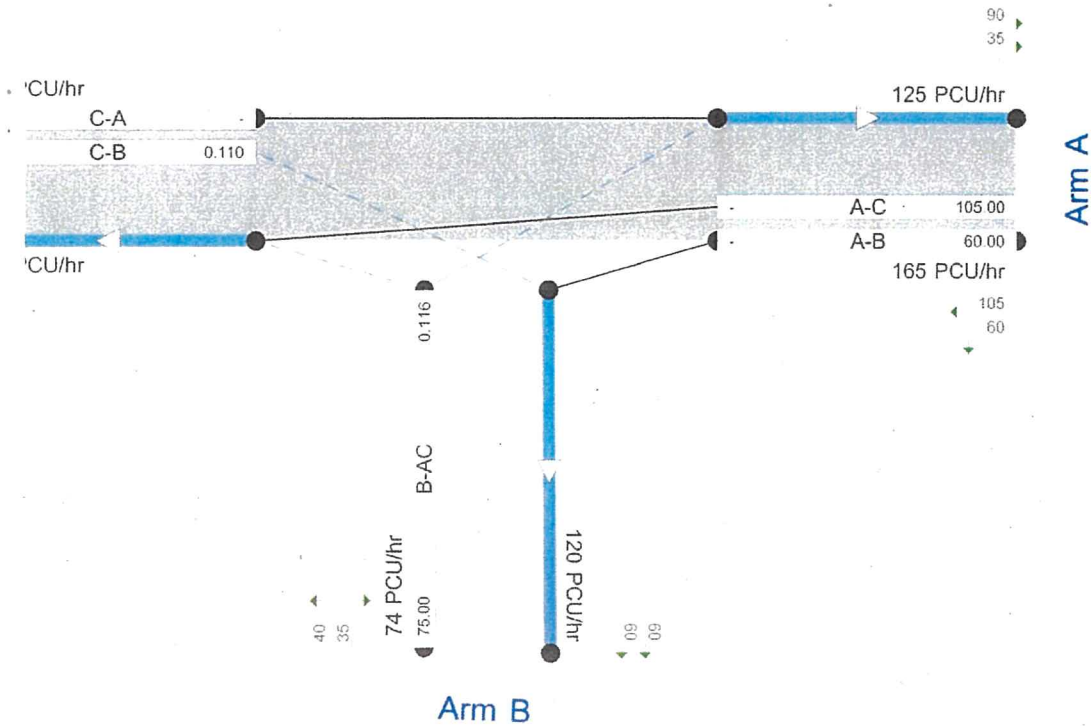
Title	(untitled)
Location	
Site Number	
Date	27/1/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	user
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



Junction A - 2022 Existing, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction A	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2022 Existing, AM	2022 Existing	AM		FLAT	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.76	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	(untitled)		Major
B	B	(untitled)		Minor
C	C	(untitled)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.00		0.00		2.20	0.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	5.00										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	622.329	0.094	0.237	0.149	0.338
1	B-C	786.649	0.100	0.252	-	-
1	C-B	573.963	0.184	0.184	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	FLAT	✓	120.00	100.000
B	FLAT	✓	65.00	100.000
C	FLAT	✓	130.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	A	120.00	120.00		
08:00-08:15	B	65.00	65.00		
08:00-08:15	C	130.00	130.00		
08:15-08:30	A	120.00	120.00		
08:15-08:30	B	65.00	65.00		
08:15-08:30	C	130.00	130.00		
08:30-08:45	A	120.00	120.00		
08:30-08:45	B	65.00	65.00		
08:30-08:45	C	130.00	130.00		
08:45-09:00	A	120.00	120.00		
08:45-09:00	B	65.00	65.00		
08:45-09:00	C	130.00	130.00		
09:00-09:15	A	120.00	120.00		
09:00-09:15	B	65.00	65.00		
09:00-09:15	C	130.00	130.00		
09:15-09:30	A	120.00	120.00		
09:15-09:30	B	65.00	65.00		
09:15-09:30	C	130.00	130.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	20.000	100.000
	B	45.000	0.000	20.000
	C	85.000	45.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.17	0.83
	B	0.69	0.00	0.31
	C	0.65	0.35	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A	0.11	6.53	0.12	A
C-A	-	-	-	-
C-B	0.08	7.10	0.09	A
A-B	-	-	-	-
A-C	-	-	-	-



Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	65.00	64.53	0.00	616.52	0.105	0.12	6.516	A
C-A	85.00	85.00	0.00	-	-	-	-	-
C-B	45.00	44.65	0.00	551.92	0.082	0.09	7.092	A
A-B	20.00	20.00	0.00	-	-	-	-	-
A-C	100.00	100.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	65.00	65.00	0.00	616.42	0.105	0.12	6.527	A
C-A	85.00	85.00	0.00	-	-	-	-	-
C-B	45.00	45.00	0.00	551.92	0.082	0.09	7.100	A
A-B	20.00	20.00	0.00	-	-	-	-	-
A-C	100.00	100.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	65.00	65.00	0.00	616.42	0.105	0.12	6.527	A
C-A	85.00	85.00	0.00	-	-	-	-	-
C-B	45.00	45.00	0.00	551.92	0.082	0.09	7.100	A
A-B	20.00	20.00	0.00	-	-	-	-	-
A-C	100.00	100.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	65.00	65.00	0.00	616.42	0.105	0.12	6.527	A
C-A	85.00	85.00	0.00	-	-	-	-	-
C-B	45.00	45.00	0.00	551.92	0.082	0.09	7.100	A
A-B	20.00	20.00	0.00	-	-	-	-	-
A-C	100.00	100.00	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	65.00	65.00	0.00	616.42	0.105	0.12	6.527	A
C-A	85.00	85.00	0.00	-	-	-	-	-
C-B	45.00	45.00	0.00	551.92	0.082	0.09	7.100	A
A-B	20.00	20.00	0.00	-	-	-	-	-
A-C	100.00	100.00	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	65.00	65.00	0.00	616.42	0.105	0.12	6.527	A
C-A	85.00	85.00	0.00	-	-	-	-	-
C-B	45.00	45.00	0.00	551.92	0.082	0.09	7.100	A
A-B	20.00	20.00	0.00	-	-	-	-	-
A-C	100.00	100.00	0.00	-	-	-	-	-

Junction A - 2022 Existing, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction A	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2022 Existing, PM	2022 Existing	PM		FLAT	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.54	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	(untitled)		Major
B	B	(untitled)		Minor
C	C	(untitled)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.00		0.00		2.20	0.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	5.00										50	50



Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	622.329	0.094	0.237	0.149	0.338
1	B-C	786.649	0.100	0.252	-	-
1	C-B	573.963	0.184	0.184	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	FLAT	✓	130.00	100.000
B	FLAT	✓	55.00	100.000
C	FLAT	✓	115.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	A	130.00	130.00		
08:00-08:15	B	55.00	55.00		
08:00-08:15	C	115.00	115.00		
08:15-08:30	A	130.00	130.00		
08:15-08:30	B	55.00	55.00		
08:15-08:30	C	115.00	115.00		
08:30-08:45	A	130.00	130.00		
08:30-08:45	B	55.00	55.00		
08:30-08:45	C	115.00	115.00		
08:45-09:00	A	130.00	130.00		
08:45-09:00	B	55.00	55.00		
08:45-09:00	C	115.00	115.00		
09:00-09:15	A	130.00	130.00		
09:00-09:15	B	55.00	55.00		
09:00-09:15	C	115.00	115.00		
09:15-09:30	A	130.00	130.00		
09:15-09:30	B	55.00	55.00		
09:15-09:30	C	115.00	115.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

	To			
		A	B	C
From	A	0.000	45.000	85.000
	B	25.000	0.000	30.000
	C	65.000	50.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

	To			
		A	B	C
From	A	0.00	0.35	0.65
	B	0.45	0.00	0.55
	C	0.57	0.43	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

	To		
	A	B	C
From	A	1.000	1.000
	B	1.000	1.000
	C	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To		
	A	B	C
From	A	0.0	0.0
	B	0.0	0.0
	C	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.08	5.94	0.09	A
C-A	-	-	-	-
C-B	0.09	7.20	0.10	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	55.00	54.64	0.00	661.18	0.083	0.09	5.931	A
C-A	65.00	65.00	0.00	-	-	-	-	-
C-B	50.00	49.60	0.00	550.08	0.091	0.10	7.182	A
A-B	45.00	45.00	0.00	-	-	-	-	-
A-C	85.00	85.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	55.00	55.00	0.00	661.10	0.083	0.09	5.938	A
C-A	65.00	65.00	0.00	-	-	-	-	-
C-B	50.00	50.00	0.00	550.08	0.091	0.10	7.197	A
A-B	45.00	45.00	0.00	-	-	-	-	-
A-C	85.00	85.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A	55.00	55.00	0.00	661.10	0.083	0.09	5.938	A
C-A	65.00	65.00	0.00	-	-	-	-	-
C-B	50.00	50.00	0.00	550.08	0.091	0.10	7.197	A
A-B	45.00	45.00	0.00	-	-	-	-	-
A-C	85.00	85.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A	55.00	55.00	0.00	661.10	0.083	0.09	5.938	A
C-A	65.00	65.00	0.00	-	-	-	-	-
C-B	50.00	50.00	0.00	550.08	0.091	0.10	7.197	A
A-B	45.00	45.00	0.00	-	-	-	-	-
A-C	85.00	85.00	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A	55.00	55.00	0.00	661.10	0.083	0.09	5.938	A
C-A	65.00	65.00	0.00	-	-	-	-	-
C-B	50.00	50.00	0.00	550.08	0.091	0.10	7.197	A
A-B	45.00	45.00	0.00	-	-	-	-	-
A-C	85.00	85.00	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A	55.00	55.00	0.00	661.10	0.083	0.09	5.938	A
C-A	65.00	65.00	0.00	-	-	-	-	-
C-B	50.00	50.00	0.00	550.08	0.091	0.10	7.197	A
A-B	45.00	45.00	0.00	-	-	-	-	-
A-C	85.00	85.00	0.00	-	-	-	-	-

Junction A - 2030 Reference, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction A	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Reference, AM	2030 Reference	AM		FLAT	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.99	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	(untitled)		Major
B	B	(untitled)		Minor
C	C	(untitled)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.00		0.00		2.20	0.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	5.00										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	622.329	0.094	0.237	0.149	0.338
1	B-C	786.649	0.100	0.252	-	-
1	C-B	573.963	0.184	0.184	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	FLAT	✓	145.00	100.000
B	FLAT	✓	85.00	100.000
C	FLAT	✓	150.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	A	145.00	145.00		
08:00-08:15	B	85.00	85.00		
08:00-08:15	C	150.00	150.00		
08:15-08:30	A	145.00	145.00		
08:15-08:30	B	85.00	85.00		
08:15-08:30	C	150.00	150.00		
08:30-08:45	A	145.00	145.00		
08:30-08:45	B	85.00	85.00		
08:30-08:45	C	150.00	150.00		
08:45-09:00	A	145.00	145.00		
08:45-09:00	B	85.00	85.00		
08:45-09:00	C	150.00	150.00		
09:00-09:15	A	145.00	145.00		
09:00-09:15	B	85.00	85.00		
09:00-09:15	C	150.00	150.00		
09:15-09:30	A	145.00	145.00		
09:15-09:30	B	85.00	85.00		
09:15-09:30	C	150.00	150.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	30.000	115.000
	B	55.000	0.000	30.000
	C	95.000	55.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.21	0.79
	B	0.65	0.00	0.35
	C	0.63	0.37	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.14	6.78	0.16	A
C-A	-	-	-	-
C-B	0.10	7.31	0.11	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A	85.00	84.36	0.00	615.76	0.138	0.16	6.765	A
C-A	95.00	95.00	0.00	-	-	-	-	-
C-B	55.00	54.56	0.00	547.33	0.100	0.11	7.299	A
A-B	30.00	30.00	0.00	-	-	-	-	-
A-C	115.00	115.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A	85.00	85.00	0.00	615.65	0.138	0.16	6.783	A
C-A	95.00	95.00	0.00	-	-	-	-	-
C-B	55.00	55.00	0.00	547.33	0.100	0.11	7.311	A
A-B	30.00	30.00	0.00	-	-	-	-	-
A-C	115.00	115.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A	85.00	85.00	0.00	615.65	0.138	0.16	6.783	A
C-A	95.00	95.00	0.00	-	-	-	-	-
C-B	55.00	55.00	0.00	547.33	0.100	0.11	7.311	A
A-B	30.00	30.00	0.00	-	-	-	-	-
A-C	115.00	115.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A	85.00	85.00	0.00	615.65	0.138	0.16	6.783	A
C-A	95.00	95.00	0.00	-	-	-	-	-
C-B	55.00	55.00	0.00	547.33	0.100	0.11	7.311	A
A-B	30.00	30.00	0.00	-	-	-	-	-
A-C	115.00	115.00	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A	85.00	85.00	0.00	615.65	0.138	0.16	6.783	A
C-A	95.00	95.00	0.00	-	-	-	-	-
C-B	55.00	55.00	0.00	547.33	0.100	0.11	7.311	A
A-B	30.00	30.00	0.00	-	-	-	-	-
A-C	115.00	115.00	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A	85.00	85.00	0.00	615.64	0.138	0.16	6.783	A
C-A	95.00	95.00	0.00	-	-	-	-	-
C-B	55.00	55.00	0.00	547.33	0.100	0.11	7.311	A
A-B	30.00	30.00	0.00	-	-	-	-	-
A-C	115.00	115.00	0.00	-	-	-	-	-

Junction A - 2030 Reference, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction A	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Reference, PM	2030 Reference	PM		FLAT	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.77	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	(untitled)		Major
B	B	(untitled)		Minor
C	C	(untitled)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.00		0.00		2.20	0.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	5.00										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	622.329	0.094	0.237	0.149	0.338
1	B-C	786.649	0.100	0.252	-	-
1	C-B	573.963	0.184	0.184	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	FLAT	✓	160.00	100.000
B	FLAT	✓	75.00	100.000
C	FLAT	✓	135.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	A	160.00	160.00		
08:00-08:15	B	75.00	75.00		
08:00-08:15	C	135.00	135.00		
08:15-08:30	A	160.00	160.00		
08:15-08:30	B	75.00	75.00		
08:15-08:30	C	135.00	135.00		
08:30-08:45	A	160.00	160.00		
08:30-08:45	B	75.00	75.00		
08:30-08:45	C	135.00	135.00		
08:45-09:00	A	160.00	160.00		
08:45-09:00	B	75.00	75.00		
08:45-09:00	C	135.00	135.00		
09:00-09:15	A	160.00	160.00		
09:00-09:15	B	75.00	75.00		
09:00-09:15	C	135.00	135.00		
09:15-09:30	A	160.00	160.00		
09:15-09:30	B	75.00	75.00		
09:15-09:30	C	135.00	135.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
From		A	B	C
	A	0.000	65.000	95.000
	B	35.000	0.000	40.000
	C	75.000	60.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

	To			
From		A	B	C
	A	0.00	0.41	0.59
	B	0.47	0.00	0.53
	C	0.56	0.44	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.12	6.25	0.13	A
C-A	-	-	-	-
C-B	0.11	7.43	0.12	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	75.00	74.48	0.00	651.41	0.115	0.13	6.235	A
C-A	75.00	75.00	0.00	-	-	-	-	-
C-B	60.00	59.51	0.00	544.57	0.110	0.12	7.413	A
A-B	65.00	65.00	0.00	-	-	-	-	-
A-C	95.00	95.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	75.00	75.00	0.00	651.31	0.115	0.13	6.245	A
C-A	75.00	75.00	0.00	-	-	-	-	-
C-B	60.00	60.00	0.00	544.57	0.110	0.12	7.428	A
A-B	65.00	65.00	0.00	-	-	-	-	-
A-C	95.00	95.00	0.00	-	-	-	-	-



Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	75.00	75.00	0.00	651.31	0.115	0.13	6.245	A
C-A	75.00	75.00	0.00	-	-	-	-	-
C-B	60.00	60.00	0.00	544.57	0.110	0.12	7.428	A
A-B	65.00	65.00	0.00	-	-	-	-	-
A-C	95.00	95.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	75.00	75.00	0.00	651.31	0.115	0.13	6.245	A
C-A	75.00	75.00	0.00	-	-	-	-	-
C-B	60.00	60.00	0.00	544.57	0.110	0.12	7.428	A
A-B	65.00	65.00	0.00	-	-	-	-	-
A-C	95.00	95.00	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	75.00	75.00	0.00	651.31	0.115	0.13	6.245	A
C-A	75.00	75.00	0.00	-	-	-	-	-
C-B	60.00	60.00	0.00	544.57	0.110	0.12	7.428	A
A-B	65.00	65.00	0.00	-	-	-	-	-
A-C	95.00	95.00	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	75.00	75.00	0.00	651.31	0.115	0.13	6.245	A
C-A	75.00	75.00	0.00	-	-	-	-	-
C-B	60.00	60.00	0.00	544.57	0.110	0.12	7.428	A
A-B	65.00	65.00	0.00	-	-	-	-	-
A-C	95.00	95.00	0.00	-	-	-	-	-

Junction A - 2030 Design, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction A	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Design, AM	2030 Design	AM		FLAT	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	7.06	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	(untitled)		Major
B	B	(untitled)		Minor
C	C	(untitled)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.00		0.00		2.20	0.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	5.00										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	622.329	0.094	0.237	0.149	0.338
1	B-C	786.649	0.100	0.252	-	-
1	C-B	573.963	0.184	0.184	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.



Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	FLAT	✓	165.00	100.000
B	FLAT	✓	85.00	100.000
C	FLAT	✓	165.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	Direct Demand Entry Flow in PCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	A	165.00	165.00		
08:00-08:15	B	85.00	85.00		
08:00-08:15	C	165.00	165.00		
08:15-08:30	A	165.00	165.00		
08:15-08:30	B	85.00	85.00		
08:15-08:30	C	165.00	165.00		
08:30-08:45	A	165.00	165.00		
08:30-08:45	B	85.00	85.00		
08:30-08:45	C	165.00	165.00		
08:45-09:00	A	165.00	165.00		
08:45-09:00	B	85.00	85.00		
08:45-09:00	C	165.00	165.00		
09:00-09:15	A	165.00	165.00		
09:00-09:15	B	85.00	85.00		
09:00-09:15	C	165.00	165.00		
09:15-09:30	A	165.00	165.00		
09:15-09:30	B	85.00	85.00		
09:15-09:30	C	165.00	165.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

	To		
	A	B	C
From	A	0.000	35.000
	B	55.000	0.000
	C	110.000	55.000

Turning Proportions (PCU) - Junction 1 (for whole period)

	To		
	A	B	C
From	A	0.00	0.21
	B	0.65	0.00
	C	0.67	0.33

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

	To		
	A	B	C
From	A	1.000	1.000
	B	1.000	1.000
	C	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To		
	A	B	C
From	A	0.0	0.0
	B	0.0	0.0
	C	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A	0.14	6.86	0.16	A
C-A	-	-	-	-
C-B	0.10	7.37	0.11	A
A-B	-	-	-	-
A-C	-	-	-	-

**Main Results for each time segment****Main results: (08:00-08:15)**

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	85.00	84.36	0.00	609.86	0.139	0.16	6.842	A
C-A	110.00	110.00	0.00	-	-	-	-	-
C-B	55.00	54.55	0.00	543.66	0.101	0.11	7.354	A
A-B	35.00	35.00	0.00	-	-	-	-	-
A-C	130.00	130.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	85.00	85.00	0.00	609.74	0.139	0.16	6.859	A
C-A	110.00	110.00	0.00	-	-	-	-	-
C-B	55.00	55.00	0.00	543.66	0.101	0.11	7.366	A
A-B	35.00	35.00	0.00	-	-	-	-	-
A-C	130.00	130.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	85.00	85.00	0.00	609.74	0.139	0.16	6.859	A
C-A	110.00	110.00	0.00	-	-	-	-	-
C-B	55.00	55.00	0.00	543.66	0.101	0.11	7.366	A
A-B	35.00	35.00	0.00	-	-	-	-	-
A-C	130.00	130.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	85.00	85.00	0.00	609.74	0.139	0.16	6.859	A
C-A	110.00	110.00	0.00	-	-	-	-	-
C-B	55.00	55.00	0.00	543.66	0.101	0.11	7.366	A
A-B	35.00	35.00	0.00	-	-	-	-	-
A-C	130.00	130.00	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	85.00	85.00	0.00	609.74	0.139	0.16	6.859	A
C-A	110.00	110.00	0.00	-	-	-	-	-
C-B	55.00	55.00	0.00	543.66	0.101	0.11	7.366	A
A-B	35.00	35.00	0.00	-	-	-	-	-
A-C	130.00	130.00	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	85.00	85.00	0.00	609.74	0.139	0.16	6.859	A
C-A	110.00	110.00	0.00	-	-	-	-	-
C-B	55.00	55.00	0.00	543.66	0.101	0.11	7.366	A
A-B	35.00	35.00	0.00	-	-	-	-	-
A-C	130.00	130.00	0.00	-	-	-	-	-

Junction A - 2030 Design, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction A	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Design, PM	2030 Design	PM		FLAT	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.80	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	(untitled)		Major
B	B	(untitled)		Minor
C	C	(untitled)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.00		0.00		2.20	0.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	5.00										50	50



Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	622.329	0.094	0.237	0.149	0.338
1	B-C	786.649	0.100	0.252	-	-
1	C-B	573.963	0.184	0.184	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	FLAT	✓	165.00	100.000
B	FLAT	✓	75.00	100.000
C	FLAT	✓	150.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	A	165.00	165.00		
08:00-08:15	B	75.00	75.00		
08:00-08:15	C	150.00	150.00		
08:15-08:30	A	165.00	165.00		
08:15-08:30	B	75.00	75.00		
08:15-08:30	C	150.00	150.00		
08:30-08:45	A	165.00	165.00		
08:30-08:45	B	75.00	75.00		
08:30-08:45	C	150.00	150.00		
08:45-09:00	A	165.00	165.00		
08:45-09:00	B	75.00	75.00		
08:45-09:00	C	150.00	150.00		
09:00-09:15	A	165.00	165.00		
09:00-09:15	B	75.00	75.00		
09:00-09:15	C	150.00	150.00		
09:15-09:30	A	165.00	165.00		
09:15-09:30	B	75.00	75.00		
09:15-09:30	C	150.00	150.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
From		A	B	C
	A	0.000	60.000	105.000
	B	35.000	0.000	40.000
	C	90.000	60.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
From		A	B	C
	A	0.00	0.36	0.64
	B	0.47	0.00	0.53
	C	0.60	0.40	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.12	6.28	0.13	A
C-A	-	-	-	-
C-B	0.11	7.44	0.12	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	75.00	74.48	0.00	648.02	0.116	0.13	6.271	A
C-A	90.00	90.00	0.00	-	-	-	-	-
C-B	60.00	59.51	0.00	543.66	0.110	0.12	7.427	A
A-B	60.00	60.00	0.00	-	-	-	-	-
A-C	105.00	105.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	75.00	75.00	0.00	647.92	0.116	0.13	6.282	A
C-A	90.00	90.00	0.00	-	-	-	-	-
C-B	60.00	60.00	0.00	543.66	0.110	0.12	7.442	A
A-B	60.00	60.00	0.00	-	-	-	-	-
A-C	105.00	105.00	0.00	-	-	-	-	-



Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	75.00	75.00	0.00	647.92	0.116	0.13	6.282	A
C-A	90.00	90.00	0.00	-	-	-	-	-
C-B	60.00	60.00	0.00	543.66	0.110	0.12	7.442	A
A-B	60.00	60.00	0.00	-	-	-	-	-
A-C	105.00	105.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	75.00	75.00	0.00	647.92	0.116	0.13	6.282	A
C-A	90.00	90.00	0.00	-	-	-	-	-
C-B	60.00	60.00	0.00	543.66	0.110	0.12	7.442	A
A-B	60.00	60.00	0.00	-	-	-	-	-
A-C	105.00	105.00	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	75.00	75.00	0.00	647.92	0.116	0.13	6.282	A
C-A	90.00	90.00	0.00	-	-	-	-	-
C-B	60.00	60.00	0.00	543.66	0.110	0.12	7.442	A
A-B	60.00	60.00	0.00	-	-	-	-	-
A-C	105.00	105.00	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	75.00	75.00	0.00	647.92	0.116	0.13	6.282	A
C-A	90.00	90.00	0.00	-	-	-	-	-
C-B	60.00	60.00	0.00	543.66	0.110	0.12	7.442	A
A-B	60.00	60.00	0.00	-	-	-	-	-
A-C	105.00	105.00	0.00	-	-	-	-	-



Junctions 8							
PICADY 8 - Priority Intersection Module							
Version: 8.0.5.523 [19102, 19/06/2015]							
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Filename: Jn B.arc8

Path: \\PROJSRV\\Project\\CTA Consultants Limited\\CTA - Project\\22007HK - TCS for Rezoning of PNS Sheung Shui Fresh Food Distribution Centre\\CAL\\2022-02-07

Report generation date: 9/2/2022 14:51:22

- » Junction B - 2022 Existing, AM
- » Junction B - 2022 Existing, PM
- » Junction B - 2030 Reference, AM
- » Junction B - 2030 Reference, PM
- » Junction B - 2030 Design, AM
- » Junction B - 2030 Design, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Junction B - 2022 Existing								
Stream B-AC	0.41	11.89	0.29	B	0.39	11.87	0.28	B
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.02	6.99	0.02	A	0.01	6.89	0.01	A
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Junction B - 2030 Design								
Stream B-AC	0.63	13.81	0.39	B	0.62	13.96	0.38	B
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.05	7.31	0.05	A	0.04	7.17	0.04	A
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Junction B - 2030 Reference								
Stream B-AC	0.54	13.07	0.35	B	0.52	13.06	0.34	B
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.04	7.21	0.04	A	0.03	7.10	0.03	A
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

*D1 - 2022 Existing, AM * model duration: 8:00 - 9:30

D2 - 2022 Existing, PM model duration: 8:00 - 9:30

D3 - 2030 Reference, AM model duration: 8:00 - 9:30

D4 - 2030 Reference, PM model duration: 8:00 - 9:30

D5 - 2030 Design, AM model duration: 8:00 - 9:30

D6 - 2030 Design, PM model duration: 8:00 - 9:30

Run using Junctions 8.0.5.523 at 9/2/2022 14:51:18



File summary

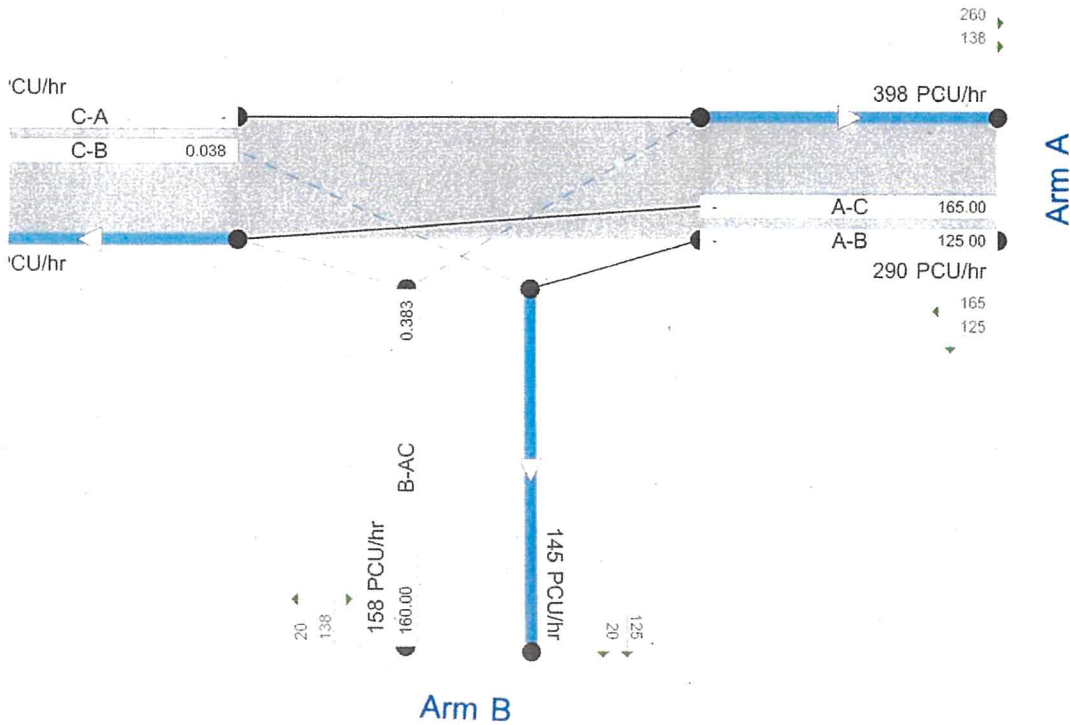
Title	(untitled)
Location	
Site Number	
Date	27/1/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	user
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



Showing predicted flow through junction (PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr). Streams (downstreams) show RFL.
Time Segment: 08:00-09:15
Showing Analysis Set: "A1 - Junction B" Demand Set: "D1 - 2022 Existing AM"

The junction diagram reflects the last run of ARCADY

Junction B - 2022 Existing, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction B	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2022 Existing, AM	2022 Existing	AM		FLAT	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	11.53	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	San Po Street (SB)		Major
B	B	Ka Fu Ci		Minor
C	C	San Po Street (NB)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.00		0.00		2.20	3.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.20										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	476.978	0.072	0.181	0.114	0.259
1	B-C	602.919	0.076	0.193	-	-
1	C-B	575.701	0.184	0.184	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.



Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	FLAT	✓	275.00	100.000
B	FLAT	✓	125.00	100.000
C	FLAT	✓	185.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	Direct Demand Entry Flow in PCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	A	275.00	275.00		
08:00-08:15	B	125.00	125.00		
08:00-08:15	C	185.00	185.00		
08:15-08:30	A	275.00	275.00		
08:15-08:30	B	125.00	125.00		
08:15-08:30	C	185.00	185.00		
08:30-08:45	A	275.00	275.00		
08:30-08:45	B	125.00	125.00		
08:30-08:45	C	185.00	185.00		
08:45-09:00	A	275.00	275.00		
08:45-09:00	B	125.00	125.00		
08:45-09:00	C	185.00	185.00		
09:00-09:15	A	275.00	275.00		
09:00-09:15	B	125.00	125.00		
09:00-09:15	C	185.00	185.00		
09:15-09:30	A	275.00	275.00		
09:15-09:30	B	125.00	125.00		
09:15-09:30	C	185.00	185.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	130.000	145.000
	B	115.000	0.000	10.000
	C	175.000	10.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.47	0.53
	B	0.92	0.00	0.08
	C	0.95	0.05	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.29	11.89	0.41	B
C-A	-	-	-	-
C-B	0.02	6.99	0.02	A
A-B	-	-	-	-
A-C	-	-	-	-

**Main Results for each time segment****Main results: (08:00-08:15)**

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	125.00	123.38	0.00	427.65	0.292	0.41	11.771	B
C-A	175.00	175.00	0.00	-	-	-	-	-
C-B	10.00	9.92	0.00	525.03	0.019	0.02	6.988	A
A-B	130.00	130.00	0.00	-	-	-	-	-
A-C	145.00	145.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	125.00	124.99	0.00	427.63	0.292	0.41	11.895	B
C-A	175.00	175.00	0.00	-	-	-	-	-
C-B	10.00	10.00	0.00	525.03	0.019	0.02	6.988	A
A-B	130.00	130.00	0.00	-	-	-	-	-
A-C	145.00	145.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	125.00	124.99	0.00	427.63	0.292	0.41	11.895	B
C-A	175.00	175.00	0.00	-	-	-	-	-
C-B	10.00	10.00	0.00	525.03	0.019	0.02	6.988	A
A-B	130.00	130.00	0.00	-	-	-	-	-
A-C	145.00	145.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	125.00	125.00	0.00	427.63	0.292	0.41	11.895	B
C-A	175.00	175.00	0.00	-	-	-	-	-
C-B	10.00	10.00	0.00	525.03	0.019	0.02	6.988	A
A-B	130.00	130.00	0.00	-	-	-	-	-
A-C	145.00	145.00	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	125.00	125.00	0.00	427.63	0.292	0.41	11.895	B
C-A	175.00	175.00	0.00	-	-	-	-	-
C-B	10.00	10.00	0.00	525.03	0.019	0.02	6.988	A
A-B	130.00	130.00	0.00	-	-	-	-	-
A-C	145.00	145.00	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	125.00	125.00	0.00	427.63	0.292	0.41	11.895	B
C-A	175.00	175.00	0.00	-	-	-	-	-
C-B	10.00	10.00	0.00	525.03	0.019	0.02	6.988	A
A-B	130.00	130.00	0.00	-	-	-	-	-
A-C	145.00	145.00	0.00	-	-	-	-	-

Junction B - 2022 Existing, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction B	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2022 Existing, PM	2022 Existing	PM		FLAT	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	11.67	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	San Po Street (SB)		Major
B	B	Ka Fu Ci		Minor
C	C	San Po Street (NB)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.00		0.00		2.20	3.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.20										50	50



Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	476.978	0.072	0.181	0.114	0.259
1	B-C	602.919	0.076	0.193	-	-
1	C-B	575.701	0.184	0.184	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	FLAT	✓	260.00	100.000
B	FLAT	✓	120.00	100.000
C	FLAT	✓	240.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	A	260.00	260.00		
08:00-08:15	B	120.00	120.00		
08:00-08:15	C	240.00	240.00		
08:15-08:30	A	260.00	260.00		
08:15-08:30	B	120.00	120.00		
08:15-08:30	C	240.00	240.00		
08:30-08:45	A	260.00	260.00		
08:30-08:45	B	120.00	120.00		
08:30-08:45	C	240.00	240.00		
08:45-09:00	A	260.00	260.00		
08:45-09:00	B	120.00	120.00		
08:45-09:00	C	240.00	240.00		
09:00-09:15	A	260.00	260.00		
09:00-09:15	B	120.00	120.00		
09:00-09:15	C	240.00	240.00		
09:15-09:30	A	260.00	260.00		
09:15-09:30	B	120.00	120.00		
09:15-09:30	C	240.00	240.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

	To		
	A	B	C
From	A	0.000	110.000
	B	110.000	0.000
	C	235.000	5.000

Turning Proportions (PCU) - Junction 1 (for whole period)

	To		
	A	B	C
From	A	0.00	0.42
	B	0.92	0.00
	C	0.98	0.02

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A	0.28	11.87	0.39	B
C-A	-	-	-	-
C-B	0.01	6.89	0.01	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A	120.00	118.45	0.00	423.24	0.284	0.39	11.753	B
C-A	235.00	235.00	0.00	-	-	-	-	-
C-B	5.00	4.96	0.00	527.80	0.009	0.01	6.885	A
A-B	110.00	110.00	0.00	-	-	-	-	-
A-C	150.00	150.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A	120.00	119.99	0.00	423.23	0.284	0.39	11.871	B
C-A	235.00	235.00	0.00	-	-	-	-	-
C-B	5.00	5.00	0.00	527.80	0.009	0.01	6.885	A
A-B	110.00	110.00	0.00	-	-	-	-	-
A-C	150.00	150.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	120.00	120.00	0.00	423.23	0.284	0.39	11.871	B
C-A	235.00	235.00	0.00	-	-	-	-	-
C-B	5.00	5.00	0.00	527.80	0.009	0.01	6.887	A
A-B	110.00	110.00	0.00	-	-	-	-	-
A-C	150.00	150.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	120.00	120.00	0.00	423.23	0.284	0.39	11.871	B
C-A	235.00	235.00	0.00	-	-	-	-	-
C-B	5.00	5.00	0.00	527.80	0.009	0.01	6.887	A
A-B	110.00	110.00	0.00	-	-	-	-	-
A-C	150.00	150.00	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	120.00	120.00	0.00	423.23	0.284	0.39	11.871	B
C-A	235.00	235.00	0.00	-	-	-	-	-
C-B	5.00	5.00	0.00	527.80	0.009	0.01	6.887	A
A-B	110.00	110.00	0.00	-	-	-	-	-
A-C	150.00	150.00	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	120.00	120.00	0.00	423.23	0.284	0.39	11.871	B
C-A	235.00	235.00	0.00	-	-	-	-	-
C-B	5.00	5.00	0.00	527.80	0.009	0.01	6.887	A
A-B	110.00	110.00	0.00	-	-	-	-	-
A-C	150.00	150.00	0.00	-	-	-	-	-

Junction B - 2030 Reference, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction B	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Reference, AM	2030 Reference	AM		FLAT	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	12.38	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	San Po Street (SB)		Major
B	B	Ka Fu Ci		Minor
C	C	San Po Street (NB)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.00		0.00		2.20	3.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.20										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	476.978	0.072	0.181	0.114	0.259
1	B-C	602.919	0.076	0.193	-	-
1	C-B	575.701	0.184	0.184	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	FLAT	✓	305.00	100.000
B	FLAT	✓	150.00	100.000
C	FLAT	✓	215.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	A	305.00	305.00		
08:00-08:15	B	150.00	150.00		
08:00-08:15	C	215.00	215.00		
08:15-08:30	A	305.00	305.00		
08:15-08:30	B	150.00	150.00		
08:15-08:30	C	215.00	215.00		
08:30-08:45	A	305.00	305.00		
08:30-08:45	B	150.00	150.00		
08:30-08:45	C	215.00	215.00		
08:45-09:00	A	305.00	305.00		
08:45-09:00	B	150.00	150.00		
08:45-09:00	C	215.00	215.00		
09:00-09:15	A	305.00	305.00		
09:00-09:15	B	150.00	150.00		
09:00-09:15	C	215.00	215.00		
09:15-09:30	A	305.00	305.00		
09:15-09:30	B	150.00	150.00		
09:15-09:30	C	215.00	215.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	145.000	160.000
	B	130.000	0.000	20.000
	C	195.000	20.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.48	0.52
	B	0.87	0.00	0.13
	C	0.91	0.09	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A	0.35	13.07	0.54	B
C-A	-	-	-	-
C-B	0.04	7.21	0.04	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	150.00	147.87	0.00	425.37	0.353	0.53	12.878	B
C-A	195.00	195.00	0.00	-	-	-	-	-
C-B	20.00	19.84	0.00	519.51	0.039	0.04	7.203	A
A-B	145.00	145.00	0.00	-	-	-	-	-
A-C	160.00	160.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	150.00	149.98	0.00	425.33	0.353	0.54	13.071	B
C-A	195.00	195.00	0.00	-	-	-	-	-
C-B	20.00	20.00	0.00	519.51	0.039	0.04	7.206	A
A-B	145.00	145.00	0.00	-	-	-	-	-
A-C	160.00	160.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	150.00	149.99	0.00	425.33	0.353	0.54	13.074	B
C-A	195.00	195.00	0.00	-	-	-	-	-
C-B	20.00	20.00	0.00	519.51	0.039	0.04	7.206	A
A-B	145.00	145.00	0.00	-	-	-	-	-
A-C	160.00	160.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	150.00	150.00	0.00	425.33	0.353	0.54	13.074	B
C-A	195.00	195.00	0.00	-	-	-	-	-
C-B	20.00	20.00	0.00	519.51	0.039	0.04	7.206	A
A-B	145.00	145.00	0.00	-	-	-	-	-
A-C	160.00	160.00	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	150.00	150.00	0.00	425.33	0.353	0.54	13.074	B
C-A	195.00	195.00	0.00	-	-	-	-	-
C-B	20.00	20.00	0.00	519.51	0.039	0.04	7.206	A
A-B	145.00	145.00	0.00	-	-	-	-	-
A-C	160.00	160.00	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	150.00	150.00	0.00	425.33	0.353	0.54	13.074	B
C-A	195.00	195.00	0.00	-	-	-	-	-
C-B	20.00	20.00	0.00	519.51	0.039	0.04	7.209	A
A-B	145.00	145.00	0.00	-	-	-	-	-
A-C	160.00	160.00	0.00	-	-	-	-	-

Junction B - 2030 Reference, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction B	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Reference, PM	2030 Reference	PM		FLAT	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	12.50	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	San Po Street (SB)		Major
B	B	Ka Fu Ci		Minor
C	C	San Po Street (NB)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.00		0.00		2.20	3.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.20										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	476.978	0.072	0.181	0.114	0.259
1	B-C	602.919	0.076	0.193	-	-
1	C-B	575.701	0.184	0.184	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	FLAT	✓	290.00	100.000
B	FLAT	✓	145.00	100.000
C	FLAT	✓	275.00	100.000



Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	Direct Demand Entry Flow in PCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	A	290.00	290.00		
08:00-08:15	B	145.00	145.00		
08:00-08:15	C	275.00	275.00		
08:15-08:30	A	290.00	290.00		
08:15-08:30	B	145.00	145.00		
08:15-08:30	C	275.00	275.00		
08:30-08:45	A	290.00	290.00		
08:30-08:45	B	145.00	145.00		
08:30-08:45	C	275.00	275.00		
08:45-09:00	A	290.00	290.00		
08:45-09:00	B	145.00	145.00		
08:45-09:00	C	275.00	275.00		
09:00-09:15	A	290.00	290.00		
09:00-09:15	B	145.00	145.00		
09:00-09:15	C	275.00	275.00		
09:15-09:30	A	290.00	290.00		
09:15-09:30	B	145.00	145.00		
09:15-09:30	C	275.00	275.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

	To			
From	A	B	C	
	A	0.000	125.000	165.000
	B	125.000	0.000	20.000
	C	260.000	15.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

	To			
From		A	B	C
	A	0.00	0.43	0.57
	B	0.86	0.00	0.14
	C	0.95	0.05	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From	To		
	A	B	C
A	1.000	1.000	1.000
B	1.000	1.000	1.000
C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To		
	A	B	C
A	0.0	0.0	0.0
B	0.0	0.0	0.0
C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.34	13.06	0.52	B
C-A	-	-	-	-
C-B	0.03	7.10	0.03	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	145.00	142.94	0.00	420.76	0.345	0.51	12.868	B
C-A	260.00	260.00	0.00	-	-	-	-	-
C-B	15.00	14.88	0.00	522.27	0.029	0.03	7.093	A
A-B	125.00	125.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	145.00	144.98	0.00	420.73	0.345	0.52	13.053	B
C-A	260.00	260.00	0.00	-	-	-	-	-
C-B	15.00	15.00	0.00	522.27	0.029	0.03	7.095	A
A-B	125.00	125.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-

**Main results: (08:30-08:45)**

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	145.00	144.99	0.00	420.73	0.345	0.52	13.055	B
C-A	260.00	260.00	0.00	-	-	-	-	-
C-B	15.00	15.00	0.00	522.27	0.029	0.03	7.095	A
A-B	125.00	125.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	145.00	145.00	0.00	420.73	0.345	0.52	13.055	B
C-A	260.00	260.00	0.00	-	-	-	-	-
C-B	15.00	15.00	0.00	522.27	0.029	0.03	7.095	A
A-B	125.00	125.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	145.00	145.00	0.00	420.73	0.345	0.52	13.055	B
C-A	260.00	260.00	0.00	-	-	-	-	-
C-B	15.00	15.00	0.00	522.27	0.029	0.03	7.098	A
A-B	125.00	125.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	145.00	145.00	0.00	420.73	0.345	0.52	13.055	B
C-A	260.00	260.00	0.00	-	-	-	-	-
C-B	15.00	15.00	0.00	522.27	0.029	0.03	7.098	A
A-B	125.00	125.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-

Junction B - 2030 Design, AM**Data Errors and Warnings**

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction B	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Design, AM	2030 Design	AM		FLAT	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	12.96	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	San Po Street (SB)		Major
B	B	Ka Fu Ci		Minor
C	C	San Po Street (NB)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.00		0.00		2.20	3.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.20										50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	476.978	0.072	0.181	0.114	0.259
1	B-C	602.919	0.076	0.193	-	-
1	C-B	575.701	0.184	0.184	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.



Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	FLAT	✓	315.00	100.000
B	FLAT	✓	165.00	100.000
C	FLAT	✓	220.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	A	315.00	315.00		
08:00-08:15	B	165.00	165.00		
08:00-08:15	C	220.00	220.00		
08:15-08:30	A	315.00	315.00		
08:15-08:30	B	165.00	165.00		
08:15-08:30	C	220.00	220.00		
08:30-08:45	A	315.00	315.00		
08:30-08:45	B	165.00	165.00		
08:30-08:45	C	220.00	220.00		
08:45-09:00	A	315.00	315.00		
08:45-09:00	B	165.00	165.00		
08:45-09:00	C	220.00	220.00		
09:00-09:15	A	315.00	315.00		
09:00-09:15	B	165.00	165.00		
09:00-09:15	C	220.00	220.00		
09:15-09:30	A	315.00	315.00		
09:15-09:30	B	165.00	165.00		
09:15-09:30	C	220.00	220.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	155.000	160.000
	B	140.000	0.000	25.000
	C	195.000	25.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.49	0.51
	B	0.85	0.00	0.15
	C	0.89	0.11	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A	0.39	13.81	0.63	B
C-A	-	-	-	-
C-B	0.05	7.31	0.05	A
A-B	-	-	-	-
A-C	-	-	-	-



Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	165.00	162.53	0.00	425.62	0.388	0.62	13.561	B
C-A	195.00	195.00	0.00	-	-	-	-	-
C-B	25.00	24.80	0.00	517.67	0.048	0.05	7.300	A
A-B	155.00	155.00	0.00	-	-	-	-	-
A-C	160.00	160.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	165.00	164.97	0.00	425.57	0.388	0.63	13.809	B
C-A	195.00	195.00	0.00	-	-	-	-	-
C-B	25.00	25.00	0.00	517.67	0.048	0.05	7.306	A
A-B	155.00	155.00	0.00	-	-	-	-	-
A-C	160.00	160.00	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	165.00	164.99	0.00	425.57	0.388	0.63	13.812	B
C-A	195.00	195.00	0.00	-	-	-	-	-
C-B	25.00	25.00	0.00	517.67	0.048	0.05	7.306	A
A-B	155.00	155.00	0.00	-	-	-	-	-
A-C	160.00	160.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	165.00	164.99	0.00	425.57	0.388	0.63	13.815	B
C-A	195.00	195.00	0.00	-	-	-	-	-
C-B	25.00	25.00	0.00	517.67	0.048	0.05	7.306	A
A-B	155.00	155.00	0.00	-	-	-	-	-
A-C	160.00	160.00	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	165.00	165.00	0.00	425.57	0.388	0.63	13.815	B
C-A	195.00	195.00	0.00	-	-	-	-	-
C-B	25.00	25.00	0.00	517.67	0.048	0.05	7.306	A
A-B	155.00	155.00	0.00	-	-	-	-	-
A-C	160.00	160.00	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	165.00	165.00	0.00	425.57	0.388	0.63	13.815	B
C-A	195.00	195.00	0.00	-	-	-	-	-
C-B	25.00	25.00	0.00	517.67	0.048	0.05	7.306	A
A-B	155.00	155.00	0.00	-	-	-	-	-
A-C	160.00	160.00	0.00	-	-	-	-	-

Junction B - 2030 Design, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction B	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Design, PM	2030 Design	PM		FLAT	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	13.20	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	San Po Street (SB)		Major
B	B	Ka Fu Cl		Minor
C	C	San Po Street (NB)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.00		0.00		2.20	3.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.20										50	50



Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	476.978	0.072	0.181	0.114	0.259
1	B-C	602.919	0.076	0.193	-	-
1	C-B	575.701	0.184	0.184	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	FLAT	✓	290.00	100.000
B	FLAT	✓	160.00	100.000
C	FLAT	✓	280.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	A	290.00	290.00		
08:00-08:15	B	160.00	160.00		
08:00-08:15	C	280.00	280.00		
08:15-08:30	A	290.00	290.00		
08:15-08:30	B	160.00	160.00		
08:15-08:30	C	280.00	280.00		
08:30-08:45	A	290.00	290.00		
08:30-08:45	B	160.00	160.00		
08:30-08:45	C	280.00	280.00		
08:45-09:00	A	290.00	290.00		
08:45-09:00	B	160.00	160.00		
08:45-09:00	C	280.00	280.00		
09:00-09:15	A	290.00	290.00		
09:00-09:15	B	160.00	160.00		
09:00-09:15	C	280.00	280.00		
09:15-09:30	A	290.00	290.00		
09:15-09:30	B	160.00	160.00		
09:15-09:30	C	280.00	280.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

	To		
	A	B	C
From	A	0.000	125.000
	B	140.000	0.000
	C	260.000	20.000

Turning Proportions (PCU) - Junction 1 (for whole period)

	To		
	A	B	C
From	A	0.00	0.43
	B	0.88	0.00
	C	0.93	0.07

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.38	13.96	0.62	B
C-A	-	-	-	-
C-B	0.04	7.17	0.04	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	160.00	157.58	0.00	417.96	0.383	0.61	13.703	B
C-A	260.00	260.00	0.00	-	-	-	-	-
C-B	20.00	19.84	0.00	522.27	0.038	0.04	7.163	A
A-B	125.00	125.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	160.00	159.97	0.00	417.92	0.383	0.61	13.951	B
C-A	260.00	260.00	0.00	-	-	-	-	-
C-B	20.00	20.00	0.00	522.27	0.038	0.04	7.166	A
A-B	125.00	125.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-



Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	160.00	159.99	0.00	417.92	0.383	0.62	13.954	B
C-A	260.00	260.00	0.00	-	-	-	-	-
C-B	20.00	20.00	0.00	522.27	0.038	0.04	7.166	A
A-B	125.00	125.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	160.00	159.99	0.00	417.92	0.383	0.62	13.956	B
C-A	260.00	260.00	0.00	-	-	-	-	-
C-B	20.00	20.00	0.00	522.27	0.038	0.04	7.166	A
A-B	125.00	125.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	160.00	160.00	0.00	417.92	0.383	0.62	13.956	B
C-A	260.00	260.00	0.00	-	-	-	-	-
C-B	20.00	20.00	0.00	522.27	0.038	0.04	7.166	A
A-B	125.00	125.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-A-C	160.00	160.00	0.00	417.92	0.383	0.62	13.956	B
C-A	260.00	260.00	0.00	-	-	-	-	-
C-B	20.00	20.00	0.00	522.27	0.038	0.04	7.169	A
A-B	125.00	125.00	0.00	-	-	-	-	-
A-C	165.00	165.00	0.00	-	-	-	-	-

TRAFFIC SIGNALS CALCULATION

Job No: 22007HK

CTA Consultants Ltd.

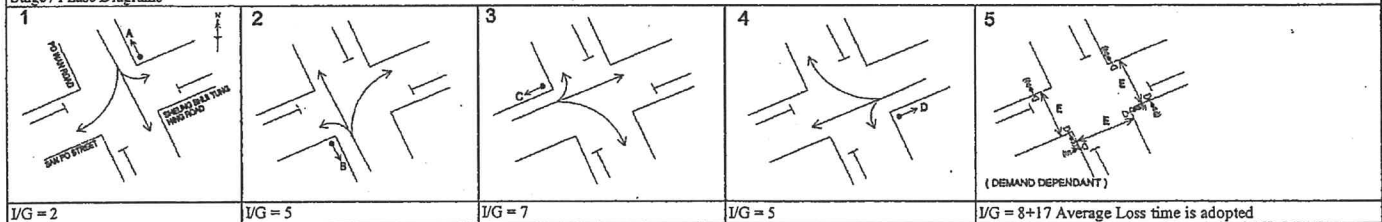
Junction: Junction C - Po Wan Road / San Po Street / Sheung Shui Tung Hing Road
 Description: Year 2022 Observed Flow

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M. Peak			P.M. Peak		
						Left	Right		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
San Po Street	N	↔	C	3	5.0	30	25	1	34% / 59% / 4% / 70%		2010	2005	2010	2005	355	0.177	0.177	380	0.190	0.190
Sheung Shui Tung Hing Road	S	↔	D	4	5.0	30	25	1	76% / 15% / 2% / 24%		2020	2025	2020	2025	170	0.084	0.084	145	0.072	0.072
Po Wan Road	W	↖	A	1	4.0	18	0	1	100%	100%	1860	1860	1860	1860	180	0.097	0.097	160	0.086	0.086
	W	↗	A	1	3.5	0	25	0	23%	33%	2075	2065	2075	2065	195	0.094		150	0.073	
Po Wan Road	E	↔	B	2	5.0	30	25	1	15% / 30% / 3% / 31%		2065	2070	2065	2070	270	0.131	0.131	240	0.116	0.116

Pedestrian crossing ↔ Ep 5 Min. Green = 8Gm + 9Fm = 17s

Notes:	Traffic Flow (pcu / hr)	AM(PM) PEAK	Check Phase	
			εy	Check Phase
	25(35)	15(20)	0.488	εy 0.463
	40(20) ↗	130(90)	L (sec) 29	L (sec) 29
	150(145) →	45(50)	C (sec) 128	C (sec) 128
	80(75) ↘	150(100)	y pract. 0.696	y pract. 0.696
		180(160)	R.C. (%) 43%	R.C. (%) 50%
	120(90)	25(25)		
		210(265)		

Stage / Phase Diagrams









I/G = 2 I/G = 5 I/G = 7 I/G = 5 I/G = 8+17 Average Loss time is adopted

TRAFFIC SIGNALS CALCULATION

Job No: 22007HK

CTA Consultants Ltd.

Junction: Junction C - Po Wan Road / San Po Street / Sheung Shui Tung Hing Road
 Description: Year 2030 Reference Flow

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M. Peak			P.M. Peak		
						Left	Right		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
San Po Street	N		C	3	5.0	30	25	1	34% / 58% 3% / 70%		2010	2010	2010	2010	385	0.192	0.192	410	0.204	0.204
Sheung Shui Tung Hing Road	S		D	4	5.0	30	25	1	74% / 16% 1% / 24%		2020	2025	2020	2025	190	0.094	0.094	165	0.081	0.081
Po Wan Road	W		A	1	4.0	18	0	1	100%	100%	1860	1860	1860	1860	200	0.108	0.108	180	0.097	0.097
	W		A	1	3.5	0	25	0	24%	33%	2075	2065	2075	2065	225	0.108		180	0.087	
Po Wan Road	E		B	2	5.0	30	25	1	15% / 28% 0% / 31%		2065	2065	2065	2065	300	0.145	0.145	260	0.126	0.126
Pedestrian crossing		Ep	5	Min. Green = 8Gm + 9Fm = 17s																

Notes:

Traffic Flow (pcu / hr)

AM(PM) PEAK

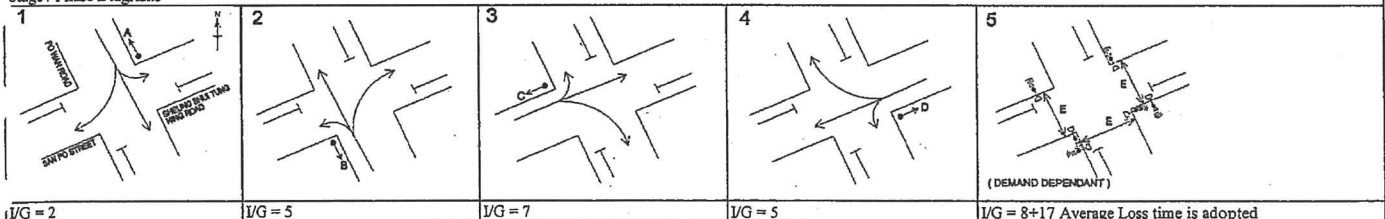
Check Phase

Check Phase

30(40)	20(25)	140(100)
45(25) ↗	↖	↘
170(155) →		←
85(80) ↘	↗	↖
130(95)	30(30)	225(285)

8y	0.539	8y	0.508
L (sec)	29	L (sec)	29
C (sec)	128	C (sec)	128
y pract.	0.696	y pract.	0.696
R.C. (%)	29%	R.C. (%)	37%

Stage / Phase Diagrams



I/G = 2

I/G = 5

I/G = 7

I/G = 5

I/G = 8+17 Average Loss time is adopted

TRAFFIC SIGNALS CALCULATION

Job No: 22007HK

CTA Consultants Ltd.

Junction: Junction C - Po Wan Road / San Po Street / Sheung Shui Tung Hing Road
Description: Year 2030 Design Flow

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M. Peak			P.M. Peak		
						Left	Right		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
San Po Street	N	↕	C	3	5.0	30	25	1	33% / 59% / 2% / 71%		2010	2010	2010	2010	390	0.194	0.194	425	0.211	0.211
Sheung Shui Tung Hing Road	S	↕	D	4	5.0	30	25	1	72% / 15% / 9% / 24%		2025	2025	2025	2025	195	0.096	0.096	170	0.084	0.084
Po Wan Road	W	↔	A	1	4.0	18	0	1	100%	100%	1860	1860	1860	1860	205	0.110	0.110	185	0.099	0.099
Po Wan Road	W	↔	A	1	3.5	0	25	0	24%	33%	2075	2065	2075	2065	225	0.108		180	0.087	
Po Wan Road	E	↔	B	2	5.0	30	25	1	15% / 28% / 0% / 31%		2065	2065	2065	2065	300	0.145	0.145	260	0.126	0.126

Pedestrian crossing ↔ Ep 5 Min. Green = 8Gm + 9Fm = 17s

Notes:	Traffic Flow (pcu / hr)			AM(PM) PEAK		Check Phase		Check Phase	
	30(40)	25(30)	140(100)			Ey	0.546	Ey	0.521
	45(25) →	↓	↓	↖	↗	L (sec)	29	L (sec)	29
	170(155) →			↖	↗	C (sec)	128	C (sec)	128
	85(80) ↓	↑	↑	↖	↗	y pract.	0.696	y pract.	0.696
				↖	↗	R.C. (%)	28%	R.C. (%)	34%
	130(95)	35(35)	230(300)						

Stage / Phase Diagrams

1 	2 	3 	4 	5
I/G = 2	I/G = 5	I/G = 7	I/G = 5	I/G = 8+17 Average Loss time is adopted














TRAFFIC SIGNALS CALCULATION

Job No: 22007HK

CTA Consultants Ltd.

Junction: Junction D - Po Wan Road / Po Shek Wu Road

Description: Year 2022 Observed Flow

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M. Peak			P.M. Peak		
						Left	Right		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Po Shek Wu Road	N		A	1	3.5	40	0	1	100%	100%	1895	1895	1895	1895	330	0.174		435	0.230	
	N		A	1	3.5	0	0	0	0%	0%	2105	2105	4210	4210	430	0.204		358	0.170	
	N		A	1	3.5	0	0	0	0%	0%	2105	2105	0	0	430	0.204		358	0.170	
	N		B	2	3.4	0	25	0	100%	100%	1975	1975	4000	4000	119	0.060	0.060	119	0.060	0.060
	N		B	2	4.2	0	20	0	100%	100%	2025	2025	0	0	122	0.060		122	0.060	
Po Shek Wu Road	S		A	1	3.5	15	0	1	100%	100%	1785	1785	1785	1785	205	0.115		205	0.115	
	S		A	1	3.5	0	0	0	0%	0%	2105	2105	4210	4210	495	0.235	0.235	465	0.221	0.230
	S		A	1	3.5	0	0	0	0%	0%	2105	2105	0	0	495	0.235		465	0.221	
San Wan Road	E		E	4	3.4	20	0	1	51%	55%	1885	1880	1885	1880	215	0.114	0.154	220	0.117	0.154
	E		E	4	3.5	0	18	0	100%	100%	1945	1945	1945	1945	300	0.154		300	0.154	
San Wan Road	W		D	2,3	4.0	0	30	0	19%	19%	2135	2135	2135	2135	365	0.171	0.171	360	0.169	0.169
	W		C	2,3	4.0	20	0	1	100%	100%	1875	1875	1875	1875	500	0.267		485	0.259	
Pedestrian crossing		Fp	1,4	Min. Green = 5Gm + 9Fm = 14s																
		Gp	2	Min. Green = 5Gm + 10Fm = 15s																
		Hp	3	Min. Green = 5m + 8Fm = 13s																

Notes:

Traffic Flow (pcu / hr)

AM(PM) PEAK

Check Phase

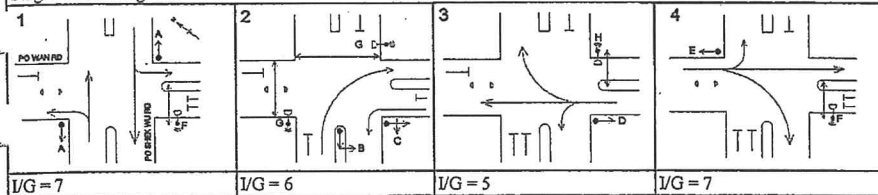
Check Phase

110(120) ↗
 105(100) →
 300(300) ↘
 990(930) 205(205)
 70(70)
 245(250)
 500(485)
 330(435) 240(240)
 860(715)

Sy 0.620
 L (sec) 21
 C (sec) 128
 y pract. 0.752
 R.C. (%) 21%

Sy 0.612
 L (sec) 21
 C (sec) 128
 y pract. 0.752
 R.C. (%) 23%

Stage / Phase Diagrams



I/G = 7

I/G = 6

I/G = 5

I/G = 7

TRAFFIC SIGNALS CALCULATION

Job No: 22007HK

CTA Consultants Ltd.

Junction: Junction D - Po Wan Road / Po Shek Wu Road
 Description: Year 2030 Reference Flow

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M. Peak			P.M. Peak		
						Left	Right		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Po Shek Wu Road	N	↰	A	1	3.5	15	0	1	100%	100%	1785	1785	5995	5960	370	0.207		380	0.213	
	N	↱	A	1	3.5	20	0	0	0%	23%	2105	2070	0	0	483	0.229		441	0.213	
	N	↲	A	1	3.5	0	0	0	0%	0%	2105	2105	0	0	483	0.229		449	0.213	
	N	↲	B	2	3.4	0	25	0	100%	100%	1975	1975	4000	4000	153	0.078	0.078	148	0.075	0.075
	N	↲	B	2	4.2	0	20	0	100%	100%	2025	2025	0	0	157	0.078		152	0.075	
Po Shek Wu Road	S	↰	A	1	3.5	15	0	1	60%	70%	1855	1835	6065	6045	414	0.223		358	0.195	
	S	↱	A	1	3.5	0	0	0	0%	0%	2105	2105	0	0	470	0.223	0.229	411	0.195	0.213
	S	↲	A	1	3.5	0	0	0	0%	0%	2105	2105	0	0	470	0.223		411	0.195	
San Wan Road	E	↰	E	4	3.4	20	18	1	4% / 11.4% / 9%		1875	1880	3820	3825	287	0.153	0.153	292	0.155	0.156
	E	↲	E	4	3.5	0	18	0	100%	100%	1945	1945	0	0	298	0.153		303	0.156	
San Wan Road	W	↰	D	2,3	4.0	0	30	0	22%	21%	2130	2135	2130	2135	395	0.185	0.185	385	0.180	0.180
	W	↲	C	2,3	4.0	20	0	1	100%	100%	1875	1875	1875	1875	620	0.331		575	0.307	
Pedestrian crossing	↔	Fp	1,4	Min. Green = 5Gm + 9Fm = 14s																
		Gp	2	Min. Green = 5Gm + 10Fm = 15s																
		Hp	3	Min. Green = 5m + 8Fm = 13s																

Notes:	Traffic Flow (pcu / hr)	AM(PM) PEAK	Check Phase	
			εy	0.645
			L (sec)	21
			C (sec)	128
			y pract.	0.752
			R.C. (%)	17%
			Check Phase	
			εy	0.624
			L (sec)	21
			C (sec)	128
			y pract.	0.752
			R.C. (%)	21%







Stage / Phase Diagrams			
1 	2 	3 	4
I/G = 7	I/G = 6	I/G = 5	I/G = 7

TRAFFIC SIGNALS CALCULATION

Job No: 22007HK

CTA Consultants Ltd.

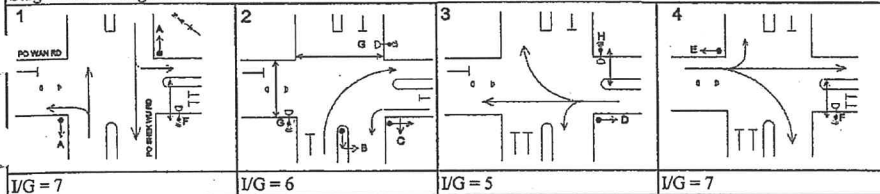
Junction: Junction D - Po Wan Road / Po Shek Wu Road
Description: Year 2030 Design Flow

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M. Peak			P.M. Peak		
						Left	Right		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Po Shek Wu Road	N		A	1	3.5	15	0	1	100%	100%	1785	1785	5995	5960	380	0.213		383	0.215	
	N		A	1	3.5	20	0	0	0%	24%	2105	2070	0	0	483	0.229		444	0.215	
	N		A	1	3.5	0	0	0	0%	0%	2105	2105	0	0	483	0.229		452	0.215	
	N		B	2	3.5	0	25	0	100%	100%	1985	1985	4035	4035	153	0.077	0.077	148	0.074	0.074
	N		B	2	4.5	0	20	0	100%	100%	2050	2050	0	0	157	0.077		152	0.074	
Po Shek Wu Road	S		A	1	3.5	15	0	1	60%	70%	1855	1835	6065	6045	414	0.223		358	0.195	
	S		A	1	3.5	0	0	0	0%	0%	2105	2105	0	0	470	0.223	0.229	411	0.195	0.215
	S		A	1	3.5	0	0	0	0%	0%	2105	2105	0	0	470	0.223		411	0.195	
San Wan Road	E		E	4	3.5	20	18	1	4%/10'6%/8%		1885	1890	3830	3835	295	0.157	0.157	303	0.160	0.160
	E		E	4	3.5	0	18	0	100%	100%	1945	1945	0	0	305	0.157		312	0.160	
San Wan Road	W		D	2,3	4.0	0	30	0	22%	21%	2130	2135	2130	2135	395	0.185	0.185	385	0.180	0.180
	W		C	2,3	4.0	20	0	1	100%	100%	1875	1875	1875	1875	620	0.331		575	0.307	
Pedestrian crossing			Fp	1,4	Min. Green = 5Gm + 9Fm = 14s															
			Gp	2	Min. Green = 5Gm + 10Fm = 15s															
			Hp	3	Min. Green = 5m + 8Fm = 13s															

Notes:

Traffic Flow (pcu / hr)	AM(PM) PEAK	Check Phase	Check Phase
130(140) ↗ 135(140) → 335(335) ↘	1105(930) 250(250) 85(80) 310(305) 620(575)	εy 0.648 L (sec) 21 C (sec) 128 y pract. 0.752 R.C. (%) 16%	εy 0.630 L (sec) 21 C (sec) 128 y pract. 0.752 R.C. (%) 19%
380(490) 965(790)	310(300)		

Stage / Phase Diagrams



TRAFFIC SIGNALS CALCULATION

Job No: 22007HK

CTA Consultants Ltd.

Junction: Junction E - Po Shek Wu Road / Choi Yuen Road
 Description: Year 2022 Observed Flow

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside D/I	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M. Peak			P.M. Peak		
						Left	Right		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Po Shek Wu Road	N	←	D	2,3	5.9	40	0	1	100%	100%	2125	2125	2125	2125	154	0.072		148	0.070	
	N	→	C	2,3	3.3	0	0	0	0%	0%	2085	2085	4170	4170	573	0.275		560	0.269	
	N	→	C	2,3	3.3	0	0	0	0%	0%	2085	2085	0	0	573	0.275		560	0.269	
	N	↘	E	3	3.4	0	25	0	100%	100%	1975	1975	4000	4000	213	0.108	0.108	225	0.114	0.114
	N	↙	E	3	4.2	0	20	0	100%	100%	2025	2025	0	0	218	0.108		230	0.114	
Po Shek Wu Road	S	←	A	1	3.6	0	10	0	100%	100%	1840	1840	1840	1840	45	0.024	0.024	70	0.038	0.038
	S	→	B	1,2	3.7	0	0	0	0%	0%	2125	2125	6395	6395	434	0.204	0.180	452	0.213	0.175
	S	→	B	1,2	3.9	0	0	0	0%	0%	2145	2145	0	0	438	0.204		456	0.213	
	S	↘	B	1,2	3.7	0	0	0	0%	0%	2125	2125	0	0	434	0.204		452	0.213	
	S	↙	B	1,2	3.5	15	0	1	100%	100%	1785	1785	1785	1785	430	0.241		230	0.129	
Choi Yuen Road	E	←	H	5	3.5	15	0	1	40%	50%	1890	1870	5785	5765	62	0.033	0.049	62	0.033	0.035
	E	→	H	5	3.4	0	20	0	100%	100%	1950	1950	0	0	96	0.049		68	0.035	
	E	→	H	5	3.5	0	18	0	100%	100%	1945	1945	0	0	95	0.049		67	0.035	
Choi Yuen Road	W	←	G	4	4.0	0	30	0	86%	85%	2065	2065	2065	2065	318	0.154	0.154	283	0.137	0.137
	W	→	F,G	3,4	4.0	20	0	0	100%	100%	2005	2005	3830	3830	229	0.114		235	0.117	
	W	→	F,G	3,4	3.6	18	0	1	100%	100%	1825	1825	0	0	208	0.114		214	0.117	
Pedestrian crossing		↔	Ip 2,3 Min. Green = 27Gm + 19Fm = 46s Jp 1,4,5 Min. Green = 47 Gm + 5Fm = 52s Kp 4 Min. Green = 4Gm + 9Fm = 13s Lp 1,2,5 Min. Green = 40Gm + 12Fm = 52s																	

Notes:

Traffic Flow (pcu / hr)

AM(PM) PEAK

Check Phase

Check Phase

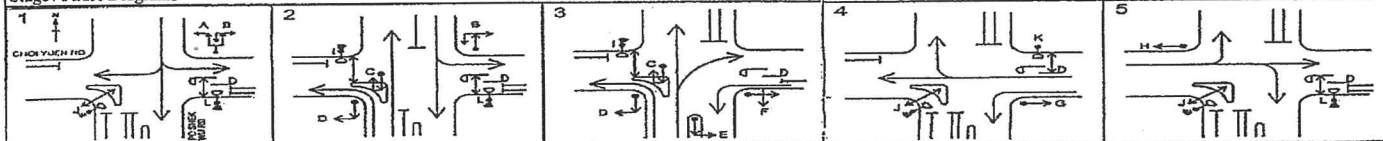
1305(1360)
 45(70) 430(230) 275(240)
 25(31) → 43(43)
 37(31) → 437(449)
 191(135) ↘ 154(148) 431(455)
 1145(1120)

εy 0.515
 L (sec) 24
 C (sec) 128
 y pract. 0.731
 R.C. (%) 42%

εy 0.498
 L (sec) 24
 C (sec) 128
 y pract. 0.731
 R.C. (%) 47%

12 3 4 5

Stage / Phase Diagrams



I/G = 0

I/G = 6

I/G = 5

I/G = 9

I/G = 8







Loss Time: 6s+5s+9s+8s-4s (Nos. of stages) = 24s

TRAFFIC SIGNALS CALCULATION

Job No: 22007HK

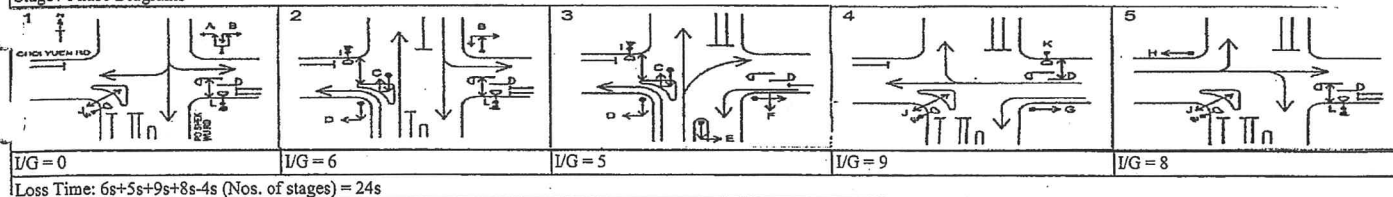
CTA Consultants Ltd.

Junction: Junction E - Po Shek Wu Road / Choi Yuen Road
 Description: Year 2030 Reference Flow

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M. Peak			P.M. Peak		
						Left	Right		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Po Shek Wu Road	N		D	2,3	5.9	40	0	1	100%	100%	2125	2125	2125	2125	305	0.144		305	0.144	
	N		C	2,3	3.5	0	0	1	0%	0%	1965	1965	6175	6175	434	0.221		420	0.214	
	N		C	2,3	3.5	0	0	0	0%	0%	2105	2105	0	0	465	0.221		450	0.214	
	N		C	2,4	3.5	0	0	0	0%	0%	2105	2105	0	0	465	0.221		450	0.214	
	N		E	3	3.4	0	25	0	100%	100%	1975	1975	4000	4000	217	0.110	0.110	232	0.118	0.118
	N		E	3	4.2	0	20	0	100%	100%	2025	2025	0	0	223	0.110		238	0.118	
Po Shek Wu Road	S		A	1	3.6	0	10	0	100%	100%	1840	1840	1840	1840	60	0.033	0.033	85	0.046	0.046
	S		B	1,2	3.7	0	0	0	0%	0%	2125	2125	6395	6395	296	0.139	0.107	321	0.151	0.105
	S		B	1,2	3.9	0	0	0	0%	0%	2145	2145	0	0	299	0.139		324	0.151	
	S		B	1,2	3.7	0	0	0	0%	0%	2125	2125	0	0	296	0.139		321	0.151	
	S		B	1,2	3.5	15	0	1	100%	100%	1785	1785	1785	1785	475	0.266		255	0.143	
Choi Yuen Road	E		H	5	3.5	15	0	1	18%	25%	1930	1915	5855	5860	166	0.086	0.086	141	0.073	0.073
	E		H	5	3.4	0	20	0	77%	63%	1980	2000	0	0	171	0.086		147	0.073	
	E		H	5	3.5	0	18	0	100%	100%	1945	1945	0	0	168	0.086		143	0.073	
Choi Yuen Road	W		G	4	4.0	0	30	0	84%	79%	2070	2075	2070	2075	375	0.181	0.181	340	0.164	0.164
	W		F,G	3,4	4.0	20	0	0	100%	100%	2005	2005	3830	3830	238	0.119		243	0.121	
	W		F,G	3,4	3.6	18	0	1	100%	100%	1825	1825	0	0	217	0.119		222	0.121	
Pedestrian crossing			Ip	2,3	Min. Green = 27Gm + 19Fm = 46s															
	Jp		1,4,5	Min. Green = 47 Gm + 5Fm = 52s																
	Kp		4	Min. Green = 4Gm + 9Fm = 13s																
	Lp		1,2,5	Min. Green = 40Gm + 12Fm = 52s																

Notes:	Traffic Flow (pcu / hr)	AM(PM) PEAK	Check Phase	
			εy	0.517
	960(965)		L (sec)	24
	60(85)	475(255)	C (sec)	128
	30(35) →	315(270)	y pract.	0.731
	175(160) →	60(75)	R.C. (%)	42%
	300(235) ↘	455(465)		
	305(305)	440(470)		
	1365(1320)			
			12 3 4 5	

Stage / Phase Diagrams





















TRAFFIC SIGNALS CALCULATION

Job No: 22007HK

CTA Consultants Ltd.

Function: Junction E - Po Shek Wu Road / Choi Yuen Road
 Description: Year 2030 Design Flow

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M. Peak			P.M. Peak		
						Left	Right		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Po Shek Wu Road	N		D	2,3	5.9	40	0	1	100%	100%	2125	2125	2125	2125	305	0.144		305	0.144	
	N		C	2,3	3.5	0	0	1	0%	0%	1965	1965	6175	6175	434	0.221		420	0.214	
	N		C	2,3	3.5	0	0	0	0%	0%	2105	2105	0	0	465	0.221		450	0.214	
	N		C	2,4	3.5	0	0	0	0%	0%	2105	2105	0	0	465	0.221		450	0.214	
	N		E	3	3.4	0	25	0	100%	100%	1975	1975	4000	4000	217	0.110	0.110	232	0.118	0.118
	N		E	3	4.2	0	20	0	100%	100%	2025	2025	0	0	223	0.110		238	0.118	
Po Shek Wu Road	S		A	1	3.6	0	10	0	100%	100%	1840	1840	1840	1840	60	0.033	0.033	85	0.046	0.046
	S		B	1,2	3.7	0	0	0	0%	0%	2125	2125	6395	6395	297	0.140	0.107	322	0.152	0.105
	S		B	1,2	3.9	0	0	0	0%	0%	2145	2145	0	0	300	0.140		325	0.152	
	S		B	1,2	3.7	0	0	0	0%	0%	2125	2125	0	0	297	0.140		322	0.152	
	S		B	1,2	3.5	15	0	1	100%	100%	1785	1785	1785	1785	480	0.269		260	0.146	
Choi Yuen Road	E		H	5	3.5	15	0	1	18%	25%	1930	1915	5855	5860	166	0.086	0.086	141	0.073	0.073
	E		H	5	3.4	0	20	0	77%	63%	1980	2000	0	0	171	0.086		147	0.073	
	E		H	5	3.5	0	18	0	100%	100%	1945	1945	0	0	168	0.086		143	0.073	
Choi Yuen Road	W		G	4	4.0	0	30	0	84%	79%	2070	2075	2070	2075	375	0.181	0.181	340	0.164	0.164
	W		F,G	3,4	4.0	20	0	0	100%	100%	2005	2005	3830	3830	238	0.119		243	0.121	
	W		F,G	3,4	3.6	18	0	1	100%	100%	1825	1825	0	0	217	0.119		222	0.121	
Pedestrian crossing			Ip	2,3	Min. Green = 27Gm + 19Fm = 46s															
			Jp	1,4,5	Min. Green = 47 Gm + 5Fm = 52s															
			Kp	4	Min. Green = 4Gm + 9Fm = 13s															
			Lp	1,2,5	Min. Green = 40Gm + 12Fm = 52s															

Notes:	Traffic Flow (pcu / hr)	AM(PM) PEAK	Check Phase		Check Phase	
			εy	0.517	εy	0.506
		895(970)	L (sec)	24	L (sec)	24
		30(35) →	C (sec)	128	C (sec)	128
		175(160) →	y pract.	0.731	y pract.	0.731
		300(235) ↘	R.C. (%)	41%	R.C. (%)	44%
		60(85) ↓				
		480(260) ↓				
		315(270) ↙				
		60(75) ←				
		455(465) ↘				
		305(305) ↗				
		440(470) ↗				
		1370(1325)		12 3 4 5		

Stage / Phase Diagrams				
I/G = 0	I/G = 6	I/G = 5	I/G = 9	I/G = 8
Loss Time: 6s+5s+9s+8s-4s (Nos. of stages) = 24s				

Junctions 8
ARCADY 8 - Roundabout Module
Version: 8.0.5.523 [19102,19/06/2015] © Copyright TRL Limited, 2022
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Filename: Jn F.arc8

Path: \\PROJSRV\Project\CTA Consultants Limited\CTA - Project\22007HK - TCS for Rezoning of PNS Sheung Shui Fresh Food Distribution Centre\CAL\2022-02-07

Report generation date: 10/2/2022 9:26:24

» Junction F - 2022 Existing Flow, AM

» Junction F - 2022 Existing Flow, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Junction F - 2022 Existing Flow								
Arm 1	1.81	9.35	0.65	A	2.39	10.73	0.71	B
Arm 2	1.16	4.22	0.54	A	1.78	5.50	0.64	A
Arm 3	0.15	2.60	0.13	A	0.19	2.98	0.16	A
Arm 4	1.90	4.36	0.66	A	1.72	4.27	0.63	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D7 - 2022 Existing Flow, AM" model duration: 8:00 - 9:00

"D8 - 2022 Existing Flow, PM" model duration: 17:30 - 18:30

Run using Junctions 8.0.5.523 at 10/2/2022 9:26:22

File summary

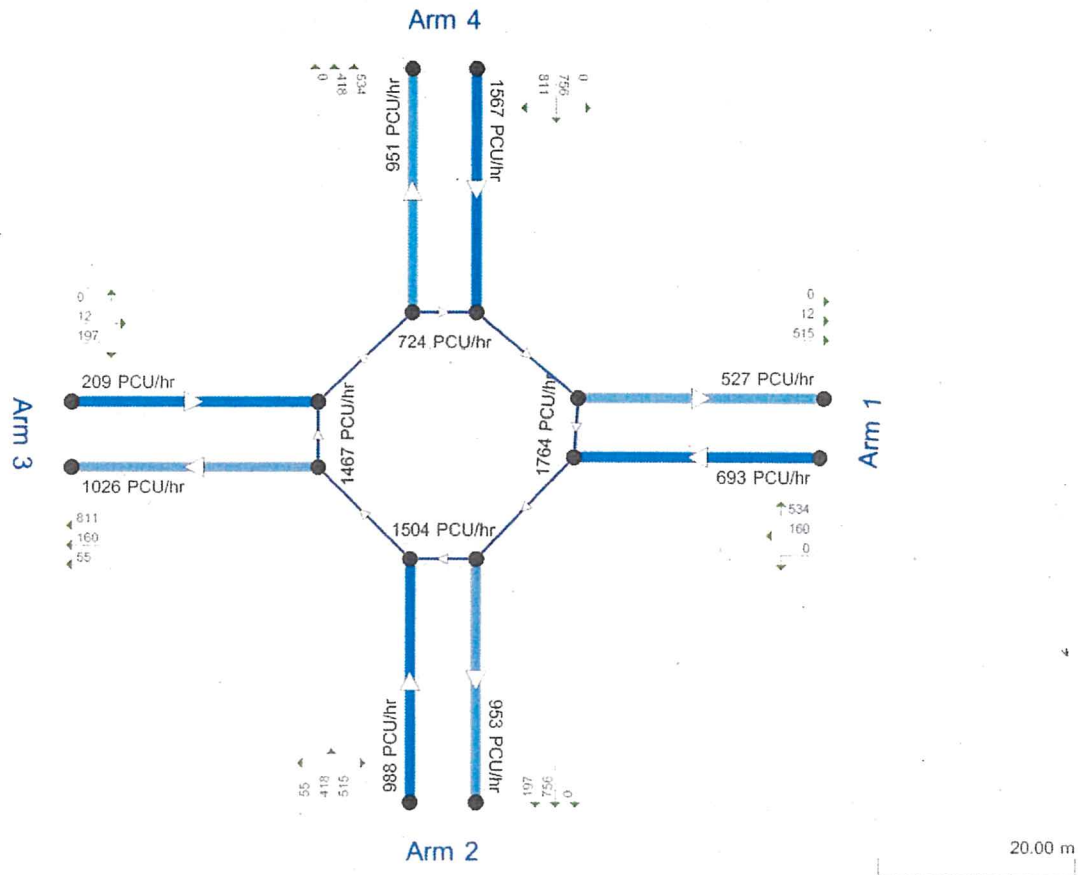
Title	(untitled)
Location	
Site Number	
Date	16/10/2015
Version	
Status	(new file)
Identifier	
Client	
Job number	
Enumerator	Kathy Wan
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



Showing modeled flow through junction (PCU/hr)
Time Segment: 108:00:00:00
Showing Analysis Set: "A1 - Junction 1" Demand Set: "D1 - 2022 Existing Flow AM"

The junction diagram reflects the last run of ARCADY.

Junction F - 2022 Existing Flow, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction F	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2022 Existing Flow, AM	2022 Existing Flow	AM		FLAT	08:00	09:00	60	60		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
D	Fanling Highway / Fan Kam Road / Po Shek Wu Road	Roundabout	1,2,3,4			5.22	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Fanling Highway	
2	2	Fan Kam Road	
3	3	Fanling Highway	
4	4	Po Shek Wu Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.75	9.00	16.00	60.00	85.00	30.00	
2	7.50	11.00	12.00	50.00	85.00	45.00	
3	7.00	8.00	13.00	50.00	85.00	30.00	
4	7.00	10.50	16.00	100.00	85.00	30.00	



Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.509	1974.564
2		(calculated)	(calculated)	0.610	2756.969
3		(calculated)	(calculated)	0.574	2433.512
4		(calculated)	(calculated)	0.637	2852.201

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	695.00	100.000
2	FLAT	✓	989.00	100.000
3	FLAT	✓	209.00	100.000
4	FLAT	✓	1569.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	Direct Demand Entry Flow in PCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-09:00	1	695.00	695.00		
08:00-09:00	2	989.00	989.00		
08:00-09:00	3	209.00	209.00		
08:00-09:00	4	1569.00	1569.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction D (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	160.000	535.000
	2	516.000	0.000	55.000	418.000
	3	12.000	197.000	0.000	0.000
	4	0.000	757.000	812.000	0.000

Turning Proportions (PCU) - Junction D (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.00	0.23	0.77
	2	0.52	0.00	0.06	0.42
	3	0.06	0.94	0.00	0.00
	4	0.00	0.48	0.52	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction D (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction D (for whole period)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.65	9.35	1.81	A
2	0.54	4.22	1.16	A
3	0.13	2.60	0.15	A
4	0.66	4.36	1.90	A



Main Results for each time segment

Main results: (08:00-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	695.00	693.19	1763.96	0.00	1076.45	0.646	1.81	9.350	A
2	989.00	987.84	1504.21	0.00	1839.91	0.538	1.16	4.220	A
3	209.00	208.85	1466.51	0.00	1591.04	0.131	0.15	2.604	A
4	1569.00	1567.10	724.24	0.00	2390.97	0.656	1.90	4.360	A

Junction F - 2022 Existing Flow, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction F	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2022 Existing Flow, PM	2022 Existing Flow	PM		FLAT	17:30	18:30	60	60		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
D	Fanling Highway / Fan Kam Road / Po Shek Wu Road	Roundabout	1,2,3,4			6.00	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Fanling Highway	
2	2	Fan Kam Road	
3	3	Fanling Highway	
4	4	Po Shek Wu Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.75	9.00	16.00	60.00	85.00	30.00	
2	7.50	11.00	12.00	50.00	85.00	45.00	
3	7.00	8.00	13.00	50.00	85.00	30.00	
4	7.00	10.50	16.00	100.00	85.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.509	1974.564
2		(calculated)	(calculated)	0.610	2756.969
3		(calculated)	(calculated)	0.574	2433.512
4		(calculated)	(calculated)	0.637	2852.201

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	800.00	100.000
2	FLAT	✓	1163.00	100.000
3	FLAT	✓	227.00	100.000
4	FLAT	✓	1450.00	100.000



Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	Direct Demand Entry Flow in PCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:30-18:30	1	800.00	800.00		
17:30-18:30	2	1163.00	1163.00		
17:30-18:30	3	227.00	227.00		
17:30-18:30	4	1450.00	1450.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction D (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	191.000	609.000
	2	658.000	0.000	31.000	474.000
	3	18.000	209.000	0.000	0.000
	4	0.000	700.000	750.000	0.000

Turning Proportions (PCU) - Junction D (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.00	0.24	0.76
	2	0.57	0.00	0.03	0.41
	3	0.08	0.92	0.00	0.00
	4	0.00	0.48	0.52	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction D (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction D (for whole period)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.71	10.73	2.39	B
2	0.64	5.50	1.78	A
3	0.16	2.98	0.19	A
4	0.63	4.27	1.72	A

Main Results for each time segment

Main results: (17:30-18:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	800.00	797.61	1657.11	0.00	1130.85	0.707	2.39	10.727	B
2	1163.00	1161.22	1546.72	0.00	1814.00	0.641	1.78	5.501	A
3	227.00	226.81	1737.45	0.00	1435.40	0.158	0.19	2.978	A
4	1450.00	1448.28	883.81	0.00	2289.36	0.633	1.72	4.271	A



Junctions 8			
ARCADY 8 - Roundabout Module			
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Filename: Jn F (Future).arc8

Path: \PROJSRV\Project\CTA Consultants Limited\CTA - Project\22007HK - TCS for Rezoning of PNS Sheung Shui Fresh Food Distribution Centre\CAL\2022-02-07

Report generation date: 9/2/2022 14:53:08

- » Junction F - 2030 Reference, AM
- » Junction F - 2030 Reference, PM
- » Junction F - 2030 Design, AM
- » Junction F - 2030 Design, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Junction F - 2030 Design								
Arm 1	0.73	3.42	0.42	A	0.86	3.52	0.46	A
Arm 2	1.70	4.64	0.63	A	1.90	4.99	0.66	A
Arm 3	0.19	3.14	0.16	A	0.22	3.43	0.18	A
Arm 4	1.07	3.31	0.52	A	0.87	3.04	0.46	A
Junction F - 2030 Reference								
Arm 1	0.72	3.41	0.42	A	0.85	3.50	0.46	A
Arm 2	1.69	4.62	0.63	A	1.90	4.97	0.66	A
Arm 3	0.19	3.13	0.16	A	0.22	3.42	0.18	A
Arm 4	1.07	3.31	0.52	A	0.87	3.04	0.46	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D7 - 2030 Reference, AM" model duration: 8:00 - 9:00

"D8 - 2030 Reference, PM" model duration: 17:30 - 18:30

"D9 - 2030 Design, AM" model duration: 8:00 - 9:00

"D10 - 2030 Design, PM" model duration: 17:30 - 18:30

Run using Junctions 8.0.5.523 at 9/2/2022 14:53:06



File summary

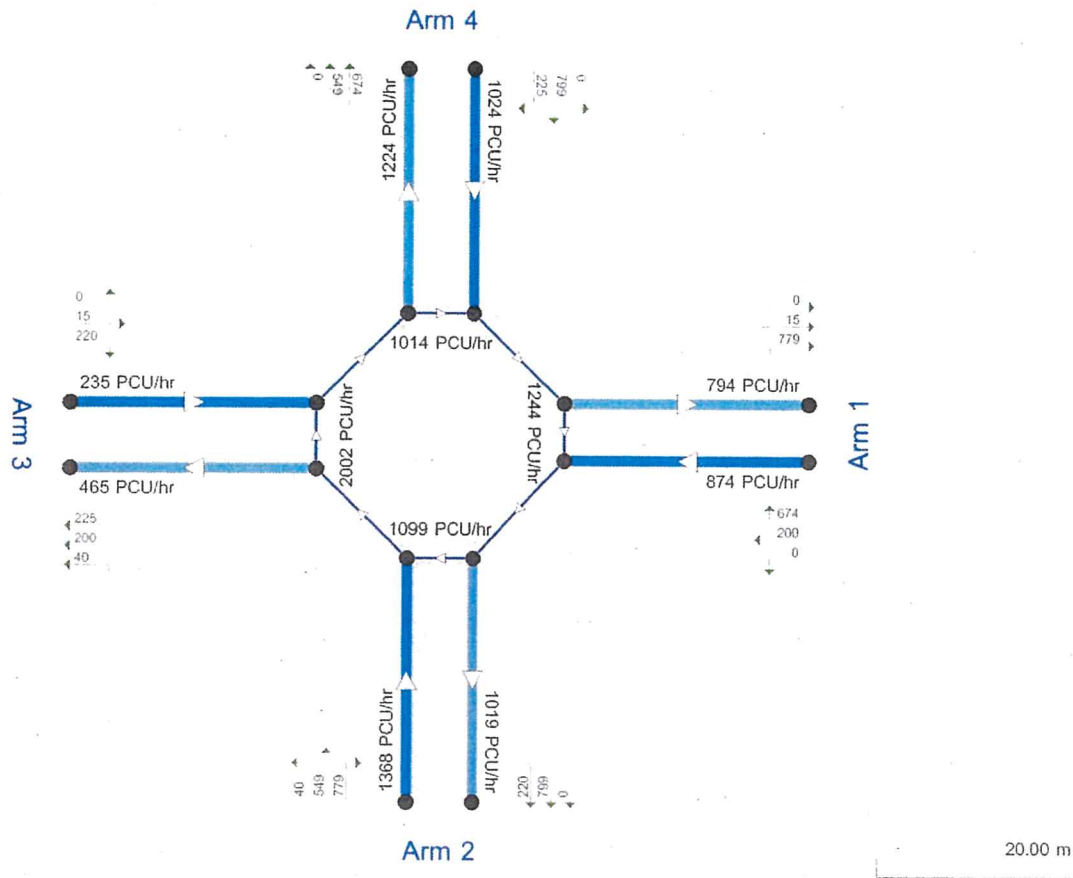
Title	(untitled)
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Site Number	
Date	16/10/2015
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Kathy Wan
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



Showing modelled flow through junction (PCU/hr)
Time Segment (17:30-18:30)
Showing Analysis Set "A1 - Junction F" Demand Set "D1 - 2030 Reference - AM"

The junction diagram reflects the last run of ARCADY.

Junction F - 2030 Reference, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction F	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Reference, AM	2030 Reference	AM		FLAT	08:00	09:00	60	60		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
D	Fanling Highway / Fan Kam Road / Po Shek Wu Road	Roundabout	1,2,3,4			3.82	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Fanling Highway	
2	2	Fan Kam Road	
3	3	Fanling Highway	
4	4	Po Shek Wu Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R' - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	7.30	9.00	12.00	60.00	85.00	30.00	
2	7.50	11.00	12.00	50.00	85.00	45.00	
3	7.00	8.00	13.00	50.00	85.00	30.00	
4	7.00	10.50	16.00	100.00	85.00	30.00	



Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.606	2649.989
2		(calculated)	(calculated)	0.610	2756.969
3		(calculated)	(calculated)	0.574	2433.512
4		(calculated)	(calculated)	0.637	2852.201

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	765.00	100.000
2	FLAT	✓	1320.00	100.000
3	FLAT	✓	220.00	100.000
4	FLAT	✓	1160.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction D (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	165.000	600.000
	2	735.000	0.000	65.000	520.000
	3	10.000	210.000	0.000	0.000
	4	0.000	840.000	320.000	0.000

Turning Proportions (PCU) - Junction D (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.00	0.22	0.78
	2	0.56	0.00	0.05	0.39
	3	0.05	0.95	0.00	0.00
	4	0.00	0.72	0.28	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction D (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction D (for whole period)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.42	3.41	0.72	A
2	0.63	4.62	1.69	A
3	0.16	3.13	0.19	A
4	0.52	3.31	1.07	A

Main Results for each time segment

Main results: (08:00-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	765.00	764.28	1368.75	0.00	1820.07	0.420	0.72	3.408	A
2	1320.00	1318.31	1083.98	0.00	2096.11	0.630	1.69	4.618	A
3	220.00	219.81	1852.82	0.00	1369.12	0.161	0.19	3.132	A
4	1160.00	1158.93	953.86	0.00	2244.74	0.517	1.07	3.312	A

Junction F - 2030 Reference, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction F	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Reference, PM	2030 Reference	PM		FLAT	17:30	18:30	60	60		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
D	Fanling Highway / Fan Kam Road / Po Shek Wu Road	Roundabout	1,2,3,4			3.94	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Fanling Highway	
2	2	Fan Kam Road	
3	3	Fanling Highway	
4	4	Po Shek Wu Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I* - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	7.30	9.00	12.00	60.00	85.00	30.00	
2	7.50	11.00	12.00	50.00	85.00	45.00	
3	7.00	8.00	13.00	50.00	85.00	30.00	
4	7.00	10.50	16.00	100.00	85.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.606	2649.989
2		(calculated)	(calculated)	0.610	2756.969
3		(calculated)	(calculated)	0.574	2433.512
4		(calculated)	(calculated)	0.637	2852.201

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	870.00	100.000
2	FLAT	✓	1370.00	100.000
3	FLAT	✓	235.00	100.000
4	FLAT	✓	1025.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction D (for whole period)

		To			
From		1	2	3	4
	1	0.000	0.000	200.000	670.000
	2	780.000	0.000	40.000	550.000
	3	15.000	220.000	0.000	0.000
	4	0.000	800.000	225.000	0.000

Turning Proportions (PCU) - Junction D (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.00	0.23	0.77
	2	0.57	0.00	0.03	0.40
	3	0.06	0.94	0.00	0.00
	4	0.00	0.78	0.22	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction D (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction D (for whole period)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.46	3.50	0.85	A
2	0.66	4.97	1.90	A
3	0.18	3.42	0.22	A
4	0.46	3.04	0.87	A

Main Results for each time segment

Main results: (17:30-18:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	870.00	869.15	1243.92	0.00	1895.76	0.459	0.85	3.503	A
2	1370.00	1368.10	1093.96	0.00	2090.02	0.656	1.90	4.973	A
3	235.00	234.78	1997.51	0.00	1286.00	0.183	0.22	3.424	A
4	1025.00	1024.13	1013.70	0.00	2206.64	0.465	0.87	3.043	A

Junction F - 2030 Design, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction F	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Design, AM	2030 Design	AM		FLAT	08:00	09:00	60	60		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
D	Fanling Highway / Fan Kam Road / Po Shek Wu Road	Roundabout	1,2,3,4			3.83	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Fanling Highway	
2	2	Fan Kam Road	
3	3	Fanling Highway	
4	4	Po Shek Wu Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	7.30	9.00	12.00	60.00	85.00	30.00	
2	7.50	11.00	12.00	50.00	85.00	45.00	
3	7.00	8.00	13.00	50.00	85.00	30.00	
4	7.00	10.50	16.00	100.00	85.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.606	2649.989
2		(calculated)	(calculated)	0.610	2756.969
3		(calculated)	(calculated)	0.574	2433.512
4		(calculated)	(calculated)	0.637	2852.201

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	770.00	100.000
2	FLAT	✓	1320.00	100.000
3	FLAT	✓	220.00	100.000
4	FLAT	✓	1160.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction D (for whole period)

		To			
From		1	2	3	4
	1	0.000	0.000	165.000	605.000
	2	735.000	0.000	65.000	520.000
	3	10.000	210.000	0.000	0.000
	4	0.000	840.000	320.000	0.000

Turning Proportions (PCU) - Junction D (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.00	0.21	0.79
	2	0.56	0.00	0.05	0.39
	3	0.05	0.95	0.00	0.00
	4	0.00	0.72	0.28	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction D (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction D (for whole period)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.42	3.42	0.73	A
2	0.63	4.64	1.70	A
3	0.16	3.14	0.19	A
4	0.52	3.31	1.07	A

Main Results for each time segment

Main results: (08:00-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	770.00	769.27	1368.75	0.00	1820.07	0.423	0.73	3.424	A
2	1320.00	1318.30	1088.97	0.00	2093.07	0.631	1.70	4.636	A
3	220.00	219.81	1857.81	0.00	1366.26	0.161	0.19	3.139	A
4	1160.00	1158.93	953.86	0.00	2244.74	0.517	1.07	3.312	A



Junction F - 2030 Design, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Junction F	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Design, PM	2030 Design	PM		FLAT	17:30	18:30	60	60		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
D	Fanling Highway / Fan Kam Road / Po Shek Wu Road	Roundabout	1,2,3,4			3.95	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Fanling Highway	
2	2	Fan Kam Road	
3	3	Fanling Highway	
4	4	Po Shek Wu Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	7.30	9.00	12.00	60.00	85.00	30.00	
2	7.50	11.00	12.00	50.00	85.00	45.00	
3	7.00	8.00	13.00	50.00	85.00	30.00	
4	7.00	10.50	16.00	100.00	85.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.606	2649.989
2		(calculated)	(calculated)	0.610	2756.969
3		(calculated)	(calculated)	0.574	2433.512
4		(calculated)	(calculated)	0.637	2852.201

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	875.00	100.000
2	FLAT	✓	1370.00	100.000
3	FLAT	✓	235.00	100.000
4	FLAT	✓	1025.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction D (for whole period)

		To			
From		1	2	3	4
	1	0.000	0.000	200.000	675.000
	2	780.000	0.000	40.000	550.000
	3	15.000	220.000	0.000	0.000
	4	0.000	800.000	225.000	0.000

Turning Proportions (PCU) - Junction D (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.00	0.23	0.77
	2	0.57	0.00	0.03	0.40
	3	0.06	0.94	0.00	0.00
	4	0.00	0.78	0.22	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction D (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction D (for whole period)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.46	3.52	0.86	A
2	0.66	4.99	1.90	A
3	0.18	3.43	0.22	A
4	0.46	3.04	0.87	A

**Main Results for each time segment**

Main results: (17:30-18:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	875.00	874.14	1243.92	0.00	1895.76	0.462	0.86	3.520	A
2	1370.00	1368.10	1098.95	0.00	2086.98	0.656	1.90	4.995	A
3	235.00	234.78	2002.49	0.00	1283.14	0.183	0.22	3.433	A
4	1025.00	1024.13	1013.69	0.00	2206.64	0.465	0.87	3.043	A

Written Representation in relation to Amendment Item D4 of Draft Fanling / Sheung Shui Outline Zoning Plan No. S/FSS/25 on Rezoning of Park'N Shop Sheung Shui Fresh Food Distribution Centre from "Industrial" to "Other Specified Uses" annotated Business Zone at 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui

Appendix 5

Sewerage Impact Assessment

**Written Representation in relation to Amendment Item D4 of Draft
Fanling / Sheung Shui Outline Zoning Plan No. S/FSS/25 on
Rezoning of Park'N Shop Sheung Shui Fresh Food Distribution
Centre from "Industrial" to "Other Specified Uses" annotated
Business Zone at 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui**

Subject: Sewerage Impact Assessment (SIA) Report

Date: 18 January 2022

Draft

WSP

Quality Management

<u>Date</u>	<u>Revision</u>	<u>Prepared by</u>	<u>Checked by</u>	<u>Authorised by</u>
<i>Jan 2022</i>	<i>Rev 0</i>	<i>Lily Chow</i>	<i>C. K. Chan</i>	<i>Paul Kau</i>

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The original of the technology-based document sent herewith has been authenticated and will be retained by WSP for a minimum of ten years. Since the file transmitted is now out of WSP's control and its integrity can no longer be ensured, no guarantee may be given to by any modifications to be made to this document.

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1 INTRODUCTION

- 1.1 WSP (Asia) Limited was commissioned by Kung Hei Investment Limited to conduct a Sewerage Impact Assessment (SIA) for the indicative composite residential development at FSSTL 97, 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui (Hereafter "Project Site") by ascertaining adequate capacity of the existing sewerage system to cope with the sewerage flow generated from the Indicative Development.
- 1.2 Under Amendment Item D4 of the Draft Fanling/Sheung Shui Outline Zoning Plan No. S/FSS/25, the Representation Site in Sheung Shui Area 4 is proposed to be rezoned from "Industrial" ("I") to "Other Specified Uses" annotated "Business" ("OU(B)") subject to maximum building height restriction of 75mPD and maximum plot ratio restriction of 5.
- 1.3 To enable a composite residential development at Representation Site, the Written Representation puts forward a proposed rezoning from "I" to "Residential (Group E)" ("R(E)") with a proposed domestic PR of 5 and a non-domestic PR of 0.5, subject to the same building height restrictions of 75mPD set out for the adjoining "OU(B)" zone.
- 1.4 The scope of the sewerage impact assessment includes catchment study of the proposed site, discussion on potential sewerage impact on the existing sewerage system from two development scenarios: 1) a business development with plot ratio 5 for office, retail and restaurant uses under the "OU(B)" zone and 2) the indicative composite residential development with plot ratio 5 and non-domestic plot ratio of 0.5 under the "R(E)" zone and any recommendation on feasible mitigation measures, if applicable.

2 OUTLINE OF EXISTING SITE CONDITIONS AND SEWERAGE CHARACTERISTICS

- 2.1 The Project Site is located at F.S.S.T.L. 97, 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui. The area of the Project Site is approximately 3041m².
- 2.2 Under Amendment Item D4 of the Draft Fanling/Sheung Shui Outline Zoning Plan No. S/FSS/25, the Representation Site in Sheung Shui Area 4 is proposed to be rezoned from "Industrial" ("I") to "Other Specified Uses" annotated "Business" ("OU(B)") subject to maximum building height restriction of 75mPD and maximum plot ratio restriction of 5.
- 2.3 To enable a composite residential development at Representation Site, the Written Representation puts forward a proposed rezoning from "I" to "Residential (Group E)" ("R(E)") with a proposed domestic PR of 5 and a non-domestic PR of 0.5, subject to the same building height restrictions of 75mPD set out for the adjoining "OU(B)" zone. The sewage generated from the Proposed Development will be connected to Manhole 1 (FMH1004018) of the existing public sewerage network at Ka Fu Close.
- 2.4 The main sewerage flow runs along a series of foul sewer with size of 225mm in diameters along Ka Fu Close.

3 STANDARDS AND REGULATIONS ON WATER QUALITY

- 3.1 Water quality in Hong Kong is subject to the provisions of the Water Pollution Control Ordinance (Cap 358), 1980 (WPCO). Territorial Water has been subdivided into ten Water Control Zones (WCZ) and four supplementary water control zones. The Project Site is located in the Deep Bay Control Zone. A Technical Memorandum on Standards for Effluents discharged into Drainage and Sewerage Systems, Inland and Coastal Water (TMES) has been issued, which requires licensing of all discharges into all public sewers and drains. The water quality standards will have to be complied during the operation stages.
- 3.2 Discharge of sewage from the Project Site shall also be referenced to Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations 40(1), 40(2), 41(1), 90 and recap in ProPECC PN 5/93.

4 ASSESSMENT METHODOLOGY

- 4.1 The assessment has been carried out in accordance with the guidelines set out in EPD Report No. EPD/TP 1/05 Guidelines for Estimating Sewage Flows (GESF) for Sewerage Infrastructure Planning Version 1.0 ("GESF").
- 4.2 The existing demand for the sewerage system was identified to estimate the potential sewerage impact on the existing sewerage system associated with the Proposed Development.
- 4.3 With respect to the drainage record plans obtained from Drainage Services Department (DSD), the nearest existing manhole would be Manhole 1 (FMH1004018). It is proposed that the sewage generated from the Proposed Development will be directed to Manhole 1 (FMH1004018) at Ka Fu Close in the existing sewerage system. The proposed discharge manhole of sewage generated from the proposed development remains the same as the previous application (commercial development with PR 5.0).
- 4.4 The main sewerage flow runs along a series of sewer with size of 225mm in diameters along Ka Fu Close.
- 4.5 Locations of the manholes are shown in the drainage plan demonstrated in **Appendix 4.1**.
- 4.6 Based on the information of the existing foul sewers from DSD, the allowable flow rate of the existing sewers was calculated by using the Colebrook-White Equation. With reference to Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (GESF), the Global Unit Flow Factors indicated in **Table 4.1** and the Global Peaking factors shown in **Table 4.2** are adopted for calculation.

Table 4.1 Global Unit Flow Factor (UFF)

Type	Units Flow Factors (m ³ /person/day)
Residents (R2)	0.27
Office Staff	0.28
Retail Staff	0.28
F&B Staff	1.58

Table 4.2 Global Peaking Factor

Population	Peaking Factor
More than 50000	$\text{Max}(\frac{6}{N^{0.175}}, 1.6)$
10,000 – 50,000	3
5,000 – 10,000	4
1,000 – 5,000	5
Less than 1,000	6

5 SEWAGE IMPACT ASSESSMENT

Population

- 5.1 The existing demand for the sewerage system was calculated to estimate the sewerage impact on the Project Site, which is indicated in **Appendix 4.1**.
- 5.2 Population of the Indicative Development is estimated with the GFA and planned usage type according to the Commercial and Industrial Floor Space Utilization Survey (CIFSUS) published by Planning Department in 2005. The estimated worker density (employee/100m²) is 3.5 for Retail staff.
- 5.3 For other commercial activities in the typical business development with PR 5 for office, retail and restaurant use, the estimated worker density (employee/100m²) is 3.4 for Office staff, 5.1 for F&B staff and 3.5 for Retail staff as referenced from "Table 8 – Worker Density by Economic Activity and Planned Usage Type" in the CIFSUS.

Description of Zones

Project Site

- 5.4 The assumption of sewerage discharged from the Indicative Development is based on the location of existing manholes. It is assumed that sewage generated from the Project Site would be diverted to Manhole 1 (FMH1004018) since it is the nearest existing Manhole from proposed site area.

Sewage from Project Site

- 5.5 General activities such as toilet flushing, washing and cleaning are considered as the major sources of sewage discharge from the Project Site. All sewage will be collected and sewers will be connected to the existing sewerage systems and directed to the government drainage network. The peak flow of the Project Site is calculated in accordance with the DSD Sewerage Manual Part and the GESF. Detailed calculation of sewerage flow and loading is given in **Appendix 4.2**.
- 5.6 The estimated average sewerage flow from the Indicative Development is 252.9m³/day, which is smaller than the average sewerage flow of a typical business development with PR 5 for office, retail and restaurant use, 362.1m³/day.
- 5.7 As such, the Indicative Development is not expected to result in adverse impact on the existing sewerage system.

6 CONCLUSION

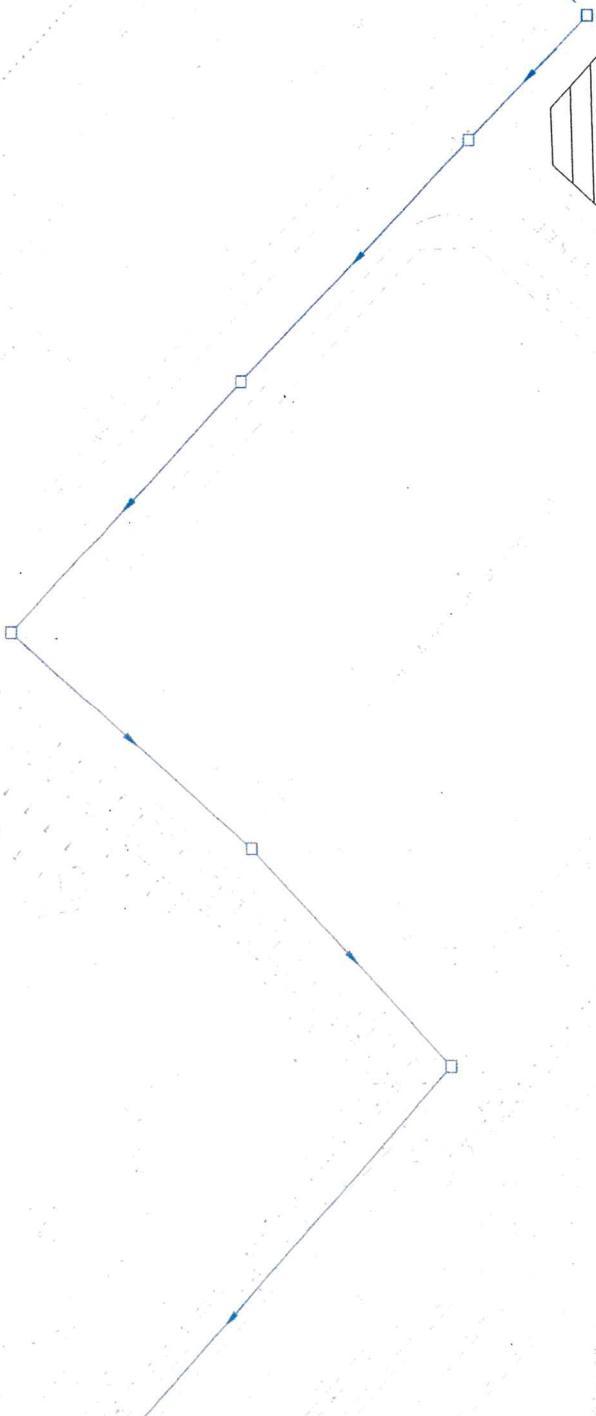
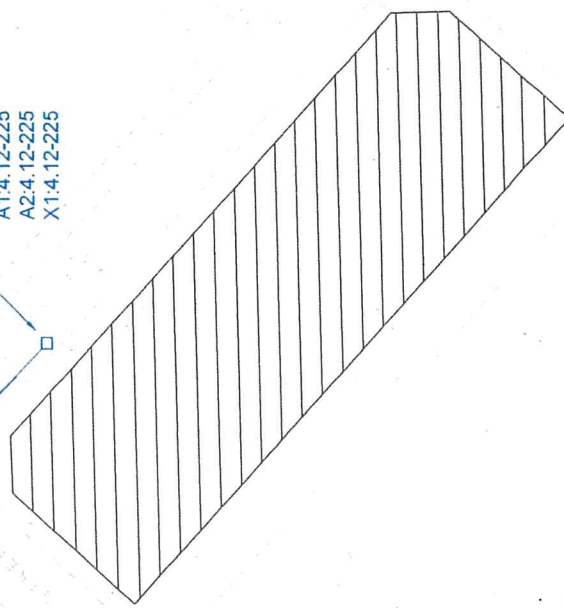
- 6.1 A sewerage impact assessment has been carried out for Indicative composite residential development at F.S.S.T.L. 97, 6 Ka Fu Close, Sheung Shui Area 4, Sheung Shui, N.T. It is expected that the total peak sewerage flow of $0.0176\text{m}^3/\text{s}$ will be generated from the full operation of the Proposed Development. Sewage from the Indicative Development would be diverted to public sewerage system on Ka Fu Close. As the expected peak flow from the Indicative Development is smaller than that of a typical development with PR 5 for business use (i.e. Office, Retail, Restaurants). ($0.0210\text{m}^3/\text{s}$), the Indicative Development is not expected to result in adverse impact on the existing sewerage system.

Appendices

Appendix 4.1
Sewer Plan



Manhole 1
FMH1004018
CL: 7.67
A1: 4.12-225
A2: 4.12-225
X1: 4.12-225



Legend:

	Project Site
	Existing Sewerage Pipeline

Appendix 4.2
Detailed Calculation of Sewage Flow and Loading

Detailed Calculation of Sewage Flow and Loading of Schemes from Previous Application														
Area	Discharge Manhole No.	Buildings in Zone	Uses	No. of Units	GFA	Population	Global Unit Factor	Estimated Sewage Discharge (m ³ /d)	Total Discharge at Manhole (m ³ /d)	Catchment Inflow Factor (PCIF)	Contribution Population	Peaking Factor	Total Peak Flow (m ³ /s)	Remarks
Commercial PR 5.0	FMH10004018	Proposed Building	Office	N/A	7603	256	0.26	72.4	382.1	1.0	1341	5	0.0210	
			Retail	N/A	160	4562	160	44.7						
			F&B	N/A	3041	155	1.58	246.0						

Detailed Calculation of Sewage Flow and Loading of Proposed Scheme														
Area	Discharge Manhole No.	Buildings in Zone	Uses	No. of Units	GFA	Population	Global Unit Factor	Estimated Sewage Discharge (m ³ /d)	Total Discharge Factor at Manhole (m ³ /d)	Catchment Inflow Factor (PCF)	Contribution Population	Peaking Factor	Total Peak Flow (m ³ /s)	Remarks
Domestic PR 5.0; Non-domestic PR 0.5	FMH1004018	Proposed Building	Residential	304	N/A	862	0.27	238.0	252.9	1.0	937	6	0.0176	
			Retail	N/A	1521	53	0.28	14.9						

就草圖作出申述

Representation Relating to Draft Plan

參考編號

Reference Number:

220217-114811-44620

提交限期

Deadline for submission:

17/02/2022

提交日期及時間

Date and time of submission:

17/02/2022 11:48:11

「申述人」全名

Full Name of "Representer":

先生 Mr. Edmond Fong for The Hong Kong and China Gas Company Limited

「獲授權代理人」全名

Full Name of "Authorized Agent" :

與申述相關的草圖

Draft plan to which the representation relates: S/FSS/25

申述的性質及理由

Nature of and reasons for the representation:

有關事項 Subject Matters	性質 Nature	理由 Reason
C1	反對 Oppose	<p>We write to lodge our objection to the S5 application – item C1 (Application No. S/FSS/25) due to a section of existing 600 mm High Pressure strategic trunk main, supplying gas to Fanling, Yuen Long and Tuen Mun, situated within application site.</p> <p>The current application site boundary should be adjusted in such a way that the 600mm High Pressure pipeline will not be encroached in the application site boundary.</p> <p>Furthermore, since the proposed rezoning from "G/IC" and "GB" to "R(A)" is in close vicinity to our Fanling West Offtake Station and 600mm High Pressure gas pipeline near Castle Peak Road – Kwu Tung, the rezoning/project proponent should conduct Quantitative Risk Assessment (QRA) to evaluate the potential risk and determine/implement the necessary mitigation measure(s) if required. The QRA should take into account the future population of the area, such as those in the existing buildings, in the proposed development, and in other approved developments, etc. where applicable. The rezoning/project proponent should consult our company in the design stage and closely coordinate with our company during the construction</p>

		<p>on stage, and provide protective measures.</p> <p>Application number: Y/NE-KTS/12</p> <p>Link: https://www.info.gov.hk/tpb/tc/plan_application/Attachment/20190222/s12afi_Y_NE-KTS_12_4_gist.pdf</p> <p>Application number: Y/NE-KTS/14</p> <p>Link: https://www.info.gov.hk/tpb/tc/plan_application/Attachment/20200619/s12afi_Y_NE-KTS_14_5_gist.pdf</p> <p>Application number: A/NE-KTS/484</p> <p>Link: https://www.info.gov.hk/tpb/tc/plan_application/Attachment/20191126/s16fi_A_NE-KTS_484_12_gist.pdf</p>
<p>對草圖的建議修訂(如有的話)</p> <p>Proposed Amendments to Draft Plan(if any):</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>		

就草圖作出申述

Representation Relating to Draft Plan

參考編號

Reference Number:

220217-204204-67064

提交限期

Deadline for submission:

17/02/2022

提交日期及時間

Date and time of submission:

17/02/2022 20:42:04

「申述人」全名

Full Name of "Representer":

先生 Mr. John Douglas Moore

「獲授權代理人」全名

Full Name of "Authorized Agent" :

與申述相關的草圖

Draft plan to which the representation relates: S/FSS/25

申述的性質及理由

Nature of and reasons for the representation:

有關事項 Subject Matters	性質 Nature	理由 Reason
All Items	反對 Oppose	<p>I object to all of the various rezoning proposals from G/IC to residential, whether the proposed rezoning be for public or private housing developments. Hong Kong faces a diminishing population for various reasons, with an increasingly elderly population requiring community services in light of the distinct possibility that they will not have adequately equipped family members (or domestic helpers) in Hong Kong who can care for them privately.</p> <p>With respect to the "B" sites, these should be retained as G/IC for stand-alone community services and to lessen the ventilation, visual and "wall effects" of existing, nearby developments. Any construction on these sites will create a wall effect bordering a green hillside and is not compatible with the surroundings.</p> <p>I note that thousands of trees in aggregate have been surveyed with respect to the various application sites, and I object to the extensive destruction of the natural ecosystem and felling of such an extensive number of trees. The application contains no background on the environmental impacts of such widespread destruction of the natural environment. Extensive residen</p>

tial construction will be done with extensive podiums which cannot accommodate at ground planting. Trees on podiums is not comparable to at ground planting and will not provide space for planting trees with appropriately-sized canopies to shade frequently access outdoor spaces. In addition, compensatory planting at "off-site" locations is unacceptable as it does not replace the loss of vegetation at the application sites. Vague statements regarding plans to plant trees on podium estates in nothing more than fraudulent greenwash.

Small piecemeal developments lack traditional support systems necessary for public housing development and should be avoided.

There is no discussion of this "off-site" location at Tong Hang. How large is this site? What is its current use? How can at most 1,000 trees be planted at this location, and if it is so conducive to tree planting, why has it not already been planted? It is amazing how compensatory sites just conveniently and magically appear.

The images provided are inadequate and make it impossible to truly understand the construction impact of the proposal. This application should be rejected.

對草圖的建議修訂(如有的話)

Proposed Amendments to Draft Plan(if any):

就草圖作出申述

Representation Relating to Draft Plan

參考編號

Reference Number:

220217-204414-95628

提交限期

Deadline for submission:

17/02/2022

提交日期及時間

Date and time of submission:

17/02/2022 20:44:14

「申述人」全名

Full Name of "Representer":

女士 Ms. Melanie Ann Moore

「獲授權代理人」全名

Full Name of "Authorized Agent":

與申述相關的草圖

Draft plan to which the representation relates: S/FSS/25

申述的性質及理由

Nature of and reasons for the representation:

有關事項 Subject Matters	性質 Nature	理由 Reason
All Items	反對 Oppose	<p>I object to all of the various rezoning proposals from G/IC to residential, whether the proposed rezoning be for public or private housing developments. Hong Kong faces a diminishing population for various reasons, with an increasingly elderly population requiring community services in light of the distinct possibility that they will not have adequately equipped family members (or domestic helpers) in Hong Kong who can care for them privately.</p> <p>With respect to the "B" sites, these should be retained as G/IC for stand-alone community services and to lessen the ventilation, visual and "wall effects" of existing, nearby developments. Any construction on these sites will create a wall effect bordering a green hillside and is not compatible with the surroundings.</p> <p>I note that thousands of trees in aggregate have been surveyed with respect to the various application sites, and I object to the extensive destruction of the natural ecosystem and felling of such an extensive number of trees. The application contains no background on the environmental impacts of such widespread destruction of the natural environment. Extensive residen</p>

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對草圖的建議修訂(如有的話)

Proposed Amendments to Draft Plan(if any):

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就草圖作出申述

Representation Relating to Draft Plan

參考編號

Reference Number:

220217-204534-55328

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Deadline for submission:

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提交日期及時間

Date and time of submission:

17/02/2022 20:45:34

「申述人」全名

Full Name of "Representer":

女士 Ms. Wilhelmina Evelyn Moore

「獲授權代理人」全名

Full Name of "Authorized Agent":

與申述相關的草圖

Draft plan to which the representation relates: S/FSS/25

申述的性質及理由

Nature of and reasons for the representation:

有關事項 Subject Matters	性質 Nature	理由 Reason
All Items	反對 Oppose	<p>I object to all of the various rezoning proposals from G/IC to residential, whether the proposed rezoning be for public or private housing developments. Hong Kong faces a diminishing population for various reasons, with an increasingly elderly population requiring community services in light of the distinct possibility that they will not have adequately equipped family members (or domestic helpers) in Hong Kong who can care for them privately.</p> <p>With respect to the "B" sites, these should be retained as G/IC for stand-alone community services and to lessen the ventilation, visual and "wall effects" of existing, nearby developments. Any construction on these sites will create a wall effect bordering a green hillside and is not compatible with the surroundings.</p> <p>I note that thousands of trees in aggregate have been surveyed with respect to the various application sites, and I object to the extensive destruction of the natural ecosystem and felling of such an extensive number of trees. The application contains no background on the environmental impacts of such widespread destruction of the natural environment. Extensive residen</p>

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The images provided are inadequate and make it impossible to truly understand the construction impact of the proposal. The application should be rejected.

對草圖的建議修訂(如有的話)

Proposed Amendments to Draft Plan(if any):

--

就草圖作出申述

Representation Relating to Draft Plan

參考編號

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220217-204657-42775

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Deadline for submission:

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Date and time of submission:

17/02/2022 20:46:57

「申述人」全名

Full Name of "Representer":

女士 Ms. Genevieve James Moore

「獲授權代理人」全名

Full Name of "Authorized Agent":

與申述相關的草圖

Draft plan to which the representation relates: S/FSS/25

申述的性質及理由

Nature of and reasons for the representation:

有關事項 Subject Matters	性質 Nature	理由 Reason
All Items	反對 Oppose	<p>I object to all of the various rezoning proposals from G/IC to residential, whether the proposed rezoning be for public or private housing developments. Hong Kong faces a diminishing population for various reasons, with an increasingly elderly population requiring community services in light of the distinct possibility that they will not have adequately equipped family members (or domestic helpers) in Hong Kong who can care for them privately.</p> <p>With respect to the "B" sites, these should be retained as G/IC for stand-alone community services and to lessen the ventilation, visual and "wall effects" of existing, nearby developments. Any construction on these sites will create a wall effect bordering a green hillside and is not compatible with the surroundings.</p> <p>I note that thousands of trees in aggregate have been surveyed with respect to the various application sites, and I object to the extensive destruction of the natural ecosystem and felling of such an extensive number of trees. The application contains no background on the environmental impacts of such widespread destruction of the natural environment. Extensive residen</p>

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對草圖的建議修訂(如有的話)

Proposed Amendments to Draft Plan(if any):

--

就草圖作出申述

Representation Relating to Draft Plan

參考編號

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220217-235407-77812

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Date and time of submission:

17/02/2022 23:54:07

「申述人」全名

Full Name of "Representer":

先生 Mr. Piter Lu

「獲授權代理人」全名

Full Name of "Authorized Agent":

與申述相關的草圖

Draft plan to which the representation relates: S/FSS/25

申述的性質及理由

Nature of and reasons for the representation:

有關事項 Subject Matters	性質 Nature	理由 Reason
Rezoning of a site to the east of Jockey Club Road and to the west of Fan Leng Lau Road at Fanling Area 17 from "Government, Institution or Community" ("G/IC") and "Residential (Group C)1" ("R(C)1") to "Reside	反對 Oppose	<p>STRONGLY OPPOSE THIS ITEM</p> <p>首先，起到170mPD咁高完全不合理！嚴重影響周遭景觀，附近屋苑都係二三十層樓高，粉嶺花園更加得3層樓高，所謂既視覺影響評估寫到可以用緩解措施去減低景觀影響，麻煩城規會委員可以睇睇顧問公司報告視覺影響評估既VIEWPOINT 7，又密又高，完全不符human scale，空氣極不流通，另外VIEWPOINT 9更加可以睇到擬建公屋同整個社區唔融合，請解釋點樣可以對景觀無不良影響？再者，呢個SITE咁大，點解要喺呢個SITE起到170mPD咁高而唔係喺其他修訂項目既SITE起高少少拉上補下令到區內景觀影響減到最低？</p> <p>第二，此修訂項目完全忽視交通問題！區內出市區既公共交通只有巴士，巴士班次極疏，講緊係20分鐘至半個鐘先一班，之後多成兩萬幾三萬人，想問要區內居民等幾耐先上到車出到市區返工返學？想問個交通評估計左馬屎埔一帶未來會起既私樓未（幾萬人口）？交通評估計中寫既路口改善同加公共交通交匯處係咪就真係解決到區內十分嚴重既交通問題？</p>

Initial (Group A)7" ("R(A)7") with stipulation of building height restriction		
Rezoning of a site fronting Fan Leng Lau Road at Fanling Area 17 from "G/IC" and "R(C)1" to "R(A)8" with stipulation of building height restriction	反對 Oppose	<p>STRONGLY OPPOSE THIS ITEM</p> <p>此修訂項目完全忽視交通問題！區內出市區既公共交通只有巴士，巴士班次極疏，講緊係20分鐘至半個鐘先一班，之後多成兩萬幾三萬人，想問要區內居民等幾耐先上到車出到市區返工返學？想問個交通評估計左馬屎埔一帶未來會起既私樓未（幾萬人口）？交通評估計中寫既路口改善同加公共交通交匯處係咪就真係解決到區內十分嚴重既交通問題？</p>
Rezoning of a site to the east of Jockey Club Road and to the southwest of Fanling Garden at Fanling Area 17 from "G/IC" and "R(C)1" to "R(A)8" with stipulation of building height restriction	反對 Oppose	<p>STRONGLY OPPOSE THIS ITEM</p> <p>此修訂項目完全忽視交通問題！區內出市區既公共交通只有巴士，巴士班次極疏，講緊係20分鐘至半個鐘先一班，之後多成兩萬幾三萬人，想問要區內居民等幾耐先上到車出到市區返工返學？想問個交通評估計左馬屎埔一帶未來會起既私樓未（幾萬人口）？交通評估計中寫既路口改善同加公共交通交匯處係咪就真係解決到區內十分嚴重既交通問題？</p>

對草圖的建議修訂(如有的話)

Proposed Amendments to Draft Plan(if any):

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AMENDMENTS TO FANLING/SHEUNG SHUI OZP NO. S/FSS/24

17/02/2022 19:54

From:

To:

File Ref:

tpbpd <tpbpd@pland.gov.hk>

AMENDMENTS TO FANLING/SHEUNG SHUI OZP NO. S/FSS/24

Dear TPB Members,

Yet another substantial grab of sites that were attended to provide community services and recreational facilities to be rezoned to feed the housing monster. This despite the reality that we face a diminishing population because of demographic, political and now economic issues. Once interest rates start to rise there will no longer be access to cheap capital and the acquisition of bricks and motor as investment vehicles will diminish. On the other hand the number of elderly requiring community services will steadily increase and it is evident that better child care facilities are necessary if working mothers are to be encouraged to have more children.

Item A1 – (about 6.35 ha) Area 17 Rezone from “G/IC” and “R(C)1” to “R(A)7” with a maximum BH of 170mPD for the public housing development.

Item A2 – (about 0.87ha) Rezone Area 17 Site B1 from “G/IC” and “R(C)1” to “R(A)8” with a maximum BH of 135mPD for the **private housing development**.

Item A3 – (about 0.73 ha) Rezone Area 17 Site B2 from “G/IC” and “R(C)1” to “R(A)8” with a maximum BH of 145mPD for the **private housing development**.

Object to the rezoning of the two ‘B’ sites to private housing. One at least, preferably B2 close to the schools should be retained as GIC to provide stand-alone community services and to provide ventilation and visual relief from the wall effect of the existing towers and the proposed PH estate. B2 also has a number of trees. How many of the 14 are on this site?

4.12 A total of 1,035 trees are surveyed.. There are 14 trees with DBH greater than 1m. 4.13 158 trees are recommended to be retained, while the remaining 877 trees are recommended to be felled, including 8 trees with DBH greater than 1m. About 350 new trees are proposed within the future public housing development (Plan 8b). Since there is limited space within the sites for compensatory planting, an off-site location near Tong Hang (Plan 8a) has been identified for compensatory planting of about 505 trees.

No mention of the ecosystem and the impact on flora and fauna. There is absolutely no way 350 REAL trees could be provided at the PH as the majority of the site is to be developed on top of podiums and all that can grow at that level are decorative

trees not the type of tree that would attract birds, butterflies or fauna.

*planting trees **with appropriate sized canopies** in frequently accessed outdoor spaces*

This is one of those fairytale statements that no one who has visited the new PH podium estates would take as anything more than GREENWASH. On the contrary it is clear that every effort is being made to ensure that those species of trees that could in due course require more space than their allocated box are no longer planted. Instead the trend is for trees that produce colourful flowers but are in reality nothing more than tall bushes.

Item B – (about 0.43 ha) Rezone Ching Hiu Road Site from “G/IC” and “GB” to “R (A)9” with a maximum BH of 140mPD for the public housing development.

Object to this stand-alone PH. In view of the small number of units and the private towers of Royal Green on one side and the Home for the Aged on the other, this site would be more suited to a medium rise private development or GIC use instead of a wall effect bordering the green hillside. It is clear from the visuals that the PH tower is not compatible with the surroundings. An extension of Royal Garden with the large clump of trees retained would be more appropriate.

HA officials themselves do not favour such small developments as they lack the traditional support systems of a PH development.

*A total of **173 trees** are surveyed. There is one tree with DBH greater than 1m. **100 trees** are in direct conflict with or will be affected by the proposed development and are recommended to be felled due to poor condition and/or low suitability to be transplanted. The remaining 73 trees are recommended to be retained.*

*5.8 About **20 new trees** are proposed within the future public housing development (Plan 8c). Since there is limited space within the site for compensatory planting, about **80 trees** are proposed to be compensated at the off-site location near **Tong Hang** (Plan 8a).*

Item C1 – (about 3.05 ha) Rezone Tai Tau Leng Site from “G/IC” and “GB” to “R (A)10” with a maximum BH of 130mPD for the public housing development.

Item C2 – (about 0.72ha) Rezone of a strip of land along Fanling Highway at Sheung Shui Area 35 from “GB” to area shown as ‘Road’.

*A total of **515 trees** are surveyed (**280 trees within the site**). There are **10 trees with DBH greater than 1m. 371 trees, including seven with DBH greater than 1m, are in direct conflict with or will be affected by the proposed development***

and are recommended to be felled due to poor condition and/or low suitability to be transplanted. The remaining 144 trees are proposed to be retained.

6.8 About 130 new trees are proposed within the future public housing development (Plan 8d). Since there is limited space within the site for compensatory planting, about **230 trees are proposed to be compensated at the off-site location near Tong Hang**

What can one say, its PH so it will go ahead regardless. Again no mention of the impact on flora and fauna and with much of the compensatory tree planting on podium level the compensatory planting can be taken as green wash.

Item D1 – (about 1.96 ha) Rezone Choi Shun Street Site from “I” to “R(A)11” with a maximum BH of 160mPD for the public housing development..

Item D2 – (about 3.64 ha) Rezone a proposed primary school site adjacent to Choi Shun Street, Sheung Shui Ambulance Depot, Sheung Shui Ventilation Building and a strip of land along Dongjiang watermain from “I” to “G/IC”.

*A total of **148 trees** are surveyed. A total of **123 trees will be affected** by the proposed development and proposed to be felled as the trees are not suitable for transplanting. The remaining 25 existing trees will be retained. About **90 new trees** will be provided within the public housing development (Plan 8e). **44 compensatory trees** are proposed outside the public housing site boundary (Plan 8e) Mostly along the highway*

The rezoning of Industrial is of concern. Where are all these additional residents going to work?

Where are all those activities currently being carried out on brownfield sites that should be accommodated in custom built high rise industrial parks going to move to? The need to ensure employment opportunities within a reasonable distance of homes appears to have been forgotten in the drive to rezone every piece of land to tick the PH box.

Item D3 – (about 3.11 ha) Rezone eastern portion of Area 30 from “I” to “C” with a maximum BH of 75mPD.

Item D4 – (about 4.22 ha) Rezone Area 4 from “I” to “OU(B)” with a maximum BH of 75mPD.

While the above will be welcomed by developers and the commercial developments will provide employment, the issue of where will the brownfields and less desirable facilities go is not resolved. For example services like car repair are gradually being eliminated but these are essential to the smooth operation of the community and provide thousands of jobs for blue collar workers. The ‘gentrification’ of the ‘I’ zones with no alternative sites provided for workshops should be questioned by TPB members.

Trees – 505 (A) + 80 (B) + 230 (C) = 815 to be planted at Tong Hang. So how large is the site there? Other than one plan no details provided re how these trees will be accommodated and how they will integrate with the local environment and terrain.

Re the Visual Impact. It appears that the images were taken on a particularly bad pollution day to ensure visual impact would be obscured?

It is impossible to make an educated comment and better images should be provided so that this issue can be addressed during the Comments stage of consultation.

Mary Mulvihill



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	Date Received 收到日期	

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申述必須於指定的圖則展示期限屆滿前向城市規劃委員會（下稱「委員會」）提出，填妥的表格及支持有關申述的文件（倘有），必須送交香港北角渣華道 333 號北角政府合署 15 樓城市規劃委員會秘書收。
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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。提出申述的人士須以打印方式或以正楷填寫表格，填寫的資料宜中英文兼備。倘若未能提供所需資料，則委員會可把有關申述視為不曾提出論。

1. Person Making this Representation (known as "Representer" hereafter) 提出此宗申述的人士（下稱「申述人」）
Full Name 姓名 / 名稱 (Mr./Ms./Company/Organisation* 先生/女士/公司/機構*) HONG FUNG CHUI LING CINDY 黃馮翠玲 (Note: for submission by person, full name shown on Hong Kong Identity Card/Passport must be provided) (注意：若個人提交，須填上與香港身份證／護照所載的全名)

2. Authorised Agent (if applicable) 獲授權代理人(如適用)
Full Name 姓名 / 名稱 (Mr./Ms./Company/Organisation* 先生/女士/公司/機構*) NA (Note: for submission by person, full name shown on Hong Kong Identity Card/Passport must be provided) (注意：若個人提交，須填上與香港身份證／護照所載的全名)



3. Details of the Representation 申述詳情	
Draft plan to which the representation relates (please specify the name and number of the draft plan) 與申述相關的草圖（請註明草圖名稱及編號）	粉嶺/上水分區計劃 S/FSS/24 S/FSS/25

* Delete as appropriate 請刪去不適用者

Please fill in "NA" for not applicable item 請在不適用的項目填寫「不適用」

3. Details of the Representation (Continued) (use separate sheet if necessary) [#] 申述詳情(續)(如有需要,請另頁說明) [#]		
Nature of and reasons for the representation 申述的性質及理由		
Subject matters 有關事項 [@]	Are you supporting or opposing the subject matter? 你支持還是反對有關事項?	Reasons 理由
1. 拆散家園 2. 綠化地改為住宅地	<input type="checkbox"/> support 支持 <input checked="" type="checkbox"/> oppose 反對	詳述見附頁 P.1 P.1
3. 破壞生態環境 4. 造成交通擠塞	<input type="checkbox"/> support 支持 <input checked="" type="checkbox"/> oppose 反對	詳述見附頁 P.1-P.2 P.2
5. 撤回發展大頭嶺屋計劃 6. 修改圖則	<input checked="" type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	詳述見附頁 P.2 P.3
Any proposed amendments to the draft plan? If yes, please specify the details. 對草圖是否有任何擬議修訂? 如有的話,請註明詳情。		

[#] If supporting documents (e.g. colour and/or large size plans, planning studies and technical assessments) is included in the representations, 90 copies (or 40 hard copies and 50 soft copies) of such information shall be provided.
若申述附有支持其論點的補充資料(例如彩色及/或大尺寸的圖則、規劃研究及技術評估),則須提供 90 份複本(或 40 份印文本和 50 份電子複本)。

[@] Please describe the particular matter in the plan to which the representation relates. Where the representation relates to an amendment to a plan, please specify the amendment item number provided in the Schedule of Proposed Amendments. 請形容圖則內與申述有關的指定事項,如申述與圖則的修訂有關,請註明在修訂項目附表內的修訂項目編號。

Please fill "NA" for not applicable item 請在不適用的項目填寫「不適用」

☒ at the appropriate box 請在適當的方格內加上 ☒ 號

1. 反對拆散家園：

我們家在松柏朗這家居住了超過五十多年時間。到現在已第四代了。家族成員五十多人，大家都視這家為祖屋，維繫一家人感情的地方。我們都希望可以一代代傳下去。我們只求安居，我們安份守己，努力保持家庭完整，維持家園面貌。到頭來無理被迫走，拆散家庭。這合情合理嗎？

2. 反對綠化地改為住宅地：

我們家松柏朗身處綠化地區。我們一直致力保持原貌，種植多種樹木、植物，保護環境。有些樹木更超過五十分樹齡，樹身更滿布地衣，証明空氣良好。香港雖然是寸金尺土，但要覓地建屋又何需偏要向綠化地上居民開刀！

明白香港住屋需求，政府要不斷覓地建屋。但請跟眼看看正正在我家對面就有一個佔地170公頃的高爾夫球場。近年也不斷有各階層人士要求收回建屋，以及我家毗鄰的愛苑佔地也有三公頃，都已空置數十年，政府為何不認真考慮收回建屋，肯定能建更多公屋，更多人受惠。而為何偏要拆散已住了數十年的平民百姓家園。

3. 反對破壞生態環境：

我們家這區一向安靜，空氣清新，陽光普照。但自從對面高爾夫街園開建到

人伙後已出現巨大變化，陽光空氣被遮擋，植物生長已不復從前茂盛。以前常見的螢火蟲已絕跡。經常在樹上打招呼的小松蟲也不見踪影。還有你可看過比手掌還大的飛蛾嗎？雀鳥、蝴蝶在家樹上棲息的現象已越來越少。為了保護這地球，好讓人類能繼續生存，好好居住，各國都努力致力環境保護，我們不是要同步而行嗎？破壞生態環境的代價，我們能獨善其身嗎？

4. 反對造成交通擠塞：

大頭嶺迴旋處是青山公路古洞段及粉錦公路出入上水市中心及其他地區主要路口，經常出現擠塞。而因為行車等路而出現的交通意外時有發生。現時高爾夫街圍入住率不高，但隨著時間，不斷有人入伙，若果再要建三千多戶的公屋，接近九千人口增加，交通必定負荷不住。大頭嶺迴旋處無法負荷，直接申延影響雞嶺迴旋處出入市區，交通擠塞可以想像。

5. 支持撤回發展大頭嶺建屋計劃：

近十年上水不斷有公私營住宅樓宇落成，人口不斷上升，民生、醫療、交通、學校各方面已超負荷。未封關前，每日經羅湖及落馬洲，以致新田交會處進入上水的內地居民不計其數，造成民生各方面不便，為何還要遷入更多人口。我們北區已接壞深圳，越來越擠迫，政府為何不全力發展明日大嶼？

C. 支持修改圖則：

如非要發展大頭嶺一段建公屋，我們衷心祈望政府認真考慮修改圖則。保留大坑渠西面我們松柏朗一段的村屋，只發展大坑渠東西一段棕地。畢竟松柏朗一段只佔約五分之一地方，對發展影響不大，對屬地居民影響較少，也大大減少政府收地作出貼償支出。保留多一塊綠化地區。

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1. Person Making this Representation (known as "Representer" hereafter) 提出此宗申述的人士（下稱「申述人」）

Full Name 姓名 / 名稱 (Mr./Ms./Company/Organisation* 先生/女士/公司/機構*)

CHAN WAI YEE WENDY

陳惠兒



(Note: for submission by person, full name shown on Hong Kong Identity Card/Passport must be provided)
(注意：若個人提交，須填上與香港身份證／護照所載的全名)

2. Authorised Agent (if applicable) 獲授權代理人(如適用)

Full Name 姓名 / 名稱 (Mr./Ms./Company/Organisation* 先生/女士/公司/機構*)

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3. Details of the Representation 申述詳情

Draft plan to which the representation relates (please specify the name and number of the draft plan)
與申述相關的草圖（請註明草圖名稱及編號）

S/FSS/24
C1 - R(A)10

* Delete as appropriate 請刪去不適用者

Please fill in "NA" for not applicable item 請在不適用的項目填寫「不適用」

3. Details of the Representation (Continued) (use separate sheet if necessary)[#]
 申述詳情(續) (如有需要, 請另頁說明)[#]

Nature of and reasons for the representation 申述的性質及理由		
Subject matters 有關事項 [@]	Are you supporting or opposing the subject matter? 你支持還是反對有關事項?	Reasons 理由
S/FSS/24 C1 - R(A)10 Amendment item C1	<input type="checkbox"/> support 支持 <input checked="" type="checkbox"/> oppose 反對	看附件 See attached
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	

Any proposed amendments to the draft plan? If yes, please specify the details.
 對草圖是否有任何擬議修訂? 如有的話, 請註明詳情。

強烈調要求考慮更改計劃, 刪減計劃中興建的D及E座公屋, 保留現松柏塋民居部份, 達致不遷不拆的目標。

[#] If supporting documents (e.g. colour and/or large size plans, planning studies and technical assessments) is included in the representations, 90 copies (or 40 hard copies and 50 soft copies) of such information shall be provided.
 若申述附有支持其論點的補充資料(例如彩色及/或大尺寸的圖則、規劃研究及技術評估), 則須提供 90 份複本(或 40 份印文本和 50 份電子複本)。

[@] Please describe the particular matter in the plan to which the representation relates. Where the representation relates to an amendment to a plan, please specify the amendment item number provided in the Schedule of Proposed Amendments. 請形容圖則內與申述有關的指定事項, 如申述與圖則的修訂有關, 請註明在修訂項目附表內的修訂項目編號。

Please fill "NA" for not applicable item 請在不適用的項目填寫「不適用」

☒ at the appropriate box 請在適當的方格內加上 ☒ 號

附件

有關事項：粉嶺/上水分區計劃大綱核准圖編號

S/FSS/24 - C1 - R(A)10

本人為政府計劃收回松柏塋帶狀地段(粉嶺/上水分區計劃大綱核准圖編號 S/FSS/24)的居民，對於政府突然通知要收回土地及房屋感到十分驚訝、愕然，擔心得不能入眠，心緒不寧。本人不能接受收回土地及房屋。本人要求不多，只是要求刪減計劃中將興建的D及E座公屋，達致松柏塋現有居民居住的地段可以不遷不拆。

計劃中的A、B及C座公屋與D及E座公屋之間一河相隔，不但顯得格格不入。而且沒有考慮這規劃暗藏的保安及管理的隱憂。此河在大雨時可於短瞬間滿溢，對於屋邨大量的居民尤其是小孩及長者、屋邨保安員有極大潛在危險。此河平平無奇水淺得似溝渠，但是是洩去周邊雨水的要河，大雨時因為地勢雨水大量從四方八面匯入此河，水勢之洶湧每年雨季都浸沒了很多的汽車，是汽車報銷的黑點。這地段地勢並不容易改變，西南面的高爾夫球場和北面的愛園別墅都高於此河，大量雨水沿著地勢流入青山公路匯集湧入此河，情況兇險，真的不能低估及忽視此情況。

本人反對政府收回松柏塋這地段。因為這地段不大，更全為居住用途，現住了10多戶居民。現有松柏塋民居部份地段計劃建以上提的兩幢公屋。緩減力度不大、又影響現住的民居、又大費周章安排安置善後現居民，並不是理想的決定。

現在松柏塋民居部份地段的居民大部分都60歲以上的長者，其中也有多人已是80歲90歲以上的行動不便的獨居老邁長者。多人得知這收回計劃都深感徬徨，老淚縱橫，於心何忍？不難理解徬徨的原因，不良於行的長者怎能承受搬遷的折騰。左鄰右里已是超過50年的老朋友，長者一直靠鄰里互相幫助。如要長者搬遷，鄰里各散東西，到了新環境人生路不熟，又沒有鄰里幫助，不能適應，怎麼生活呢？

除了適應問題外，還有經濟和住屋問題。若接受政府收回此地的賠償，就算拿最高金額都不足買到現時一間相對廉價的居屋，長者都已退休沒有供樓能力。更不要提對長者來講是天價的私樓了。若接受公屋或租住私樓長者也沒有能力每月交租，政府難道要迫明明原本有屋住的人瞓街嗎？

土地是真金白銀買回來為的是可以在此安居，安享晚年。居民用了畢生的積蓄裝設甚至重建老舊房子打造成為一個安樂窩，以此渡過餘生。收回土地及房屋如同強搶民居，又怎能接受呢？

其實本人對政府收地發展和興建公共房屋減緩現在公共房屋供不應求的壓力是沒有異議，不過計劃應以不憂民為目標，計劃收回的土地應只集中選擇綜地、荒廢地和空置地，不應選有居民居住的土地。

根據以上理由強烈調要求考慮更改計劃，刪減計劃中興建的D及E座公屋，保留現松柏塋民居部份，達致不遷不拆的目標。那就感激萬分。

☐ Urgent ☐ Return Receipt Requested ☐ Sign ☐ Encrypt ☐ Mark Subject Restricted ☐ Expand personal&publi

**Opposition to Amendment Item C1 Tai Tau Leng S/FSS/24**

14/02/2022 13:47

From:

To:

tpbpd@pland.gov.hk

File Ref:

1 attachment



Helen Yu Opposition to Amendment Item.C1 SFSS24.pdf

Dear sirs,

Attached please find my Opposition to Amendment Item C1: The Rezoning of a Public Housing Site at Tai Tau Leng from "GB" and "G/IC" to R(A)10 in regards to Approved Fanling / Sheung Shui Outline Zoning Plan No. S/FSS/24.

Regards,

Helen Yu

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	Date Received 收到日期	

- The representation should be made to the Town Planning Board (the Board) before the expiry of the specified plan exhibition period. The completed form and supporting documents (if any) should be sent to the Secretary, Town Planning Board, 15/F., North Point Government Offices, 333 Java Road, North Point, Hong Kong.
申述必須於指定的圖則展示期限屆滿前向城市規劃委員會(下稱「委員會」)提出, 填妥的表格及支持有關申述的文件(倘有), 必須送交香港北角渣華道 333 號北角政府合署 15 樓城市規劃委員會秘書收。
- Please read the "Town Planning Board Guidelines on Submission and Publication of Representations, Comments on Representations and Further Representations" before you fill in this form. The Guidelines can be obtained from the Secretariat of the Board (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), or downloaded from the Board's website at <http://www.info.gov.hk/tpb/>.
填寫此表格之前, 請先細閱有關「根據城市規劃條例提交及公佈申述、對申述的意見及進一步申述」的城市規劃委員會規劃指引。這份指引可向委員會秘書處(香港北角渣華道 333 號北角政府合署 15 樓 - 電話: 2231 4810 或 2231 4835 及規劃署的規劃資料查詢處(熱線: 2231 5000)(香港北角渣華道 333 號北角政府合署 17 樓及新界沙田上禾輦路 1 號沙田政府合署 14 樓)索取, 亦可從委員會的網頁下載(網址: <http://www.info.gov.hk/tpb/>)。
- 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, preferably in both English and Chinese. The representation may be treated as not having been made if the required information is not provided.
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。提出申述的人士須以打印方式或以正楷填寫表格, 填寫的資料宜中英文兼備。倘若未能提供所需資料, 則委員會可把有關申述視為不曾提出論。

1. Person Making this Representation (known as "Representer" hereafter) 提出此宗申述的人士(下稱「申述人」)

Full Name 姓名 / 名稱 (Mr./Ms./Company/Organisation* 先生/女士/公司/機構*)

Helen Yu

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與申述相關的草圖(請註明草圖名稱及編號)

Proposed Amendments to the Approved Faaling/
Shaung Shui Outline Zoning Plan No. S/FCS/240

* Delete as appropriate 請刪去不適用者

Please fill in "NA" for not applicable item 請在不適用的項目填寫「不適用」

3. Details of the Representation (Continued) (use separate sheet if necessary) [#] 申述詳情(續) (如有需要, 請另頁說明) [#]		
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Amendment Item C1 The Rezoning of a public housing site at Tai Tau Leng from "G/B" and "G/IC" to R(A)10	<input type="checkbox"/> support 支持 <input checked="" type="checkbox"/> oppose 反對	Please refer to attachment.
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
Any proposed amendments to the draft plan? If yes, please specify the details. 對草圖是否有任何擬議修訂? 如有的話, 請註明詳情。		

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Please fill "NA" for not applicable item 請在不適用的項目填寫「不適用」

☒ at the appropriate box 請在適當的方格內加上 ☒ 號

Opposition to Amendment Item C1: The Rezoning of a Public Housing Site at Tai Tau Leng from "GB" and "G/IC" to R(A)10

Effects on Transportation:

1. Impact on the Tai Tau Leng Interchange

- a. The proposed rezoning and the subsequent construction of a public housing estate in Planning Area 35 will certainly place exceptional burden on the motorway network in Sheung Shui. I speak from experience as the resident of this area. The Tai Tau Leng Interchange is one of the busiest interchanges in Sheung Shui. When there is traffic jam, it causes significant slowdown for the through traffic in the Kam Tin direction on Fan Kam Road as well as the Yuen Long direction on Castle Peak Road – Kwu Tung.
- b. The Tai Tau Leng Interchange is right off of Exit 9 on Route 9. It is the last exit in Sheung Shui before one enters the Yuen Long area on Route 9's west-bound direction. Many long vehicles pulling large cargo take this exit. For northward to the Tai Tau Leng Interchange lies the Man Kam To Interchange. Therefore Exit 9 and the Tai Tau Leng Interchange are the most-used roadway by these heavy duty vehicles, which head toward the Man Kam To border area via this road link. As a result, a traffic jam at the Tai Tau Leng Interchange very often involve very large vehicles. This fact exacerbates the traffic problem.
- c. If the development of Planning Area 35 goes forward, a projected increase of 8,900 in the population of the public housing estate in Tai Tau Leng, coupled with additional new bus routes running in the area and taxi stands, will place significant burden on the Tai Tau Leng Interchange. An envisioned closer economic ties with mainland China in this area will also cause significant increase in vehicular traffic that consists mostly of long vehicles. The proposed widening of the roadways in the Interchange does not change the fact that this area is the only way, with no alternative, to the Man Kam To Interchange from Route 9. Again I speak from experience. There were instances where a traffic accident on the four-lane section of Po Shek Wu Road clogs up the whole section between the Tai Tau Leng Interchange and the Man Kam To Interchange. The critical problem is the lack of alternative, rather than the number of lanes on the road.
- d. Traffic at the Tai Tau Leng Interchange can cost lives because the Interchange lies right by the North District Hospital. Especially when there is traffic, as it does happen, at both the Kai Leng and Tai Tau Leng Interchanges. These are the only two ways to reach the North District Hospital. Very often, I stop at the Tai Tau Leng Interchange intending for ambulances to pass by, but traffic is so heavy that even with all cars stopping will not clear the way for emergency vehicles to pass through.
- e. Like the neighboring Kai Leng Interchange, the Tai Tau Leng Interchange has been prone to traffic jam for the reasons stated above. There have been instances where both interchanges are so severely jammed that all traffic in the North District are paralyzed.
- f. I emphasize that the mere widening of roadways will not prevent them from severe traffic jam. A proposed development with significant increase in

population and community facilities, and closer ties with mainland China, must come with a revision of the whole motorway network in this area, instead of merely providing more lanes on the same roads.

2. Impact on Castle Peak Road – Kwu Tung

- a. The vehicular access for the proposed public housing estate on Planning Area 35 is Castle Peak Road – Kwu Tung Section. Currently, this road is the main vehicular access for Eden Manor, Golf Parkview, the villages of Tsung Pak Long, Kam Tsin, Yin Kong, Kwu Tung and all the way to Ho Sheung Heung. An additional public estate housing a population of 8,900, coupled with the proposed development in Kwu Tung North and another approved high-rise development immediately west of Planning Area 35, will result in serious traffic on Castle Peak Road.
- b. When the Eden Manor was under construction, a constant stream of truck fleets and roadside construction caused significant traffic issues for the residents of Tsung Pak Long. Castle Peak Road – Kwu Tung Section is currently a one-lane road link on both directions. Whatever roadside construction, be they work on the nullah, the upgrading of underground pipelines, electricity or broadband networks, drainage and sewage systems, or work to widen the road itself, will cause serious traffic on the road. There were instances where I waited for more than fifteen minutes before being able to reach the Tai Tau Leng Interchange from Tsung Pak Long. The distance is a mere 600 meters.
- c. The heavy use of Castle Peak Road – Kwu Tung have far-reaching consequences for the traffic situation in all of Sheung Shui. Again, the central issue is not so much about the number of lanes on the road, but the fact that Castle Peak Road is the only road link that provides access for all these residential estates. The residents can easily be stuck in traffic during rush hours, resulting in actual loss in economic productivity. The feasibility study draws on so-called scientific indicators without a serious consideration of the reality of the situation.
- d. Inclement weather has also caused significant problems for residents in the area. A few typhoons have felled the trees on Castle Peak Road – Kwu Tung. The trees that felled prevented all vehicular access after the typhoons. Again, this issue arises due to Castle Peak Road – Kwu Tung being the only access for residents in this area. The more populated this area is, the more likely that such incidents will cause significant loss in economic productivity and severe inconvenience.
- e. In conclusion, the lack of diversion routes in Tai Tau Leng Interchange and Castle Peak Road – Kwu Tung renders this area unsuitable for largescale public housing even if both are to be widened to provide more lanes on each direction. The approved development in Kwu Tung North and the site immediately west of Planning Area 35 will only serve to exacerbate the problem.

Effects on the Environment

1. Green Belt Zone

- a. The Town Planning Board's Guidelines for the Application for Development within Green Belt Zone states a few purposes for green belt zones. I think that two of the stated purposes are applicable to Planning Area 35. Namely, the green belt zones "conserve existing landscape features, areas of scenic value, and areas of recognized "fung shui" principles; and to define the outer limits of urbanized districts and to serve as a buffer between and within urban areas."
- b. As a green belt zone, the Tai Tau Leng area serves as a buffer between Long Valley and the densely populated establishments in Shek Wu Hui and Choi Yuen Estate.
- c. This green belt status has preserved, for decades, the rustic character in the neighborhood, which includes the Fanling Golf Course and Long Valley. Now that another part of the Fanling Golf Course will be used for public housing, the removal of green belt status in Tai Tau Leng will together pose a direct threat to the natural habitat of Long Valley.

2. The destruction of habitat for wildlife

- a. I cannot agree with the conclusions drawn in the feasibility study on the potential impact that a rezoning of the Tai Tau Leng area and the subsequent development have on the ecology of the area. The study states that "the loss of species is low because of the commonness and low fauna and floral diversity."
- b. Again I speak from experience and observation. I used to see fireflies in my garden, but after the construction of the Eden Manor across the street, I no longer see any fireflies. The proposed development in the Tai Tau Leng area will destroy the habitat for the local species. Its commonness only means that the same species will be found elsewhere. It does not mean that those resident species that find home here are being preserved. They will likely die as a result of the proposed development in the Northern Metropolis plan because a large area of low human footprint will be replaced by significant human presence.
- c. Although the feasibility study makes the case that there is low fauna and flora diversity in the area, there is still a vibrant wildlife here. A few years ago, a family of birds made a nest on one of the trees in our garden. The mother laid eggs and the eggs hatched. We watched and documented the whole process. We were in awe, and we do not think that it is justified to take away the habitat even for common species. As rural residents we practice, to the fullest extent, living in harmony with nature.
- d. The feasibility study also cites the distance of 500m from Long Valley, concluding that this distance alone will prevent the human development in Planning Area 35 from destroying the habitat for what the study seems to suggest as "more valued" wildlife there. The feasibility study zooms in on only Planning Area 35, but the Hong Kong Government has also plans to develop another part of the Fanling Golf Course and Kwu Tung North. The destruction of natural habitat in the vicinity is significant. The effect of natural habitat destruction is not limited to Planning Area 35. The overall plan of the Northern Metropolis will have adverse effect on Long Valley.
- e. It is therefore deceiving to suggest that the natural habitat of Long Valley will not be affected by the rezoning and development of Planning Area 35 alone.

Visual impact

1. The aerial view of this area of Sheung Shui now shows a large swathe of flatland with low density housing. But Eden Manor stands out as the only cluster of tall, black buildings in this landscape. Eden Manor is already an out-of-context sore thumb in this area of Sheung Shui. It goes against the rustic character in this area. More such high-density residential development will certainly destroy the visual quality of the landscape here. I quote the feasibility study on this point, "within the cluster itself, the visual composition is rather consistent, but the cluster itself stand in contrast to the surrounding low density landscape."
2. The mitigation measures suggested in the feasibility study addresses the visual impact as viewed on the ground level, "reinstatement of streetscape elements, street interface of the development and the use of sensitive and chromatic treatment of architectural façade of the future building." They do not address the effect of a cluster of buildings on the landscape at large. Such cluster is an example of stereotype and monotonous development as stated in the Urban Design Guidelines.

The Nullah

1. The nullah right next to Planning Area 35 might present danger to the residents. It is a large waterway. When there is heavy rain, the rain water gushes to the nullah. It becomes dangerous, especially for small children.
2. If significant work is to be done to deck the nullah as suggested in the feasibility report, it will induce significant traffic problems on Castle Peak Road – Kwu Tung, as I have experienced in the construction of Eden Manor.
3. Flooding is a consistent problem in Planning Area 35. As noted in the feasibility report, the nullah is a main channel of drainage for this area. During heavy rain, I often see rain water rushing through the relatively low terrain of my garden and drained via the nullah down Castle Peak Road. Significant construction work in this area poses the risk of damaging the structural integrity of the nullah.

Effects on Air Ventilation

1. Since the construction of Eden Manor across the street, I have noticed that my garden and my house is troubled by higher temperature, especially during the summer. Due to the Tai Tau Leng location being inland, air ventilation is only enabled by land breezes. The Eden Manor has blocked land breezes flowing to my house. It is the direct effect of a high density residential estate cluster at my doorstep.
2. The feasibility study suggests certain air ventilation features as mitigation when constructing the public housing estate. The empty bays suggested will assist air flow within these five blocks of public housing estate. This so-called mitigation may just benefit the five buildings themselves. But five blocks of high density residential buildings together will in any event alter and block the wind flow to the neighborhoods surrounding the area. It goes against common sense to think that a densely populated, five-building cluster will not affect wind flow to the surrounding villages. Eden Manor has had this effect on my house.

3. Finally, I think the feasibility study's section on air ventilation has not included some of the scientific indicators as would be expected under the Air Ventilation Assessment Guidelines.

Suitability of the ground to support largescale building construction

1. When Eden Manor was under construction, the foundation works have caused the floor tiles of my neighbor's house to deform. Her house lies right across the Eden Manor. As a result, the developer had to compensate my neighbor.
2. Any largescale construction of high density building in this site could potentially affect the foundation of neighboring structures, especially Eden Manor.
3. The ground of this area is frequently disturbed by water flow. Heavy rain causes the ground to be soft and moist especially during the rainy season.

Consideration of an Alternative

1. The part of Tsung Pak Long Village within Planning Area 35 has enjoyed a very long history. Most of the residents on this part of Tsung Pak Long Village have been here for generations. For my family alone, we have been here since my grandfather settled down in Tsung Pak Long in 1946, a good 76 years by now. We have embraced our rustic life here in this village, living in harmony with the natural habitat here.
2. As can be seen in the proposed development of the public housing estate, the public housing estate consists of two clear sections with the nullah separating the two. Blocks A, B and C lie eastward to the nullah. Blocks D and E will take up the area of Tsung Pak Long Village, where long-time villagers reside, to the west of the nullah.
3. I believe it is a fair suggestion to preserve the current zoning status of Tsung Pak Long Village as a green belt zone. It can continue to serve as a natural habitat buffer for the neighboring Long Valley. It can continue to give home to villagers who have invested generations of time, effort and attention to maintain their homes here. The Government should not disturb the quiet enjoyment of our way of life if alternatives exist.
4. A public housing estate consisting of the 3 blocks lying east to the nullah should amply serve the development purpose of the government. This will balance the interests of all parties involved.

Please give due consideration to the oppositions that I have raised herein.

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	Date Received 收到日期	

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1. Person Making this Representation (known as "Representer" hereafter) 提出此宗申述的人士（下稱「申述人」）

Full Name 姓名 / 名稱 (Mr./Ms./Company/Organisation* 先生/女士/公司/機構*)

WONG CHUN KEUNG

黃振強

(Note: for submission by person, full name shown on Hong Kong Identity Card/Passport must be provided)
(注意：若個人提交，須填上與香港身份證／護照所載的全名)



2. Authorised Agent (if applicable) 獲授權代理人(如適用)

Full Name 姓名 / 名稱 (Mr./Ms./Company/Organisation* 先生/女士/公司/機構*)

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3. Details of the Representation 申述詳情

Draft plan to which the representation relates (please specify the name and number of the draft plan)
與申述相關的草圖（請註明草圖名稱及編號）

S/FSS/24
C1 - R(A)10

* Delete as appropriate 請刪去不適用者

Please fill in "NA" for not applicable item 請在不適用的項目填寫「不適用」

3. Details of the Representation (Continued) (use separate sheet if necessary) [#] 申述詳情(續)(如有需要,請另頁說明) [#]		
Nature of and reasons for the representation 申述的性質及理由		
Subject matters 有關事項 [@]	Are you supporting or opposing the subject matter? 你支持還是反對有關事項?	Reasons 理由
S/FSS/24 C1 - R(A)10 AMENDMENT ITEM C1	<input type="checkbox"/> support 支持 <input checked="" type="checkbox"/> oppose 反對	看附件 SEE ATTACHMENT
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
Any proposed amendments to the draft plan? If yes, please specify the details. 對草圖是否有任何擬議修訂? 如有的話,請註明詳情。 強烈要求擱置有關發展計劃。		

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[@] Please describe the particular matter in the plan to which the representation relates. Where the representation relates to an amendment to a plan, please specify the amendment item number provided in the Schedule of Proposed Amendments. 請形容圖則內與申述有關的指定事項,如申述與圖則的修訂有關,請註明在修訂項目附表內的修訂項目編號。

Please fill "NA" for not applicable item 請在不適用的項目填寫「不適用」

☒ at the appropriate box 請在適當的方格內加上 ☒ 號

附件

有關事項：粉嶺/上水分區計劃大綱核准圖編號

S/FSS/24 - C1 - R(A)10

本人是上水松柏塱村居民，得悉本區被列入發展藍圖之內，震撼至今！畢竟從出生一直居於此處，一草一木皆有感情，要遷出的話情何以堪！

與此同時，本人亦都明白香港土地不足，新界北部發展勢在必行，得以緩解全港居住房屋短缺問題！要能平衡各方利益，不致衝突才是關鍵。

我長居此地，對環境比較瞭解，若規劃這地方建為公營房屋，本人可並不認同！

首先在交通方面，青山公路是唯一可以通達上水車站的要道，但這段公路只是一條狹小的車路，多年來沿路住屋不斷發展，路況早已飽和，每天繁忙時段皆會堵車，莫說是交通意外的了！要把路段加闊，同時也會增加上水迴旋處的交通壓力！上水週邊公路環環相扣，但設計是只符合上世紀的稀疏人口，現今逐漸發展，已超出了負荷水平，嚴重擠塞時有所聞，我也試過從上水回家花了3.5小時！而這段路程約只2公里！光在上水區交通擠塞問題，一直都有反映給政府相關部門，但多年來一直未能解決，情況日益嚴重。若在此再增加民居屋苑，根本是不設實際，並非簡單地加建直通路段就可解決，只會對新的住戶甚至沿路居民做成諸多不便。

此外，從發展規劃圖則也可看見，這個發展區的中間有一條河道，這條河平時的水量不多，但每當到了下雨季節，這條河就承擔了疏導從高爾夫球場及愛園別墅收集並流出來的雨水，由於球場面積甚廣水量甚多，河道時常瞬間滿溢，甚至影響路面交通，情況嚴峻，如果河道發展成為公共屋邨內的一部分，可能對民居造成不便，若在洪水爆發時有小孩在河道上玩耍，甚至有生命威脅！你們評估河水流量按什麼數據？有風險評估嗎？

在整體上來看，政府把這裡規劃成為公營房屋，但毗鄰是已建成的高尚住宅又或已入紙興建高級住宅，要在這裏興建公營房屋，一來格格不入，亦會面對大量反對聲音，並不明智，要是政府把這裏的土地改變成為住宅用途之後，再出售予地產商發展成為私營房屋的話，這似乎是出賣著在這裡土生土長的原住民，也會惹來利益輸送的嫌疑、私相授受的不良印象！更有可能面對法律訴訟！

還有，評估報告說在這裏改建為公營房屋後，不會對當區的景觀，視角做成不能克服的影響，你們是按怎麼標準判斷什麼是大影響什麼是小影響？從小農村平房變高樓大廈難道不算大改變嗎？可以怎克服？什麼緩解措施？我親身經驗是，我從前每天早上起來便看見晨早陽光，自從建了高爾夫 御園後，陽光不再，每天起來抬頭東望，只見到高樓大廈！太陽被檔了，有什麼措施可還我從前的陽光？

基於以上因素，本人反對把這綠化地帶改劃成公共房屋。

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LI CHUN MING ALEXANDER

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S/FSS/24
C1 - R(A)10

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3. Details of the Representation (Continued) (use separate sheet if necessary)[#]
 申述詳情(續) (如有需要, 請另頁說明)[#]

Nature of and reasons for the representation 申述的性質及理由		
Subject matters 有關事項 [@]	Are you supporting or opposing the subject matter? 你支持還是反對有關事項?	Reasons 理由
交通	<input type="checkbox"/> support 支持 <input checked="" type="checkbox"/> oppose 反對	太多車輛使用青山公路致擠塞
寵物 綠化	<input type="checkbox"/> support 支持 <input checked="" type="checkbox"/> oppose 反對	Abandon 消失
住屋	<input type="checkbox"/> support 支持 <input checked="" type="checkbox"/> oppose 反對	No replacement.
Any proposed amendments to the draft plan? If yes, please specify the details. 對草圖是否有任何擬議修訂? 如有的話, 請註明詳情。		

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☒ at the appropriate box 請在適當的方格內加上 ☒ 號

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ANG CHIU HAK 洪朝霞



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S/FSS/24

C1 - R(A)10 AMENDMENT ITEM C1

* Delete as appropriate 請刪去不適用者

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S/FSS/24 C1 - R(A)10 AMENDMENT ITEM C1	<input type="checkbox"/> support 支持 <input checked="" type="checkbox"/> oppose 反對	看附件 SEE ATTACHMENT
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
Any proposed amendments to the draft plan? If yes, please specify the details. 對草圖是否有任何擬議修訂? 如有的話,請註明詳情。 強烈反對收地計劃。		

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附件

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S/FSS/24 - C1 - R(A)10

本人反對收我的地做為公屋，首先現時政府賠償方案非常不合理！沒有考慮過被收地的居民！

另外在交通方面，青山公路古洞段現時每天繁忙時段皆會堵車，由於高爾夫御園入住後就更嚴重，這說明青山公路承受不了人口急劇增加，青山公路古洞段一帶只適合低密度住宅，無論在景觀或交通方面都不適宜起公屋，人口突然增加，會極大地增加交通意外！

北區會有很多地適合起公屋，為什麼要收一塊不適合起公屋的地來起公屋！為何要收我的地，而又不收鄰近愛園的地？還是打算收我的地再轉售給私人發展商？咁應該由私人發展商同我們直接交易比較公平！

我在這居住了幾拾年，又是我媽媽留下比給我的遺產，本人對這塊土地有著深刻的感情，本人在此強烈反對這個計劃，更不希望因為這個計劃，周圍的百年老樹要被拆除，如同強搶我的家園一樣！

最後本人強烈反對改變我這塊綠化地做為住宅用地。

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Full Name 姓名 / 名稱 (Mr./Ms./Company/Organisation* 先生/女士/公司/機構*)

Mr. Ku CHU KWAN MANTRZO

(Note: for submission by person, full name shown on Hong Kong Identity Card/Passport must be provided)
(注意：若個人提交，須填上與香港身份證／護照所載的全名)

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Draft plan to which the representation relates (please specify the name and number of the draft plan)
與申述相關的草圖（請註明草圖名稱及編號）

S/FSS/24 (C1)

* Delete as appropriate 請刪去不適用者

Please fill in "NA" for not applicable item 請在不適用的項目填寫「不適用」

3. Details of the Representation (Continued) (use separate sheet if necessary)[#]
申述詳情(續) (如有需要, 請另頁說明)[#]

Nature of and reasons for the representation 申述的性質及理由		
Subject matters 有關事項 [@]	Are you supporting or opposing the subject matter? 你支持還是反對有關事項?	Reasons 理由
S/FSS/24 C1	<input type="checkbox"/> support 支持 <input checked="" type="checkbox"/> oppose 反對	<p>事前 政府沒有諮詢原居民, 而強行收回土地; 本人完全反對該事項。</p>
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	

Any proposed amendments to the draft plan? If yes, please specify the details.
 對草圖是否有任何擬議修訂? 如有的話, 請註明詳情。

[#] If supporting documents (e.g. colour and/or large size plans, planning studies and technical assessments) is included in the representations, 90 copies (or 40 hard copies and 50 soft copies) of such information shall be provided.
 若申述附有支持其論點的補充資料(例如彩色及/或大尺寸的圖則、規劃研究及技術評估), 則須提供 90 份複本(或 40 份印文本和 50 份電子複本)。

[@] Please describe the particular matter in the plan to which the representation relates. Where the representation relates to an amendment to a plan, please specify the amendment item number provided in the Schedule of Proposed Amendments. 請形容圖則內與申述有關的指定事項, 如申述與圖則的修訂有關, 請註明在修訂項目附表內的修訂項目編號。

Please fill "NA" for not applicable item 請在不適用的項目填寫「不適用」

☒ at the appropriate box 請在適當的方格內加上 ☒ 號

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區錦成



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與申述相關的草圖（請註明草圖名稱及編號）

C1 - R(A)10
No. SIFSS/24

* Delete as appropriate 請刪去不適用者

Please fill in "NA" for not applicable item 請在不適用的項目填寫「不適用」

3. Details of the Representation (Continued) (use separate sheet if necessary) [#] 申述詳情(續)(如有需要,請另頁說明) [#]		
Nature of and reasons for the representation 申述的性質及理由		
Subject matters 有關事項 [@]	Are you supporting or opposing the subject matter? 你支持還是反對有關事項?	Reasons 理由
AMENDMENT ITEM C1 THE REZONING OF A PUBLIC HOUSING SITE AT TAI TAN LUNG FROM "GB" x "G/IC" TO R(A)10	<input type="checkbox"/> support 支持 <input checked="" type="checkbox"/> oppose 反對	PLEASE SEE ANNEX I
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
Any proposed amendments to the draft plan? If yes, please specify the details. 對草圖是否有任何擬議修訂? 如有的話,請註明詳情。 SEE ANNEX I		

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☒ at the appropriate box 請在適當的方格內加上 ☒ 號

我們提出以下理由反對收地：

根據 684 次城規會會議記錄內容，提及解決大頭嶺迴旋處及雞嶺迴旋處交通問題一事，會議紀錄提及會有若干措施舒緩未來塞車嚴重問題，但是未有切實地反映當 3300 單位牽涉 8900 人正式遷入後的情況，這個方案是否確切地解決塞車問題，有關建議其實只可以應付現時的居住人口密度正在天天面對著嚴重交通擠塞問題，現在只是紙上談兵，完全沒有實質理據支持，到時是否可以達到成效，只是一個願景，大家可參考之前興建的沙中線已是一個實例，到 2030 年再遷入 8900 人居住後的交通嚴重負荷更是杯水車薪，更妄想在 2030 年能解決這一帶交通問題，更加遙遙無期。

現時在青山公路古洞段 88 號已經入伙的高爾夫御苑，有 8 座樓高超過 28 層的屋苑，政府預算在對面興建 5 座公屋，樓高約 40 層，再加上旁邊的愛苑已向城規會申請興建 7 座樓高 23 層私人屋苑，形成嚴重屏風效應，這樣大大增加區內空氣、環保、及燈光污染負荷非常嚴重。

根據報告內容，政府為了興建 5 座公屋，將會在影響範圍內砍伐大量老樹木 370 棵，大大影響環保生態，附近的朗園受到影響的

程度亦未可估計，嚴重破壞環境生態。好幾十年前，政府已把這區規劃成綠化環保區，過往居民曾多次要求改善生活環境，申請重建破舊的居所，都被政府否決，為何政府現時又可以為了急於興建公屋，破壞綠化環保區而把這一帶住了好幾十年居民的家園毀於一旦，更影響棲息於附近瀕臨絕種及罕有的候鳥、蝴蝶、昆蟲生態亦隨之消失。政府多年來致力於朗園一帶保育工作，全部毀於一旦。現時每逢下大雨後，青山公路古洞段一帶路面的排水渠嚴重負荷而導致水浸情況不斷加劇，渠務署是最清楚的，已是多年來未能解決水浸問題，只會百上加斤令水浸情況惡化。

現時區內家家戶戶都有飼養多隻寵物，若受政府強權迫遷，一旦痛失家園，便被迫把大量寵物遺棄在區內，未能一同帶上樓居住，而上了年紀的老人家，本來是過着安逸的生活，地方寬敞、空氣清新，相信都未能適應狹窄的上樓單位，之前古洞北政府收地，已是一個活生生的例子。

最後想反映的是：現在政府過時的收地補償方案，遠遠未能給受政府強權迫遷的居民獲得之前同等的安樂生活，就算是補償公共房屋亦是蚊蠅單位，更要受制於什麼資產及資格審查，等同於一般市民申請公共房屋福利的資格相同，這是對於受政府強權迫遷的居

民非常不公平，政府要明白，為何我們選擇要在這一帶居住，就是安於現時這一帶的生活環境，這是政府打擾了我們的生活寧靜，必須正視所有以上將會發生的問題，不能因為要應付中央對於香港的房屋興建數量要求，就草率地犧牲了我們現時住戶的理想居所。而至於政府求地建屋，亦不是別無地方選擇，就是鄰近的高爾夫球場，正足夠滿足政府想收回我們這條小小的村落的面積，佔地 170 公頃的高爾夫球場，只願意交出 2.4 公頃的土地來應酬政府興建房屋，是非常不合理。

受影響遷拆居民



區錦成、區展綱、區易婷、陳玉燕

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梁國忠



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C1 - R(A) 10
No. S1FSS / 24

* Delete as appropriate 請刪去不適用者

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Subject matters 有關事項 [@]	Are you supporting or opposing the subject matter? 你支持還是反對有關事項?	Reasons 理由
Amendment Item C1. The Rezoning of a Public housing Site at Tai Tam Leng from GBR G/IC to R(A)10	<input type="checkbox"/> support 支持 <input checked="" type="checkbox"/> oppose 反對	若受政府強權迫遷,一旦失去家園,便被迫把大量寵物遺棄在區內,未能一同帶上樓居住,這就是選擇住這裏原因。
	<input type="checkbox"/> support 支持 <input checked="" type="checkbox"/> oppose 反對	現在政府過時的收地補償方案遠遠未能給政府強權迫遷的居民獲得之前同等的安樂生活,就算是補償公共房屋亦是蚊蠅單位,更要受制於什麼資產及資格審查,這是對於受政府強權迫遷的居民非常不公平。
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
Any proposed amendments to the draft plan? If yes, please specify the details. 對草圖是否有任何擬議修訂? 如有的話,請註明詳情。		

[#] If supporting documents (e.g. colour and/or large size plans, planning studies and technical assessments) is included in the representations, 90 copies (or 40 hard copies and 50 soft copies) of such information shall be provided.
若申述附有支持其論點的補充資料(例如彩色及/或大尺寸的圖則、規劃研究及技術評估),則須提供 90 份複本(或 40 份印文本和 50 份電子複本)。

[@] Please describe the particular matter in the plan to which the representation relates. Where the representation relates to an amendment to a plan, please specify the amendment item number provided in the Schedule of Proposed Amendments,請形容圖則內與申述有關的指定事項,如申述與圖則的修訂有關,請註明在修訂項目附表內的修訂項目編號。

Please fill "NA" for not applicable item 請在不適用的項目填寫「不適用」

☒ at the appropriate box 請在適當的方格內加上 ☒ 號

MTR Corporation Limited
香港鐵路有限公司
www.mtr.com.hk



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

Our ref: T&ESD/E&IC/ES/EnvE/L1113

Date: 17 FEB 2022

By Post and Fax
(Fax no.: 2877 0245 / 2522 8426)

Dear Sir/Madam,

Draft Fanling/Sheung Shui Outline Zoning Plan No. S/FSS/25 – Notice of Representation
Operational Rail and Fixed Noise Concern

The Corporation has, in general, no objection to the proposed amendments within the Draft Fanling/Sheung Shui Outline Zoning Plan (OZP) (No. S/FSS/25) as gazetted by the Town Planning Board on 17 December 2021. However, it is noted that Amendment Item D1 involves the rezoning of a site at Choi Shun Street, Sheung Shui Area 30 from “Industrial” (“I”) to “Residential (Group A)11” (“R(A)11”) with stipulation of building height restriction. Given the proximity of the site at Choi Shun Street to the MTR East Rail Line (“EAL”) and Sheung Shui Ventilation Building (“SSV”), noise from train and fixed plant operations could be of concern to the future occupants.

We noted from the concerned OZP documents that the rezoning site at Choi Shun Street, Sheung Shui Area 30 will be allocated for public housing development. Preliminary Environmental Review (“PER”) has been conducted as part of the Engineering Feasibility Study for the development site. We noticed from the PER and the layout plans in the relevant RNTPC Paper that single aspect building design and fixed windows have been recommended for implementation at the residential blocks close to the railway and SSV to meet the statutory noise limit. We wish to caution that the proposed development can be sensitive to air-borne noise from EAL especially the noise emitted from the nearby rail crossings, and the operational noise from the louvres of SSV. The future Environmental Assessment Study to be conducted by Hong Kong Housing Authority (“HKHA”) at the detailed design stage should take into account and address any air-borne noise issue from EAL and SSV, and implement all necessary noise mitigation measures at the development to ensure full compliance with statutory requirements.



Page 1 of 2

We respectfully urge Town Planning Board to give due consideration to our concern and impose related development requirements through Planning Briefs, statutory plans and/or land administration documents. HKHA should also ensure that the future residents of the development will not be exposed to noise impacts exceeding relevant noise limits by implementing adequate noise mitigation measures at their own cost and to the satisfaction of the EPD.

Thank you for your attention. Should you have any queries, please feel free to contact our Acting Lead Environmental Manager, Ms. Catherine Leung at [REDACTED]

Yours faithfully,



Chan Hing Keung

General Manager – Engineering & Innovation Centre

c.c Mr. TSANG Sai Wing, Terence	-	Assistant Director of EPD (Environmental Assessment)
Mr. LEE Chee Kwan	-	Principal Environmental Protection Officer (Assessment & Noise)

For Official Use Only 請勿填寫此欄	Reference No. 檔案編號	
	Date Received 收到日期	

- The representation should be made to the Town Planning Board (the Board) before the expiry of the specified plan exhibition period. The completed form and supporting documents (if any) should be sent to the Secretary, Town Planning Board, 15/F., North Point Government Offices, 333 Java Road, North Point, Hong Kong.
申述必須於指定的圖則展示期限屆滿前向城市規劃委員會（下稱「委員會」）提出，填妥的表格及支持有關申述的文件（倘有），必須送交香港北角渣華道 333 號北角政府合署 15 樓城市規劃委員會秘書收。
- Please read the "Town Planning Board Guidelines on Submission and Publication of Representations, Comments on Representations and Further Representations" before you fill in this form. The Guidelines can be obtained from the Secretariat of the Board (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), or downloaded from the Board's website at <http://www.info.gov.hk/tpb/>.
填寫此表格之前，請先細閱有關「根據城市規劃條例提交及公佈申述、對申述的意見及進一步申述」的城市規劃委員會規劃指引。這份指引可向委員會秘書處（香港北角渣華道 333 號北角政府合署 15 樓 - 電話：2231 4810 或 2231 4835 及規劃署的規劃資料查詢處（熱線：2231 5000）（香港北角渣華道 333 號北角政府合署 17 樓及新界沙田上禾輦路 1 號沙田政府合署 14 樓）索取，亦可從委員會的網頁下載（網址：<http://www.info.gov.hk/tpb/>）。
- 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, preferably in both English and Chinese. The representation may be treated as not having been made if the required information is not provided.
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。提出申述的人士須以打印方式或以正楷填寫表格，填寫的資料宜中英文兼備。倘若未能提供所需資料，則委員會可把有關申述視為不曾提出論。

1. Person Making this Representation (known as "Representer" hereafter)
提出此宗申述的人士（下稱「申述人」）

Full Name 姓名 / 名稱 (Mr./Ms./Company/Organisation* 先生/女士/公司/機構*)

MTR Corporation Ltd

(Note: for submission by person, full name shown on Hong Kong Identity Card/Passport must be provided)
(注意：若個人提交，須填上與香港身份證／護照所載的全名)

2. Authorised Agent (if applicable) 獲授權代理人(如適用)

Full Name 姓名 / 名稱 (Mr./ Ms./Company/Organisation* 先生/女士/公司/機構*)

(Note: for submission by person, full name shown on Hong Kong Identity Card/Passport must be provided)
(注意：若個人提交，須填上與香港身份證／護照所載的全名)

3. Details of the Representation 申述詳情

Draft plan to which the representation relates (please specify the name and number of the draft plan)
與申述相關的草圖（請註明草圖名稱及編號）

S/FSS/25

* Delete as appropriate 請刪去不適用者

Please fill in "NA" for not applicable item 請在不適用的項目填寫「不適用」

3. Details of the Representation (Continued) (use separate sheet if necessary) [#] 申述詳情(續)(如有需要, 請另頁說明) [#]		
Nature of and reasons for the representation 申述的性質及理由		
Subject matters 有關事項 [@]	Are you supporting or opposing the subject matter? 你支持還是反對有關事項?	Reasons 理由
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
	<input type="checkbox"/> support 支持 <input type="checkbox"/> oppose 反對	
Any proposed amendments to the draft plan? If yes, please specify the details. 對草圖是否有任何擬議修訂? 如有的話, 請註明詳情。 Please see comments in the attachment (Our ref: T&ESD/E&IC/ES/EnvE/L1113)		

[#] If supporting documents (e.g. colour and/or large size plans, planning studies and technical assessments) is included in the representations, 90 copies (or 40 hard copies and 50 soft copies) of such information shall be provided.
 若申述附有支持其論點的補充資料(例如彩色及/或大尺寸的圖則、規劃研究及技術評估), 則須提供 90 份複本(或 40 份印文本和 50 份電子複本)。

[@] Please describe the particular matter in the plan to which the representation relates. Where the representation relates to an amendment to a plan, please specify the amendment item number provided in the Schedule of Proposed Amendments. 請形容圖則內與申述有關的指定事項, 如申述與圖則的修訂有關, 請註明在修訂項目附表內的修訂項目編號。

Please fill "NA" for not applicable item 請在不適用的項目填寫「不適用」

☒ at the appropriate box 請在適當的方格內加上 ☒ 號

就草圖的申述提出意見

Comment on Representation Relating to Draft Plan

參考編號

Reference Number:

220331-005730-75661

提交限期

Deadline for submission:

01/04/2022

提交日期及時間

Date and time of submission:

31/03/2022 00:57:30

「提意見人」全名

Full Name of "Commenter":

先生 Mr. 簡達和

「獲授權代理人」全名

Full Name of "Authorized Agent":

與意見相關的草圖

Draft plan to which the comment relates: S/FSS/25

意見詳情

Details of the Comments:

申述編號	意見詳情
Representation No:	Details of Comments:
No. S/FSS/25 修訂項目C1	本人在此對No. S/FSS/25的修訂項目C1表示反對。原因是本人的祖先墳墓位於上述發展計劃的範圍內。祖先的墳墓已接近兩百年的歷史，為免破壞祖先的安寧和後代的風水，本人對No. S/FSS/25的修訂項目C1表示反對。檔案編號: DLON 1/27/22 (G1)

☐ Urgent
 ☐ Return Receipt Requested
 ☐ Sign
 ☐ Encrypt
 ☐ Mark Subject Restricted
 ☐ Expand personal&publi



FANLING/SUENG SHUI OZP NO. S/FSS/25
 01/04/2022 22:03

From: [REDACTED]
 To: tpbpd <tpbpd@pland.gov.hk>
 File Ref:

Dear Town Planning Board Members,

That the administration is proposing to truncate the role of the community in the town planning process is absolutely shocking. Often the first inkling local residents have of planned changes to their community is the posting of the relevant notices at the site.

The current dual system provides the opportunity for members of the community to gain fresh insight into issues that are not included in the papers. For example R11 provided background information on the impact on Tai Tau Leng Village. This detail could only be provided by someone very familiar with conditions in the locality. The information is set put in a very concise manner.

Strong objections to the implied threat of legal action in the submission of R1, intended to influence the discourse. We learn that the site is operated by Park'n'Rob (Cheung Kong), one of the twins in the supermarket monopoly that has been ripping off the community for decades. In line with its other applications to profit from the unfortunate trend of housing as an investment vehicle, it is demanding that Item D4 be rezoned to residential not business use.

No mention of how many workers would lose their jobs, and that the rezoning would not provide alternative employment for local residents.

No wonder the planning process takes so long when developers provide 200+ pages of often repetitive data to justify their proposals. Of course members do not read through as one rarely hears questions raised about the content.

In fact the reasoning behind the OZP is flawed. Hong Kong is facing a decline in population. The mainland ditto. Interest rates are rising the China government has launched a new policy that housing is for living in. The measures introduced have already had a significant impact on the housing market over the border and this will in due course and impact the local market.

We are now facing a housing glut but instead of recognizing this fact, the administration is forging ahead with its flawed policies. Anyone who follows the trends can see that rents are falling and there is a glut of empty units. Some years ago a vacancy tax was proposed to in order to address the then estimated 200,000 empty units. With both local and expat families leaving Hong Kong in droves, this number has certainly increased. Instead of building even more units, the focus should now be on assisting families of limited means to upgrade their quarters. This

could be achieved via allowances and would be financially a far more prudent approach than turning every inch of space into concrete towers.

While the Chair will remind members to focus on the facts, it is the duty of members to consider the long term implications of the decisions made by the board.

Mary Mulvihill



cultivation and other agricultural purposes. The current “AGR” zone for the site is considered appropriate and there are no strong justifications in the application to justify changes to the zoning;

- (b) the applicant fails to demonstrate that the road access, traffic impact and crowd management issues associated with the proposed columbarium development could be satisfactorily addressed; and
- (c) the applicant fails to demonstrate that the columbarium development under the rezoning application would not pose adverse landscape and ecological impacts on the surrounding area and affect the management of the nearby Tai Lam Country Park.”

Agenda Item 9

[Open Meeting]

Proposed Amendments to the Approved Fanling/Sheung Shui Outline Zoning Plan No. S/FSS/24

(RNTPC Paper No. 9/21)

38. The Secretary reported that the proposed amendments mainly involved various public housing developments to be developed by the Hong Kong Housing Authority (HKHA), which were supported by two Engineering Feasibility Studies conducted by the Civil Engineering and Development Department (CEDD) with WSP (Asia) Limited (WSP) and AECOM Asia Company Limited (AECOM) as two of the consultants, and two sites for committed/approved commercial developments with Institute of Future Cities of the Chinese University of Hong Kong (CUHK) as the consultant for conducting technical assessments in support of the rezoning proposals. The following Members had declared interests on the item:

Mr Paul Y.K. Au	-	being a representative of the Director of
(as Chief Engineer		Home Affairs who was a member of the
(Works), Home Affairs		Strategic Planning Committee and the

<i>Department)</i>	Subsidised Housing Committee of HKHA;
Dr C.H. Hau	- currently conducting contract research project with CEDD and having past business dealings with AECOM;
Mr Y.S. Wong	- being a member of the Funds Management Sub-committee of HKHA;
Dr Conrad T.C. Wong	- having current business dealings with HKHA and CUHK;
Mr K.K. Cheung	- his firm having current business dealings with HKHA, WSP and AECOM; and
Mr L.T. Kwok	- his serving organisation operating a social service team which was supported by HKHA and had openly bid funding from HKHA.

39. The Committee noted that according to the procedure and practice adopted by the Board, as the proposed amendments relating to public housing developments were the subject of amendments to the Outline Zoning Plan (OZP) proposed by the Planning Department (PlanD), the interests of Members in relation to HKHA on the item only needed to be recorded and they could stay in the meeting. As Mr K.K. Cheung, Dr C.H. Hau and Dr Conrad T.C. Wong had no involvement in relation to the proposed amendment items, the Committee agreed that they could stay in the meeting.

Presentation and Question Sessions

40. The following government representatives and the consultants were invited to the meeting at this point:

PlanD

Mr Anthony K.O. Luk	- District Planning Officer/Fanling, Sheung Shui
---------------------	--

and Yuen Long East (DPO/FSYLE)

Mr Patrick M.Y. Fung - Senior Town Planner/Fanling, Sheung Shui and Yuen Long East (STP/FSYLE)

Ms Lily H. Lau - Assistant Town Planner/Fanling, Sheung Shui and Yuen Long East

CEDD

Mr K.H. Tao - Project Team Leader/Project

Mr F.S. Sit - Chief Engineer/Housing Projects 3

Mr Stephen Wat - Senior Engineer 2/Project

Mr Terry Kea - Senior Engineer 5/Project

Mr Patrick Yeung - Senior Engineer 4/Housing Projects 3

Mr Simon Wong - Engineer 3/Project

Mr Kevin Leung - Engineer 4/Project

Mr Melvin Lam - Engineer 9/Housing Projects 3

Housing Department (HD)

Ms Alice Lo - Senior Planning Officer 2

Transport Department

Mr Michael Cheung - Engineer/North 2

Atkins China Limited

Mr Sean Wong - Technical Director

Mr Jacky Yeung - Senior Associate Director

Ms Macy Kwong - Senior Engineer

WSP

Mr Stephen Ho - Associate Director

Mr Derek Lam - Associate Director

Mr Ernest Tip - Associate Director

AECOM

Mr Colin Kwok - Associate

41. With the aid of a Powerpoint presentation, Mr Patrick M.Y. Fung, STP/FSYLE, briefed Members on the background, the rezoning proposals which were mainly to take forward the proposed public housing development under the Government's policy directives to increase housing land supply at various sites in Fanling and Sheung Shui and the latest area assessments of industrial land, the technical considerations, provision of Government, institution and community (GIC) facilities and open space in the area, consultations conducted and departmental comments as detailed in the Paper. Amendment Items A1 to A3 involved rezoning proposals for public and private housing developments at three sites in Fanling Area 17. Amendment Item B involved a rezoning proposal for public housing development at a site on Ching Hiu Road. Amendment Items C1 to C2 involved rezoning proposals for public housing development at a site near Tai Tau Leng together with a technical amendment for an area shown as 'Road'. Amendment Items D1 to D2 involved rezoning proposals for public housing development and a proposed primary school at a site on Choi Shun Street with technical amendment to reflect the existing Sheung Shui Ambulance Depot, Sheung Shui Ventilation Building and Dongjiang Watermains. Amendment Items D3 and D4 involved rezoning proposals for three industrial buildings (IBs) in Sheung Shui Area 30 and six IBs in Sheung Shui Area 4 to take forward the rezoning proposals recommended under the latest area assessments of industrial land.

42. As the presentation by PlanD's representative had been completed, the Chairman

invited questions from Members.

43. The Chairman and some Members raised the following questions:

GIC facilities

- (a) whether the actual provision of GIC facilities would be subject to confirmation by relevant Government departments at the detailed design stage;
- (b) noting the ageing population and low demand for schools in recent years, whether there was a genuine need for a primary school proposed under Amendment Item D2;

Proposed housing developments

- (c) whether the proposed domestic plot ratios (PRs) for public and private housing developments (i.e. 6.5 and 6 respectively) were comparable with the development intensity of other housing developments in the area;

Impacts on “Green Belt” (“GB”) zones and ecology

- (d) the loss of “GB” zones arising from the proposed amendments;
- (e) potential impacts on the ecology of Long Valley; and

Traffic improvement works

- (f) noting that the District Council and Rural Committee members had raised concerns on the potential traffic impacts brought by the proposed developments, what the details of the proposed traffic improvement works were.

44. In response, Mr Anthony K.O. Luk, DPO/FSYLE, PlanD, and Mr K.H. Tao, Project Team Leader/Project, CEDD, made the following main points:

GIC facilities

- (a) gross floor area (GFA) equivalent to about 5% of the domestic GFA of the four proposed public housing developments respectively, which would be exempted from PR calculation, would be reserved for the provision of social welfare facilities, including elderly, child care and rehabilitation services. The location, type and actual provision of social welfare facilities would be subject to the advice from the Social Welfare Department and HD at the detailed design stage;
- (b) the primary school was proposed as a result of liaison with the Education Bureau (EDB). EDB considered that a primary school site should be reserved in the vicinity of the site under Amendment Item D2 to meet the local demand arising from the proposed housing developments as well as other demand of Fanling/Sheung Shui New Town. PlanD would continue to liaise with EDB to update the supply and demand of primary schools in the area;

Proposed housing developments

- (c) the domestic PR of the major housing developments in the surrounding area was around 5 which was used to be the maximum PR with reference to the Hong Kong Planning Standards and Guidelines for the development of the new town. In view of the increasing acute demand for public housing, the Executive Council agreed in December 2018 to allow further increase of domestic PR for public housing sites up to 6.5 where technically feasible. The current proposed amendments to the OZP involved one public housing site and two private housing sites in Fanling (Items A1 to A3) and three public housing sites in Sheung Shui (Items B, C1 and D1), with domestic PR of 6.5 (for public housing sites) or 6.0 (for private housing sites) were in line with the above policy directives;

Impacts on “GB” zones and ecology

- (d) only Amendment Items B and C would involve “GB” zones and these “GB” sites were already formed for open air temporary carpark and open storage uses respectively;
- (e) Long Valley was located about 260m from the sites in relation to Amendment Items D1 to D2 and was the only site of recognised ecological/conservation interest within the assessment area of ecological impact (i.e. 500m from the development sites). Long Valley would not be directly or indirectly affected by the proposed developments as the most significant waterbird flight-line was northwards along Ng Tung River/Shek Sheung River to Shenzhen River and Deep Bay, which was unlikely to be affected by the proposed developments situated to the east of Long Valley. Whilst disturbance arising from lighting and associated glare at the development sites during the night time might affect some nocturnal birds such as nightjars and owls, PlanD would liaise with HD to adopt mitigation measures such as appropriate glass and façade treatments, as proposed under the ecological impact assessment, to minimise the impacts on Long Valley during the detailed design stage; and

Traffic improvement works

- (f) apart from the major traffic infrastructures including construction of Fanling Bypass, Po Shek Wu Road Flyover and North-South Link to divert inter-district traffic from infiltrating into the new town centre, and to alleviate the traffic congestion at the two major roundabouts (i.e. Po Shek Wu Road Interchange and So Kwun Po Interchange), local road widening and improvement works to major critical road junctions were proposed for meeting the traffic needs arising from the future developments, including those under the current OZP amendments, in the North District.

45. Members had no question regarding other proposed amendments to the OZP and generally considered that they were acceptable.

46. After deliberation, the Committee decided to:

- (a) agree to the proposed amendments to the approved Fanling/Sheung Shui OZP No. S/FSS/24 and that the draft Fanling/Sheung Shui OZP No. S/FSS/24A at Attachment II of the Paper (to be renumbered to S/FSS/25 upon exhibition) and its Notes at Attachment III were suitable for exhibition under section 5 of the Town Planning Ordinance; and
- (b) adopt the revised Explanatory Statement (ES) at Attachment IV of the Paper for the draft Fanling/Sheung Shui OZP No. S/FSS/25A as an expression of the planning intentions and objectives of the Board for various land use zonings of the OZP and the revised ES would be published together with the OZP.

47. Members noted that, as a general practice, the Secretariat of the Board would undertake detailed checking and refinement of the draft OZP including the Notes and ES, if appropriate, before their publication under the Town Planning Ordinance. Any major revision would be submitted for the Board's consideration.

[The Chairman thanked the government representatives and the consultants for their attendance to answer Members' enquiries. They left the meeting at this point.]

[Dr Conrad T.C. Wong left the meeting at this point.]

Sha Tin, Tai Po and North District

Agenda Item 10

[Open Meeting]

Proposed Amendments to the Approved Lung Yeuk Tau & Kwan Tei South Outline Zoning Plan No. S/NE-LYT/17 and Approved Hok Tau Outline Zoning Plan No. S/NE-HT/5
(RNTPC Paper No. 10/21)

48. The Secretary reported that the proposed amendments mainly involved a site for

見。就提供原區安置數據一事，由於現有的統計數據中沒有備存有關資料，因此未能提供給議員參考。)

39. 朱霞芬女士表示，規劃署將於會後檢視由主席提出在龍山隧道迴旋處增設轉乘站的建議，並會以書面回覆。

規劃署

40. 主席補充，他曾在前交運會於 2020 年 11 月 9 日舉行的第六次會議上提出於沙頭角公路轉入簡頭村位置增設右轉袋口位的要求(委員會文件第 106/2020 號)，並認為該提案有助政府部門進行交通規劃。按目前的交通安排，日後將有四條巴士路線經龍山隧道前往市區，途中需經沙頭角公路馬尾下段，一旦巴士停站，便會影響簡頭村居民出入，出現車流倒灌的情況。因此，他當時建議在該處增設右轉袋口位以疏導車流，惟運輸署沒有正面回應，並指根據數據而不會採納其意見。他指署方根據現時的人口數據固然不需增設右轉袋口位，但以日後的三萬人口來計算，結果截然不同。他指剛才規劃署代表鏗鏘有力地提倡「四新精神」，基建先行，惟實際上卻不重視增設路口位等微小改善，與其提倡的精神相違背，希望相關部門跟進情況。

41. 朱霞芬女士回應指，署方並無違背「四新精神」。由於皇后山擴展用地發展的交通影響評估(TIA)沒有建議在沙頭角公路轉入簡頭村的位置增設右轉袋口位，故運輸署會視乎該處的交通流量，考慮是否採納主席的建議。她強調，北部都會區即將會不同發展，政府會秉承「四新精神」，更新有關數據以配合最新的發展。政府除了檢視簡頭村目前的發展，亦會檢視其週邊配套，以作整全的發展。

42. 主席樂見規劃署的回應，但紙上談兵不能解決問題，故邀請規劃署與土拓署在皇后山邨入伙後於早上 7 時跟他到簡頭村村口進行視察，既可貫徹政府的觀念，亦更為「貼地」。

第 3 項——擬議修訂《粉嶺／上水分區計劃大綱核准圖編號 S/FSS/24》

(北區區議會文件第 45/2021 號)

43. 主席歡迎規劃署粉嶺、上水及元朗東規劃專員陸國安先生、沙田、大埔及北區規劃專員朱霞芬女士、高級城市規劃師／粉嶺上水 1 馮武揚先生、助理城市規劃師／粉嶺上水 2 劉涵女士、土拓署工程項目組長／工程項目杜琪鏗先生、總工程師／房屋工程 3 薛

鳳聲先生、高級工程師 2／工程項目滑維青先生、高級工程師 5／工程項目祁德禮先生、高級工程師 4／房屋工程 3 楊志遠先生、房屋署高級規劃師(2)盧穎儀女士及運輸署工程師／北區 2 張劍虹先生出席會議。他表示，部門代表會使用投影片作介紹，秘書處昨日已把有關投影片以電郵分發給各位議員，以便閱覽。

44. 陸國安先生感謝區議會給予機會，讓規劃署於今天介紹粉嶺／上水分區計劃大綱圖的修訂。是次修訂有四組修訂項目，主要規劃作房屋發展，而大部分修訂均為公屋項目。首先，他會請同事簡介有關修訂項目，然後聽取議員意見，出席的政府代表會盡力解答。

45. 馮武揚先生以投影片介紹北區區議會文件第 45/2021 號，有關投影片載於附件二。

46. 張浚偉議員表示，粉嶺第 17 區的房屋發展項目設有公共運輸交匯處，預計會有新的巴士線，並設有巴士停泊設施等硬件配套。軟件方面，區議會一直討論巴士南北走線方案，希望可加入此項發展計劃，以「上水車上水出、粉嶺車粉嶺出」為原則，令由粉嶺開出的巴士無須途徑上水前往高速公路。巴士公司一直指客源不足，因而必須途徑上水及粉嶺，但如此路線安排會浪費居民的時間，亦會造成交通擠塞。既然皇后山邨會新增三萬多人口，加上其他新房屋發展項目，巴士公司無須再擔心客源問題。他希望規劃署及運輸署可在此加入南北走線方案，滿足市民的期望，令巴士無須再浪費時間而可直達市區，故他建議規劃署及運輸署可向巴士公司施予壓力，盡快落實南北走線方案。

47. 溫和達議員表示，早前曾建議康樂及文化事務署(下稱「康文署」)申請鄉郊地區用地，以興建大型體育設施，如體育大樓及室內泳池等。因為上水鄉郊、沙頭角、打鼓嶺等地將有不少新的公共屋邨、大型屋苑落成，而鄉郊有大量土地可作規劃。他認為康樂用地不應全指望粉嶺及上水市區，而且即使在粉嶺及上水市區興建游泳池，亦未能方便使用者，因其要花不少交通時間前往該等設施，亦不符合北部都會區的規劃，故希望能在鄉郊地區增加康體用地，令鄉郊地區更適合居住，並可推廣運動普及化。

48. 周錦豪議員表示，剛才主席有提及現時北區的康體設施不符比例，希望規劃中可以向現時及將來新增的北區居民提供更多資源，令他們不用長時間輪候使用區內的康體設施。夏季時不少居

民抱怨要輪候長達一至兩個小時方可使用上水或粉嶺游泳池，故希望可增加不同類型的康體設施。至於鐵路的載客量問題，他指出東鐵綫由十二卡車轉成九卡車，他已接獲不少居民投訴未能上車或令其候車時間大增，車廂內的擠迫情況亦更為嚴重。施政報告中北部都會區規劃包括北環線東延，即將會有更多人使用鐵路出行，加上東鐵綫使用九卡車，可以預想未來東鐵綫的客流定會嚴重「爆煲」。他詢問有關部門會否與港鐵公司就上述問題的改善措施有更多溝通。他指出，早前港鐵代表在交運會的會議上表示，希望乘客可以循北環線古洞方向再經新的新界西鐵路前往港島或九龍一帶，以作分流。但當北環線東延線完成後，他認為分流作用已失效，因為客觀而言由安樂村前往港鐵粉嶺站轉乘必然比經由新界西方便。他希望署方在此問題上有更多考量，因為擬議房屋發展計劃涉及四萬多人口，配合北部都會區以及《香港 2030+：跨越 2030 年的規劃遠景與策略》(下稱《香港 2030+》)等發展，預計將會有數以十萬計的人口增長。

49. 主席認為溫和達議員提及的康體設施是務實的意見，尤其香港未來會舉辦全國運動會，北部都會區可在此事上有角色擔當，例如部分賽事可於北部都會區進行，這亦自然要視乎基建配套能否配合。至於人口增長問題，他表示在仔細計算下增長數字驚人，北區區議會文件第 45/2021 號第 2.2 段中只列出了總伙數，各項加起來是公營房屋有 40 950 人，私人住宅則有 4 320 人，即合共有四萬多人的增長，加上剛才討論的皇后山第二期有 11 000 人，共有五萬多人，但在基建配套方面沒有看到「四新精神」，並無突破。他指出粉嶺北新發展區計劃的人口達 78 000 人，政府亦收回不少土地，並花數百億興建粉嶺繞道東段，重置北區批發市場，但即使兩個修改大綱項目合共所牽涉的人口達五萬人，卻是「零配套」。而特首在施政報告亦有提及北部都會區是近半年來與深圳討論的成果，原先計劃時未有考慮北部都會區，他質疑如果沒有北部都會區發展，署方根本不會在基建方面有任何革新。

50. 主席續指現時配套有以下兩大問題：

- (a) 芬園警察訓練學校(即粉嶺第 17 區位置)的中心點在粉嶺圍對面，與港鐵上水站及粉嶺站都有一段距離，只能依賴巴士接駁。但該處連接雞嶺迴旋處，而現時雞嶺迴旋處的交通狀況大家有目共睹，加上在北區政府合署附近香港房屋協會(下稱「房協」)同樣有一個房屋發展項目，要思考完成

房屋發展後應如何疏導車流。整條馬會道交通燈口數量較多，如按照現時雙線行車，則不可能疏導車流，尤其芬園將有 23 000 多人。皇后山公屋的三萬多人可採用粉嶺繞道東段及龍山隧道作疏導。但芬園位於粉嶺公路入口，預計車流大增，加上北環線東延線只到安樂村，距離芬園位置頗遠，認為沒有可能在無任何交通配套改善下便執行此項目；以及

- (b) 有關上水清曉路項目，前清河邨區議員袁浩倫先生曾在區議會會議上就該區商業設施提出不少提案。現時清河邨發展至二期，惟商業設施少得可憐，只有十間以內餐廳，導致只能在屋邨籃球場舉辦墟市。現時清曉路再有房屋發展，未來附近的粉嶺高爾夫球場亦會有公營房屋發展。他指出，以往上水石湖墟水貨林立，但即使現時未通關，周末上水匯、上水廣場等也人潮如湧。未來清曉路再有數千人口增長，加上原有清河邨居民，商業設施不足以應付未來的人口增長。現時清曉路項目只有社區設施而沒有商業設施，他建議可採用「一地多用」的原則，在停車場地上或地下發展，可參考日本建造地下街或港鐵尖東站地下等類似方案。

51. 主席又指，文件中的四個房屋發展項目看似分散在不同地點，實質北區屬一個整體，發展項目所帶來的人流亦會前往聯和墟及石湖墟。雖然聯和墟將來有行人天橋作疏導，但石湖墟仍未有任何計劃，大家可見每天石湖墟交通擠塞的情況，卻仍是處於「零處理」的狀態，希望部門代表可回應上述問題。

52. 陸國安先生對各議員的提問及意見有以下綜合回應：

- (a) 就巴士南北走線方面，預計會在芬園設有新的交通交匯處，屆時將有新的公共交通安排。至於能否做到張議員建議的南北走線方案，相信運輸署會因應當時人口再作考慮，議員及有關部門可在交運會上繼續監察及回應，稍後請運輸署代表就此補充；
- (b) 有關康體設施，《規劃標準》有人口基數指標，如人口超過某項基數便需要提供某類設施。以游泳池為例，人口基數相對較大。現時上水游泳池正進行擴建工程，難免有鄉郊市民要前往上水市中心才可游泳。北部都會區文件中有提醒部門進行超前規劃，不可只參考《規劃標準》。署方會參

考慮議員的意見，考慮北區整體有否地方可提供更多康體用地，令市民不用花太多交通時間去使用康體設施；

- (c) 至於鐵路九卡車問題，相關部門及鐵路公司已在區議會會議上解釋，由十二卡車轉為九卡車後如何維持整個鐵路系統的運載力，例如縮短班次之間的頻率。至於南北走向策略性鐵路或道路方面，政府會進行研究。他又指，政府曾提出隨著《香港 2030+》規劃情況，會再規劃相對應的 2030 年後的鐵路及道路運輸系統，以考慮如何配合整個北部都會區及日後的人口增長，並考慮是否需要建設策略性鐵路或道路網絡，政府會繼續跟進；
- (d) 人口增長方面，每次署方進行新的房屋規劃時，均會評估社區設施是否足夠，而這四個房屋項目中已經包括部分社區設施，特別是服務弱勢社群、長者、有特殊需要的小朋友及殘疾人士等的設施；
- (e) 芬園距離鐵路站較遠。在現時計劃中，芬園將設有公共交通交匯處及新增的公共交通設施，而實際上如何連繫鐵路站亦是署方關注之處。現時方案包括加設行人天橋橫越馬會道，貫穿日後房協的住宅項目，再經日後的新界東文化中心旁前往港鐵粉嶺站，日後有更詳細的建議會再向區議會詳細講解；以及
- (f) 清曉路項目較少商業設施的問題，當局隨後會就清河邨第四期詳細設計，審視是否能增加商業或零售的配套設施，滿足居民所需。

53. 陸國安先生續指，整體的交通及配套設施可滿足這四個住宅項目的人口增長，規劃署願意日後繼續與區議會合作溝通，並肩同行。

54. 冼佳慧女士表示，就巴士路線走線方面，她明白議員指出現時部分巴士路線比較迂迴。不同巴士路線有不同角色，例如循環線、區內線要接載乘客前往區內不同地方，因此會有較多上落客點，亦有部分特快路線只有數個站點便會前往外區。運輸署明白議員意見，亦理解作為乘客皆希望能盡快前往目的地。署方會因應地區人口發展、預計客量及基建設施，適時檢討巴士路線走線安排。

55. 主席總結，希望各負責規劃的部門盡量考慮議員今天提出的意見，無論是此項議程的四個房屋發展項目或皇后山房屋發展項目，都應以人民利益為依歸。

第 4 項——區議會撥款申請

(撥款申請見北區區議會文件第 46/2021 號)
(團體過往推行活動的記錄見北區區議會文件第 47/2021 號)

56. 主席表示，北區區議會文件第 46/2021 號詳列了 6 項區議會撥款申請，包括 3 項社區參與計劃撥款申請、3 項地區小型工程計劃撥款申請，以及 1 項地區小型工程的修訂預算申請。秘書處已把申請團體過往推行活動的記錄，整理成北區區議會文件第 47/2021 號，供議員考慮申請者過往推行活動的記錄是否良好，以評審個別申請。

57. 在審批撥款申請前，主席詢問有否議員需要申報利益。沒有議員作出申報。

58. 主席詢問議員對上述 6 項撥款申請及 1 項修訂預算申請有否意見。沒有議員提出問題或意見。

59. 大會通過北區區議會文件第 46/2021 號的區議會撥款申請及修訂預算申請。

第 5 項——北區地政處處理小型屋宇申請及處理重建新界豁免屋宇申請績效表

(北區區議會文件第 48/2021 號)

60. 大會備悉北區區議會文件第 48/2021 號。

第 6 項——宣傳工作小組報告

(北區區議會文件第 49/2021 號)

61. 大會備悉北區區議會文件第 49/2021 號。

粉嶺／上水新市鎮的休憩用地和主要社區設施供應
(包括粉嶺／上水擴展區)

設施種類	《香港規劃標準與準則》	《香港規劃標準與準則》要求 (按規劃人口計算)	供應		剩餘／短缺 (與已規劃供應比較)
			現有供應	已規劃供應 (包括現有供應)	
地區休憩用地	每100 000人 10公頃 ¹	36.05公頃	19.48公頃	28.65公頃	-7.39公頃
鄰舍休憩用地	每100 000人 10公頃 ¹	36.05公頃	49.08公頃	66.96公頃	+30.92公頃
中學	每40名12至17歲 青少年設1間全日 制學校課室	441間 課室	582間 課室	582間 課室	+141間 課室
小學	每25.5名6至11歲 兒童設1間全日 制學校課室	590間 課室	649間 課室	853間 課室	+263間 課室
幼稚園／ 幼兒園	每1 000名3至6歲 兒童設34間課室	200間 課室	241間 課室	306間 課室	+106間 課室
警區警署	每200 000至 500 000人設1間	0間	0間	0間	0間
分區警署	每100 000至 200 000人設1間	1間	1間	1間	0間
醫院	每1 000人 設5.5張病牀	2 028張 病牀	658張 病牀	2 158張 病牀	+130張 病牀 ²
診所／ 健康中心	每100 000人 設1間	3間	2間	3間	0間

設施種類	《香港規劃標準與準則》	《香港規劃標準與準則》要求 (按規劃人口計算)	供應		剩餘／短缺 (與已規劃供應比較)
			現有供應	已規劃供應 (包括現有供應)	
裁判法院 (8個法庭)	每660 000人 設1間	0間	1間	1間	+1間
幼兒中心	每25 000名兒童 設100個資助服務 名額 ¹	1 441個 名額	420個 名額	576個 名額	-865個 名額 ³
綜合青少年服務中心	每12 000名6至24 歲人士設1間 ¹	4間	7間	7間	+3間
長者地區中心	每個人口達 170 000人或以上 的新發展區設1間 ¹	不適用	1間	1間	不適用 ⁴
長者鄰舍中心	每個人口達15 000 至20 000人的新建 及重建房屋建築羣 設1間 ¹	不適用	5間	11間	不適用 ⁵
社區照顧服務設施	每1 000名65歲或 以上長者設17.2個 資助服務名額 ^{1、6}	1 902個 名額	389個 名額	648個 名額	-1 254個 名額 ³
安老院舍	每1 000名65歲或 以上長者設21.3個 資助牀位 ¹	2 356個 牀位	1 224個 牀位	1 944個 牀位	-412個 牀位 ³
學前康復服務	每1 000名0至6歲 兒童設23個資助 名額	414個 名額	208個 名額	208個 名額	-206個 名額

設施種類	《香港規劃標準與準則》	《香港規劃標準與準則》要求 (按規劃人口計算)	供應		剩餘／短缺 (與已規劃供應比較)
			現有供應	已規劃供應 (包括現有供應)	
日間康復服務	每10 000名15歲或以上人士 設23個資助名額	708個名額	130個名額	610個名額	-98個名額 ³
住宿照顧服務	每10 000名15歲或以上人士 設36個資助名額	1 108個名額	279個名額	849個名額	-259個名額 ³
日間社區康復中心	每420 000人 設1間	0間	0間	0間	0間
殘疾人士地區支援中心	每280 000人 設1間	1間	1間	1間	0間
精神健康綜合社區中心	每310 000人設1 間標準規模中心	1間	1間	1間	0間
綜合家庭服務中心	每100 000至 150 000人設1間 ¹	2間	3間	3間	+1間
圖書館	每200 000人設1 間分區圖書館	1間	3間	3間	+2間
體育中心	每50 000至65 000 人設1間 ¹	5間	5間	5間	0間
運動場／ 運動場館	每200 000至 250 000人設1個	1個	1個	1個	0個

設施種類	《香港規劃標準與準則》	《香港規劃標準與準則》要求 (按規劃人口計算)	供應		剩餘／短缺 (與已規劃供應比較)
			現有供應	已規劃供應 (包括現有供應)	
遊泳池 場館一 標準池	每287 000人 設1個場館 ¹	1個	1個	1個	0個

註：

粉嶺／上水新市鎮(包括粉嶺／上水擴展區)的規劃人口將約為 368 700 人。撇除流動人口，整體規劃人口約為 360 500 人。所有人口數字已調整至最接近的百位數字。

1. 在訂定有關要求時，沒有把規劃流動人口計算在內。
2. 醫院管理局會按區域監察醫院病牀的供應及填補短缺情況。
3. 此乃長遠目標，實際供應數字須視乎社會福利署在規劃和發展過程中按適當情況所作出的考慮。
4. 長者地區中心的供應只適用於新發展區。
5. 長者鄰舍中心的供應只適用於人口達 15 000 至 20 000 人的新建及重建房屋建築羣。
6. 社區照顧服務設施(包括中心為本及家居為本)的規劃標準是以人口為基礎。《安老服務計劃方案》對中心為本及家居為本的社區照顧服務的分配沒有硬性的規定。不過，一般來說，家居為本的社區照顧服務可滿足六成社區照顧服務方面的需求，其餘四成服務則由中心為本的社區照顧服務加以配合。

城市規劃委員會文件
第 10856 號附件 VIII

北區的主要社區設施和休憩用地供應

設施種類	《香港規劃標準與準則》	《香港規劃標準與準則》要求 (按規劃人口計算)	供應		剩餘／短缺 (與已規劃供應比較)
			現有供應	已規劃供應 (包括現有供應)	
地區休憩用地	每100 000人 10公頃 ¹	67.88公頃	21.59公頃	66.69公頃	-1.19公頃
鄰舍休憩用地	每100 000人 10公頃 ¹	67.88公頃	63.97公頃	110.91公頃	+43.03公頃
中學	每40名12至17歲 青少年設1間全日 制學校課室	839間 課室	608間 課室	818間 課室	-21間 課室
小學	每25.5名6至11歲 兒童設1間全日 制學校課室	1 187間 課室	770間 課室	1 328間 課室	+141間 課室
幼稚園／ 幼兒園	每1 000名3至6歲 兒童設34間課室	437間 課室	263間 課室	502間 課室	+65間 課室
警區警署	每200 000至 500 000人設1間	1間	1間	2間	+1間
分區警署	每100 000至 200 000人設1間	3間	3間	4間	+1間
裁判法院 (8個法庭)	每660 000人 設1間	1間	1間	1間	0間
醫院	每1 000人設5.5 張病牀	3 795張 病牀	658張 病牀	2 158張 病牀	-1 637張 病牀 ²
診所／	每100 000人	7間	4間	7間	0間

設施種類	《香港規劃標準與準則》	《香港規劃標準與準則》要求 (按規劃人口計算)	供應		剩餘／短缺 (與已規劃供應比較)
			現有供應	已規劃供應 (包括現有供應)	
健康中心	設1間				
幼兒中心	每25 000名兒童 設100個資助服務 名額 ¹	2 715個 名額	457個 名額	1 513個 名額	-1 202個 名額 ³
綜合青少年服務 中心	每12 000名6至24 歲人士設1間 ¹	9間	7間	7間	-2間 ³
長者地區 中心	每個人口達 170 000人或以上 的新發展區 設1間 ¹	不適用	1間	2間	不適用 ⁴
長者鄰舍 中心	每個人口達 15 000至20 000 人的新建及重建 房屋建築羣 設1間 ¹	不適用	5間	18間	不適用 ⁵
社區照顧 服務設施	每1 000名65歲或 以上長者設17.2 個資助服務名額 ^{1、6}	3 245個 名額	468個 名額	1 328個 名額	-1 917個 名額 ³
安老院舍	每1 000名65歲或 以上長者設21.3 個資助牀位 ¹	4 019個 牀位	1 344個 牀位	3 848個 牀位	-171個 牀位

設施種類	《香港規劃標準與準則》	《香港規劃標準與準則》要求 (按規劃人口計算)	供應		剩餘／短缺 (與已規劃供應比較)
			現有供應	已規劃供應 (包括現有供應)	
學前康復服務	每1 000名0至6歲兒童設23個資助名額	925個名額	208個名額	328個名額	-597個名額
日間康復服務	每10 000名15歲或以上人士設23個資助名額	1 314個名額	130個名額	1 160個名額	-154個名額
住宿照顧服務	每10 000名15歲或以上人士設36個資助名額	2 057個名額	439個名額	2 159個名額	+101個名額
日間社區康復中心	每420 000人設1間	1間	0間	1間	0間
殘疾人士地區支援中心	每280 000人設1間	2間	1間	2間	0間
精神健康綜合社區中心	每310 000人設1間標準規模中心	2間	1間	1間	-1間
綜合家庭服務中心	每100 000至150 000人設1間 ¹	6間	3間	4間	+2間
圖書館	每200 000人設1間分區圖書館	3間	4間	5間	+2間
體育中心	每50 000至65 000人設1間 ¹	10間	5間	9間	-1間 ⁷

設施種類	《香港規劃標準與準則》	《香港規劃標準與準則》要求 (按規劃人口計算)	供應		剩餘／短缺 (與已規劃供應比較)
			現有供應	已規劃供應 (包括現有供應)	
運動場／運動場館	每200 000至250 000人設1個 ¹	2個	1個	2個	0個
遊泳池場館—標準池	每287 000人設1個場館 ¹	2個	1個	2個	0個

註：

北區的規劃人口將約為 690 200 人。撇除流動人口，區內的整體規劃人口約為 678 770 人。所有人口數字已調整至最接近的百位數字。

1. 在訂定有關要求時，沒有把規劃流動人口計算在內。
2. 已於古洞北新發展區內預留一幅用地，以興建醫院，但醫院所提供的病牀數目會在稍後階段才作決定。醫院管理局會按區域監察醫院病牀的供應及填補短缺情況。
3. 此乃長遠目標，實際供應數字須視乎社會福利署在規劃和發展過程中按適當情況所作出的考慮。
4. 長者地區中心的供應只適用於新發展區(即北區區內的粉嶺北新發展區及古洞北新發展區)。
5. 長者鄰舍中心的供應只適用於人口達 15 000 至 20 000 人的新建及重建房屋建築羣。
6. 社區照顧服務設施(包括中心為本及家居為本)的規劃標準是以人口為基礎。《安老服務計劃方案》對中心為本及家居為本的社區照顧服務的分配沒有硬性的規定。不過，一般來說，家居為本的社區照顧服務可滿足六成社區照顧服務方面的需求，其餘四成服務則由中心為本的社區照顧服務加以配合。
7. 當局會考慮在粉嶺北新發展區的發展內增設一間體育中心。